NEW PRODUCT NEWS

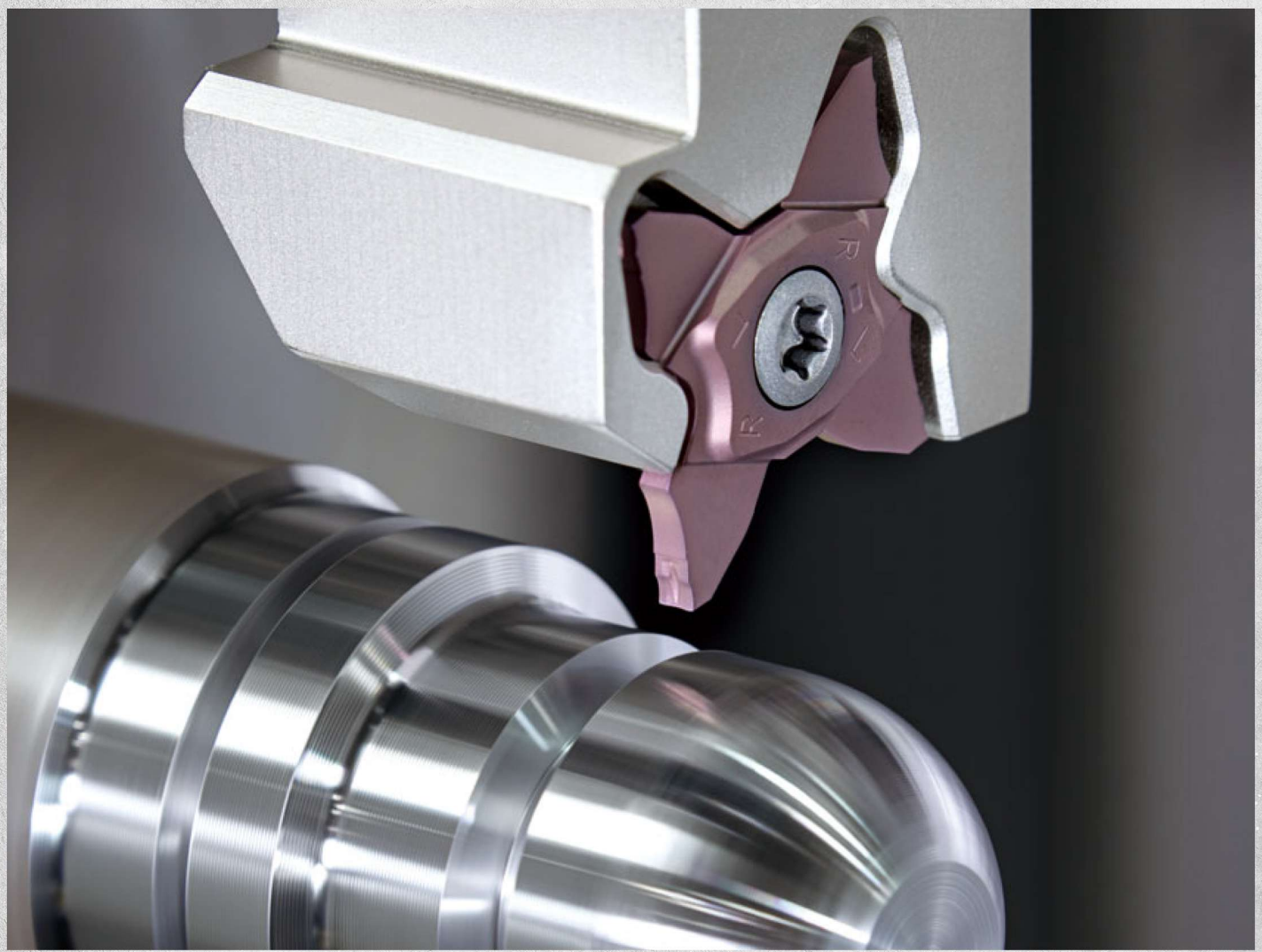
MEGA TECH
METAL WORK CO.,LTD

Tungaloy Report No. 416-G

Grooving and parting-off tool

TETRAMINICUT / TETRAFORCECUT

Introducing PVD grades AH8005, AH7025 and AH6235



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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

Tungaloy Report No. 416-G

MEGA TECH
METAL WORK CO.,LTD

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TUNGALOY
ADDFORCE
ACCELERATED LINES

NEW PRODUCT NEWS

Tungaloy Report No. 416-G

MEGA TECH
METAL WORK CO.,LTD

TETRAMINI CUT / TETRAFORCE CUT

Influential grooving lines, **TetraMini-Cut** and **TetraForce-Cut** offer ground inserts with a robust clamping structure for exceptional stability and repeatability

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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

Tungaloy Report No. 416-G

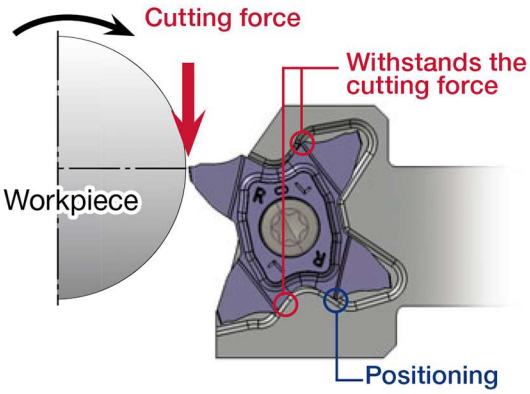
MEGA TECH METAL WORK CO.,LTD

TETRAMINICUT/TETRAFORCECUT

Multi-purpose grooving insert with economical 4 cutting edges

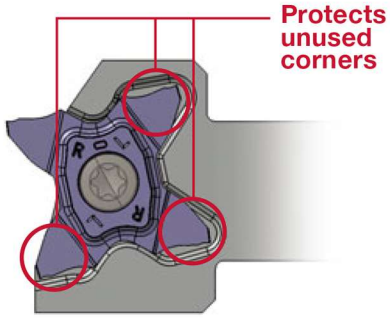
Unique 3-point clamping system

The unique pocket design provides accurate indexing repeatability of the cutting edge height.



The insert pocket protects all unused cutting edges

Strong and stable clamping design protects unused insert corners from damage during operation.



Provides increased productivity in external turning, parting, face grooving, thread turning, and custom profiling applications

External grooving / Parting-off

P13 -, P43 -

TETRAMINICUT
TETRAFORCECUT

Groove width: 0.33 - 4 mm
Max grooving depth: - 10 mm

Face grooving

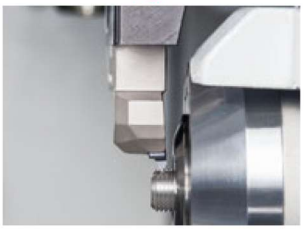
P25 -

TETRAMINICUT

Groove width:0.5 - 2.5 m
Max grooving depth: - 3 mm
Minimum grooving diameter: ø6 mm

Threading

P36 -



TETRAMINICUT

Partial profile
Thread angle: 55, 60˚

Full profile
ISO, UN, UNJ

Wide profile grooving

P56 -

TETRAFORCECUT

Max. width: ~ 20 mm
Max. depth: ~ 6.4 mm

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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

Tungaloy Report No. 416-G

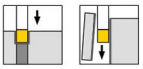
MEGA TECH METAL WORK CO.,LTD

TETRA MINI CUT 18 type

P7 -

- Available with 3D chipbreaker for excellent chip control
- 3 different types of chipbreakers each with dedicated edge preparation
- Full profile threading inserts are added. Thread pitch : 0.5 mm to 1.5 mm
- Through-coolant supply system (tool code suffix "-CHP") to ensure high efficient machining

■ External grooving /Parting-off



Groove width:
0.33 - 3 mm
Max grooving depth:
- 3 mm

TCG18/TCP18/ TCP18-F | TCS18 | TCL18

■ Face grooving

Groove width:
0.5 - 2.5 mm
Max grooving depth:
- 3 mm
Minimum grooving diameter:
ø6 mm

TCF18

■ Threading

Partial profile
55° Thread angle: Pitch = 8 ~ 28TPI
60° Thread angle: Pitch = 0.4 ~ 3 mr

Full profile
ISO: Pitch = 0.5 ~ 1.5 mm
UN: Pitch = 16 ~ 32 TPI
UNJ: Pitch = 28 ~ 32 TPI
W: Pitch = 11 ~28 TPI

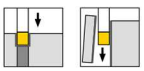
TCT18

TETRA FORCE CUT 27 type

P41 -

- Available with 3D chipbreaker for excellent chip control
- Through-coolant supply system (tool designation suffix "-CHP") to ensure high efficient machining

■ External grooving /Parting-off



Groove width: 0.33 - 3.18 mm
Max grooving depth: - 6.4 mm

TCL27 | TCS27 | TCM27 | TCG27

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TUNGALOY ADDFORCE ACCELERATED LINES

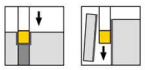
MEGA TECH METAL WORK CO.,LTD

TETRAFORCE CUT 38 type

P48, 54

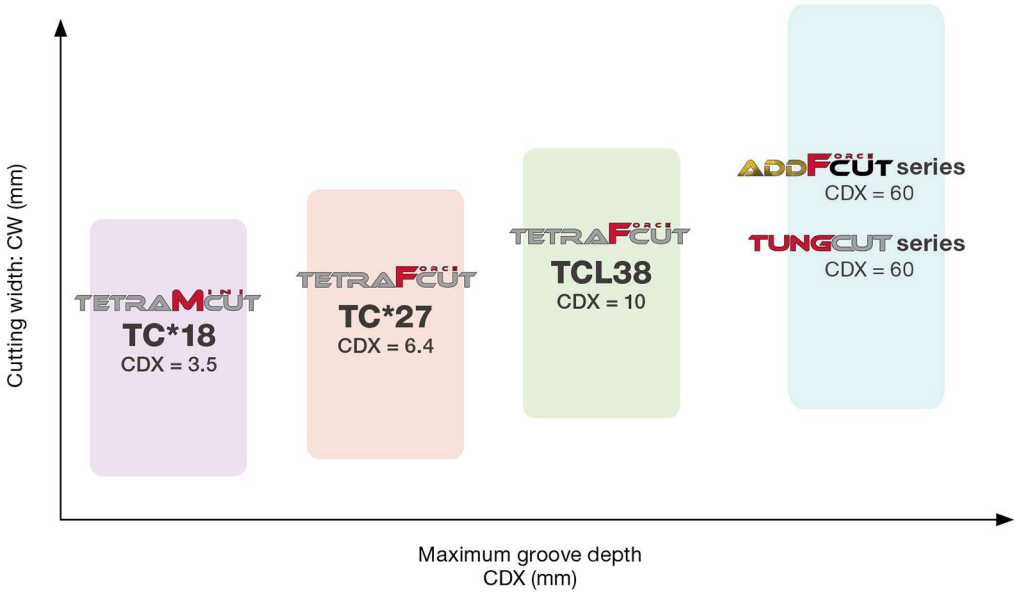
- Unique insert clamping method provides high repeatability and stability for effective deep grooving and parting applications
- Light cutting geometry ensures consistent chip control for reduced chatter
- Efficient multi-edged insert solution for OD grooving and parting applications exceeding 6.4 mm in cutting depth
- Economical 4-edge insert
- Precision coolant delivery ensures effective chip removal during deep grooving

■ External grooving /Parting-off



Groove width: 0.33 - 3.18 mm
Max grooving depth: - 6.4 mm

TCL38



NEW PRODUCT NEWS

Tungaloy Report No. 416-G

MEGA TECH METAL WORK CO.,LTD

TETRA MINI CUT

Available with 3D chipbreaker for excellent chip control. An extensive lineup covers a broad range of grooving applications from small to general size parts

- An expanded range of tools allows for an easy selection of the ideal insert
- The same toolholder for both grooving and threading

Grooving

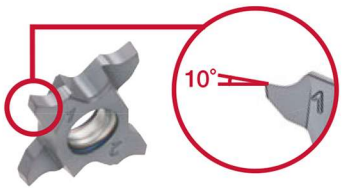
TCL18 type
(With 3D chipbreaker for low feed rates)

- The chipbreaker incorporates a dimple-like recess on the rake face to facilitate smooth chip flow with light cutting action
- The chipbreaker ensures low cutting force, providing reliable chip flow at low feed rates

TCS18 type
(With 3D chipbreaker for general purpose)

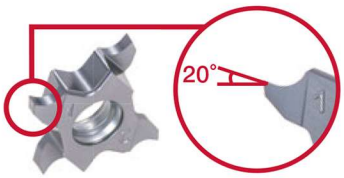
- The chipbreaker incorporates a dimple-like recess on the rake face to facilitate smooth chip flow with light cutting action

TCG18 type (Honed edge)



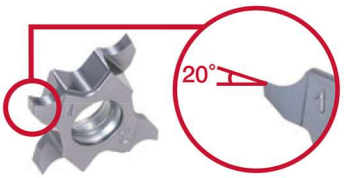
- Optimized rake angle and edge preparation enhances fracture resistance, allowing for smooth cutting
- Available in Grade AH8005, AH7025, or AH6235

TCP18 type (Lightly honed edge)



- A large rake angle ensures smooth cutting for excellent surface finish
- The insert in grade AH725 features a tough edge preparation for high resistance to fracture

TCP18-F type (Sharp edge)



- High quality surface finish and precision thanks to the sharp cutting edge
- A quality level comparable to that of cermet can be achieved
- An extremely hard coating layer on grade SH7025 provides sharp cutting edges, making it perfect for small part grooving

Face grooving

TCF18 type

- Sharp cutting edge and strong insert retention allow high surface quality.
- DAXN from 6 mm

Threading

TCT18 type

Full-profile insert

- Full profile inserts for burr-less threading are newly added.
  Pitch : 0.5 - 1.5 mm.
- Sharp cutting edge for reduced cutting load, improving thread surface quality
- Suitable for thread pitches ranging from 0.4 mm to 3 mm

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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

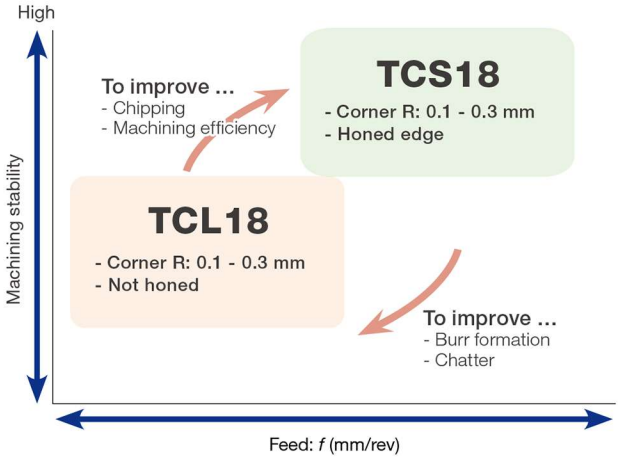
Tungaloy Report No. 416-G

MEGA TECH METAL WORK CO.,LTD

TETRAMINICUT

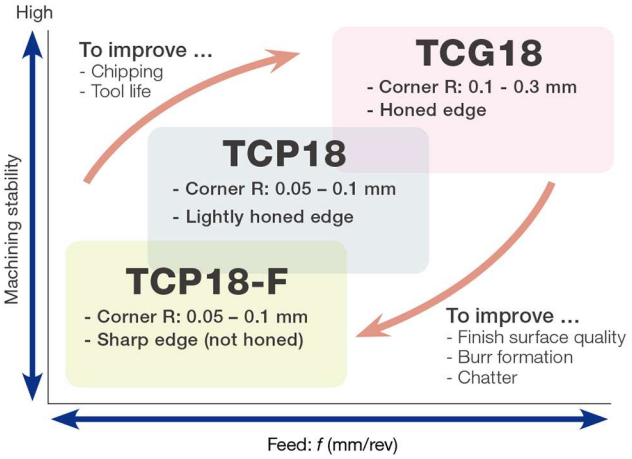
NEW SELECTION SYSTEM

■3D chipbreakers



- 2 styles of 3D chipbreakers are available as standard for reliable chip control.
- TCS: general-purpose chipbreaker, TCL: for applications where low cutting force is essential

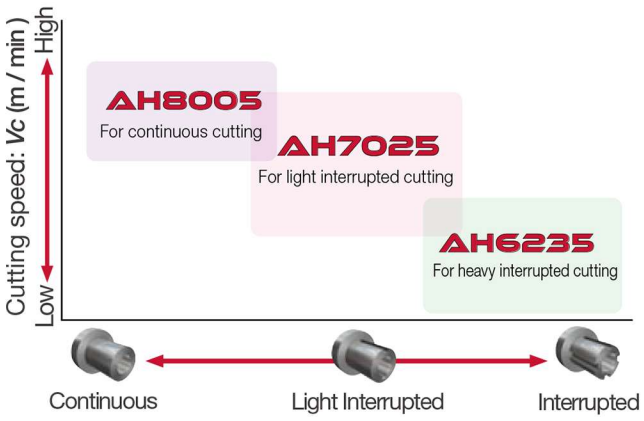
■Ground-to-form chipbreakers



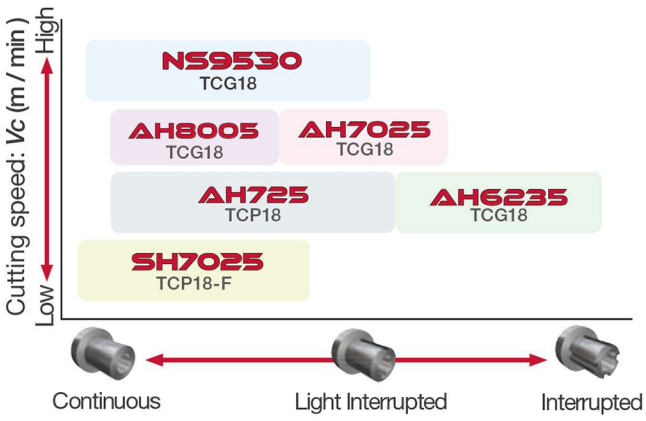
- Choose the best of all three insert types according to the machining requirements
- A variety of widths and corner radii are available in all three insert types

APPLICATION AREA

■3D chipbreakers



■Ground-in chipbreaker



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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

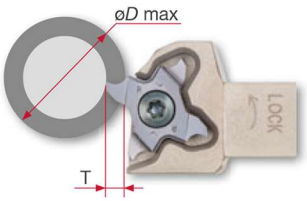
Tungaloy Report No. 416-G

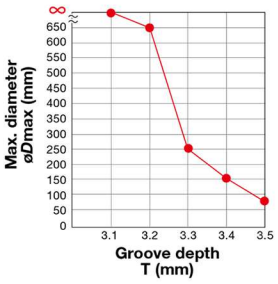
MEGA TECH METAL WORK CO.,LTD

PRECISION GROOVING & THREADING

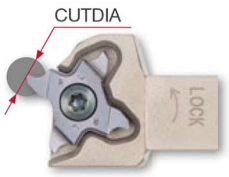
Grooving

Groove depth capacity and Dmax. capacity



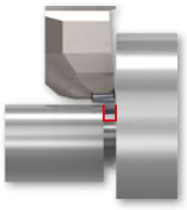


Dmax. parting-off

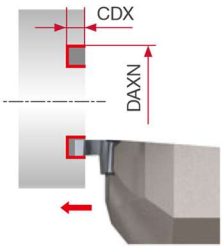


Max. diameter øDmax (mm)
7

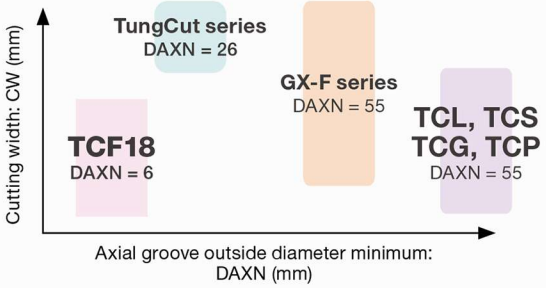
Machining next to shoulder



Minimum diameter for face grooving

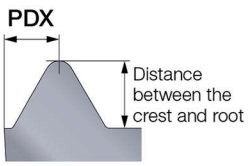


	Minimum face diameter DAXN (mm)	Maximum groove depth CDX (mm)
TCF	6	3
TCL, TCS, TCG, TCP	65	3

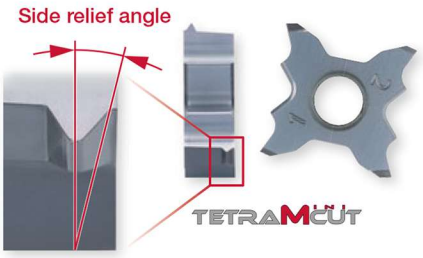


Threading

1 Excellent accessibility to the wall, minimize incomplete threads



2 Side relief angle eliminating the need for shim adjustment as with the case for a 16ER laydown insert

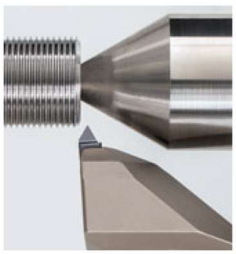


Conventional laydown insert

Shim adjustment is required to accommodate an increase in lead angle

3 High accessibility to the center lathe

TETRAMCUT
M16x1

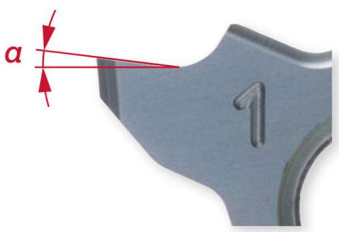


Insert: TCT18R-60N-020

Conventional
M24x1

Insert: 16ER10ISO

4 The insert features a positive rake angle on the tool holder, allowing light cutting and accurate threading operations



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TUNGALOY ADDFORCE ACCELERATED LINES

NEW PRODUCT NEWS

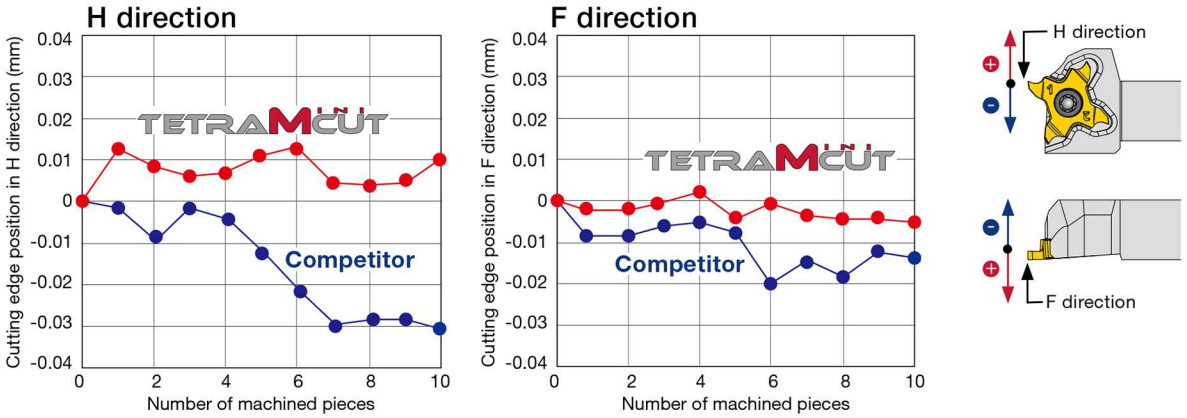
Tungaloy Report No. 416-G

MEGA TECH METAL WORK CO.,LTD

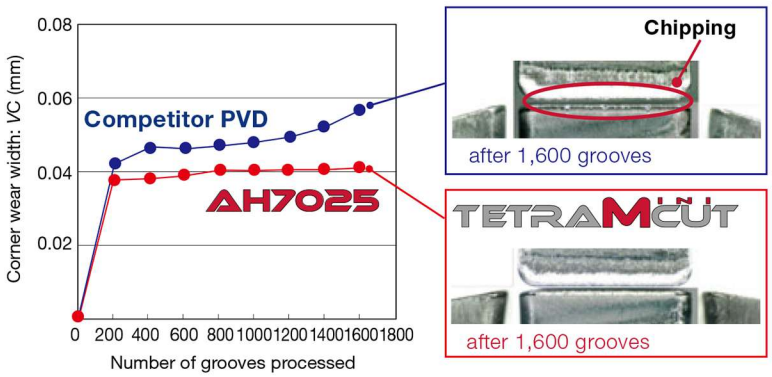
TETRAMINICUT

CUTTING PERFORMANCE

■ Tool rigidity



■ Tool life



P

Toolholder	: STCR2525Z18
Insert	: TCG18R200-020 AH7025
Workpiece material	: SCM440 / 42CrMo4
Cutting speed	: *Vc* = 180 m/min
Feed	: *f* = 0.07 mm/rev
Groove width	: 2 mm
Groove depth	: 2.5 mm

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TUNGALOY ADDFORCE ACCELERATED LINES

MEGA TECH METAL WORK CO.,LTD

■ Chip control

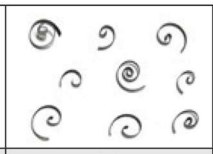
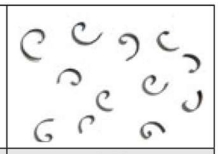
P With TCL18 style 3D chipbreaker

Toolholder : STCR2525Z18
Insert : TCL18R200-020 AH7025
Workpiece material : SCM415

Cutting speed: Vc (m/min)	0.03	0.05	0.07	0.1
150				
	Feed: *f* (mm/rev)			

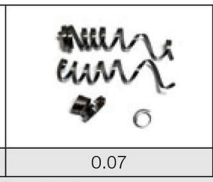
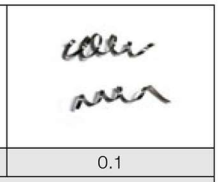
P With TCS18 style 3D chipbreaker

Toolholder : STCR2525Z18
Insert : TCS18R200-020 AH7025
Workpiece material : SCM415

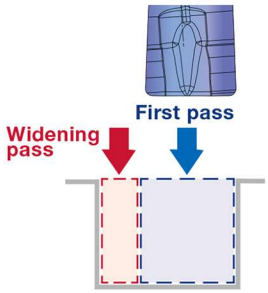
Cutting speed: Vc (m/min)	0.05	0.07	0.1	0.12
150				
	Feed: *f* (mm/rev)			

P With TCG18 style Ground-in chipbreaker

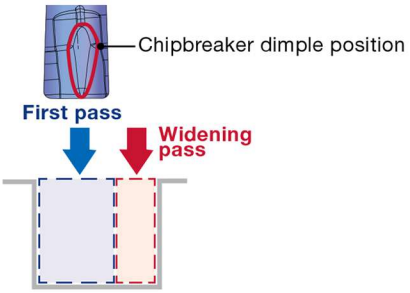
Toolholder : STCR2525Z18
Insert : TCG18R200-020 AH7025
Workpiece material : SCM415

Cutting speed: Vc (m/min)	0.03	0.05	0.07	0.1
150				
	Feed: *f* (mm/rev)			

Chipbreaker dimple position may be different depending on the groove width.
In widening, it is recommended that the chipbreaker dimple position is close to the widening pass.



Chipbreaker dimple position: left side
Widening pass: left side



Chipbreaker dimple position: right side
Widening pass: right side

NEW PRODUCT NEWS

Tungaloy Report No. 416-G

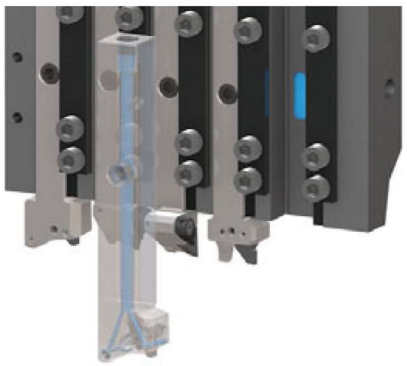
MEGA TECH METAL WORK CO.,LTD

TETRAMINI CUT

TUNGTURN JET

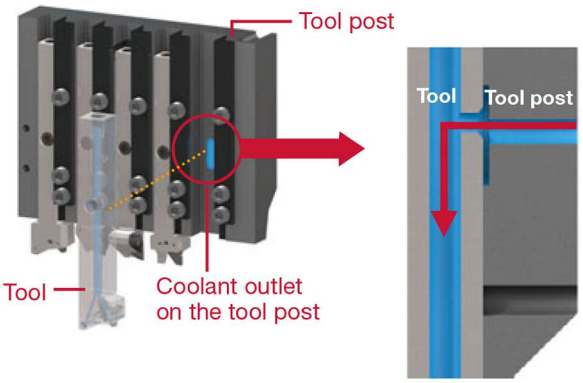
Tube-less design streamlines tool setup
Through-coolant supply enables high productivity

Direct connection



No need for coolant tube setup.
Eliminates chip entanglement on tubes and streamlines tool replacements.

Coolant is supplied from the tool post directly to the tools



S **Titanium alloy: External turning (Ti-6Al-4V)**

Material : Ti-6Al-4V
Holder : STCR1212X18-CHP
Insert : TCP18R200F-010 SH7025
Cutting speed : *Vc* = 100 m/min
Feed rate : *f* = 0.05 mm/rev
Groove width : 2 mm
Groove depth : 2.5 mm
Coolant type : Oil

TETRAMINI CUT	TUNGTURN JET 7 MPa	TUNGTURN JET 1.5 MPa	External coolant at normal pressure (at 1.5 MPa)
			

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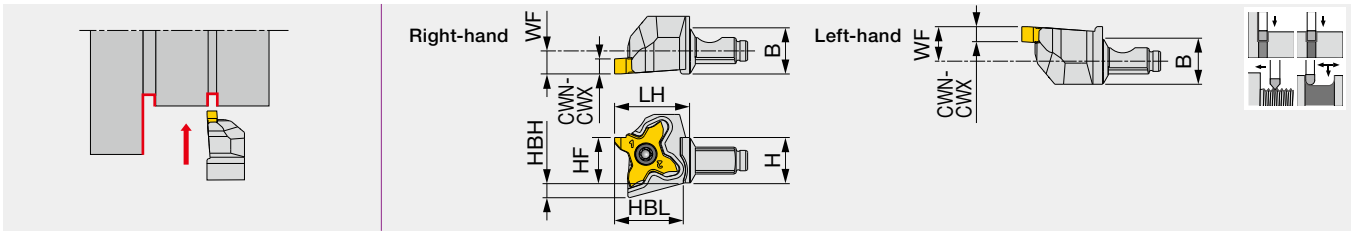
TUNGALOY ADDFORCE ACCELERATED LINES

MODULAR HEADS

QC12-STCR/L

MODUMINI TURN

Modular head for external grooving and threading



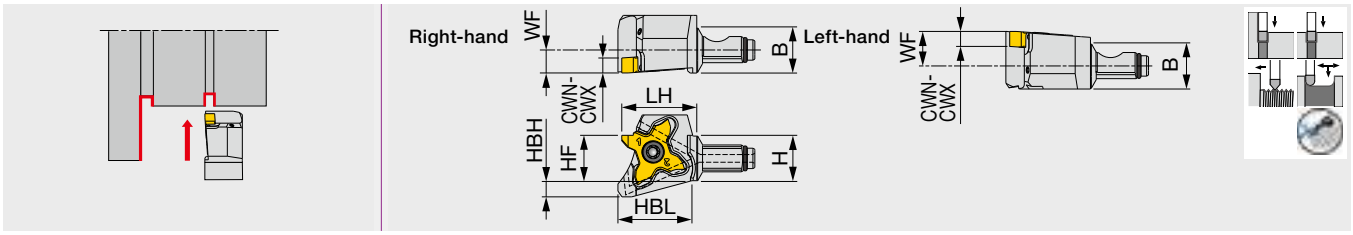
Designation	CWN	CWX	H	B	LH (1)	HF	HBH	HBL (1)	WF	Insert	Torque*	Shank
QC12-STCR/L18	0.33	3.18	12	12	19.5/21	12	3.9	17.9/18.3	6/9	TC*18R/L...	1.2	QC-12...

The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

QC12/16-STCR/L-CHP

MODUMINI TURN

Modular head for external grooving and threading, with high pressure coolant capability



Designation	CWN	CWX	H	B	LH	HF	HBH	HBL	WF (1)	Insert	Torque*	Shank
QC12-STCR/L18-CHP	0.33	3.18	12	12	21	12	4.2	19.3	6/9	TC*18R/L...	1.2	QC-12...
QC16-STCR/L18-CHP	0.33	3.18	16	16	21	16	-	-	8/13	TC*18R/L...	1.2	QC-16...

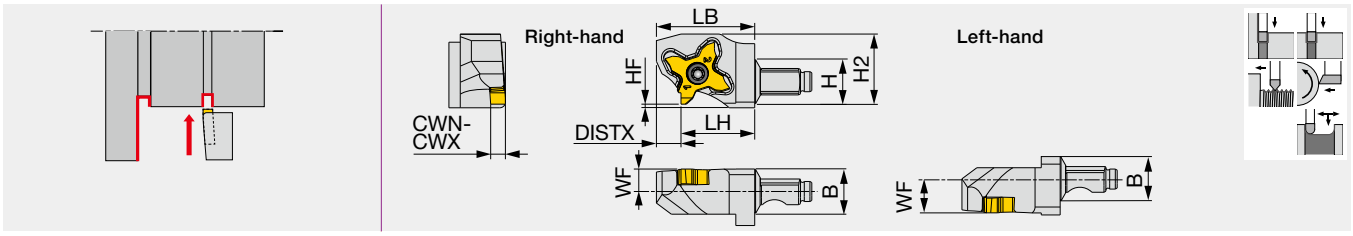
The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-STCR18	CSTC-4L100DL	T-1008/5	-
QC12-STCL18	CSTC-4L100DR	T-1008/5	-
QC12-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

QC12-STCR/L-Y

Y-axis turning modular head for external grooving and threading

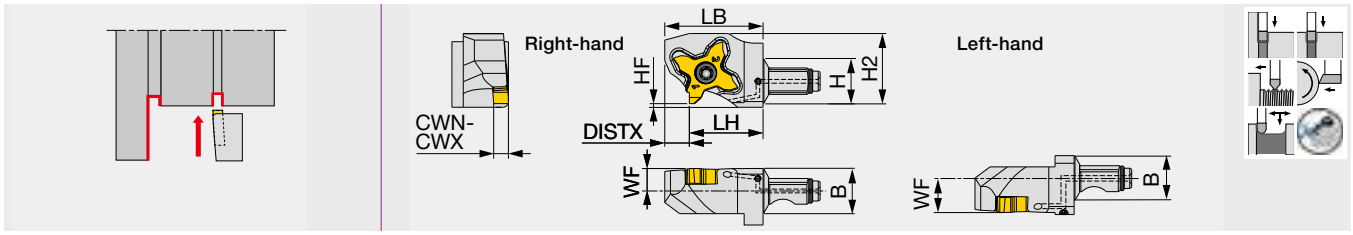


Designation	CWN	CWX	H	B	LH	HF	WF (1)	LB	H2	DISTX	Insert	Torque*	Shank
QC12-STCR/L18-Y	0.33	3.18	12	12	19.5	0	6/9	26	18.6	6.5	TC*18R/L...	1.2	QC-12...

The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

QC12/16-STCR/L-Y-CHP

Y-axis turning modular head for external grooving and threading, with high pressure coolant capability



Designation	CWN	CWX	LH	HF	WF (1)	LB	H2	DISTX	Insert	Torque*	Shank
QC12-STCR/L18-Y-CHP	0.33	3.18	19.5	0	6/9	26	18.6	6.5	TC*18R/L...	1.2	QC-12...
QC16-STCR/L18-Y-CHP	0.33	3.18	21	0	8/13	27.5	18.6	6.5	TC*18R/L...	1.2	QC-16...

Through-coolant head
The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

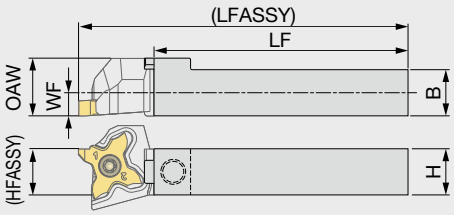
Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-Y	CSTC-4L100DL	T-1008/5	-
QC12-STCL18-Y	CSTC-4L100DR	T-1008/5	-
QC12-STCR18...	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18...	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18...	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18...	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

SHANKS

QC-1212

MODUMINI TURN

Shank for modular heads



Designation	H	B	WFASSY	LF	OAW	HFASSY	LFASSY(1)	Torque*	Head
QC-1212F	12	12	0	65	15	12	85	3	QC12...
QC-1212X	12	12	0	100	15	12	120	3	QC12...

(1) The size is true when the modular head with LH = 19.5 mm is mounted.
Torque*: Recommended clamping torque (N·m)

QC-1212/1616-CHP

MODUMINI TURN

Shank for modular heads, with high pressure coolant capability

Tube connection

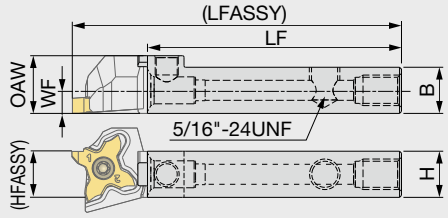


Fig.1

Direct connection

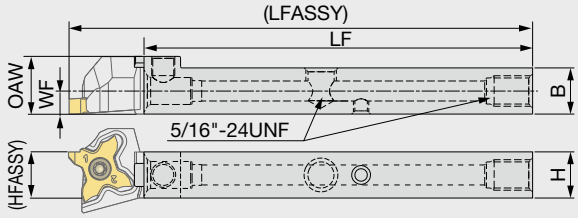


Fig.2

Designation	H	B	LF	WFASSY	OAW	HFASSY	LFASSY(1)	Torque*	Head	Fig.
QC-1212F-CHP	12	12	65	0	15	12	85	3	QC12...	1
QC-1212X-CHP (*)	12	12	100	0	15	12	120	3	QC12...	2
QC-1616X-CHP (*)	16	16	99	0	20	16	120	8.5	QC16...	2

Through-coolant shank
(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.
(1) The size is true when the modular head with LH = 19.5 mm is mounted.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
QC-1212*	SRM6X0.5-26977	P-3	-	-	-	-
QC-1212F-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	-	-
QC-1212X-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-1616X-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

QC-1216/1620-F15-CHP

Stepped-head shank for modular heads, with high pressure coolant capability

Tube connection

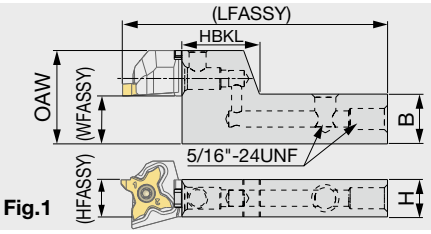


Fig.1

Direct connection

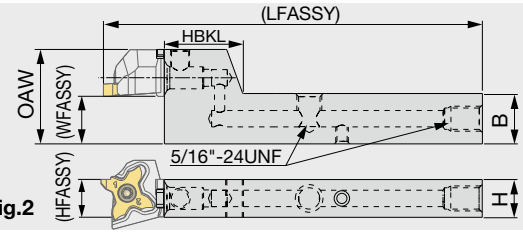


Fig.2

Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY(1)	HBKL	Torque*	Head	Fig.
QC-1216F-F15-CHP	12	16	65	30	15	12	85	25	3	QC12...	1
QC-1216X-F15-CHP (1)	12	16	100	30	15	12	120	25	3	QC12...	2
QC-1620X-F15-CHP	16	20	99	35	15	16	120	30	8.5	QC16...	2

(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.
(1) The size is true when the modular head with LH = 19.5 mm is mounted.
Torque* : Recommended clamping torque (N·m)

SPARE PARTS

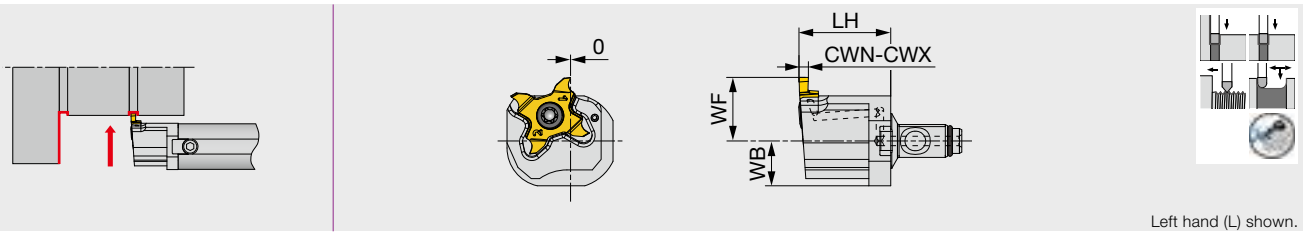
Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
QC-1216F-F15-CHP	SRM6X0.5-26977	P-3	SR5/16UNFTL360	P-4	-	-
QC-1216X-F15-CHP	SRM6X0.5-26977	P-3	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
QC-1620X-F15-CHP	SRM8X0.5	P-5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

MODULAR HEADS

QR12-STCL-CHP

MODUMINI TURN

Modular head for external grooving and threading, with high pressure coolant capability



Left hand (L) shown.

Designation	CWN	CWX	LH	WF	WB	Insert	Torque*	Shank
QR12E-STCL18-CHP	0.33	3.18	19.5	11.5	7	TC*18R...	1.2	A16*-QR12
QR12G-STCL18-CHP	0.33	3.18	19.5	13.5	8	TC*18R...	1.2	A19/20*-QR12

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

SPARE PARTS

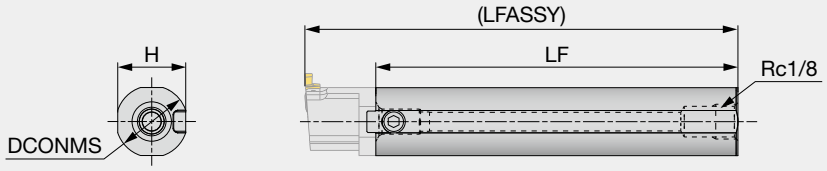
Designation	Clamping screw	Wrench	O-ring
QR12*-STCL18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70

SHANKS

A-QR12

MODUMINI TURN

Round shank for modular heads, with high pressure coolant capability



Designation	DCONMS	LF	H	LFASSY(1)	Torque*	Head
A16F-QR12	16	65	15	85	3	QR12C/E...
A16X-QR12	16	100	15	120	3	QR12C/E...
A19G-QR12	19.05	70	18	90	3	QR12D/G...
A19X-QR12	19.05	100	18	120	3	QR12D/G...
A20G-QR12	20	70	19	90	3	QR12D/G...
A20X-QR12	20	100	19	120	3	QR12D/G...

(1) The size is true when the modular head with LH = 19.5 mm is mounted.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
A**-QR12	SRM6X0.5-26977	P-3	(P-3B)

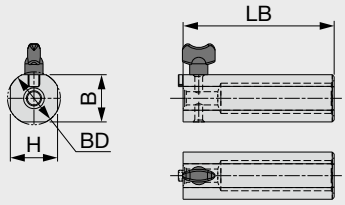
When the screw cannot be accessed with a P-3 key due to little space between the adjacent tool, use P-3B key (sold separately) with the ball-head instead.

ACCESSORY

QC-12/16D28EXC

MODUMINI-TURN

Modular head holder for insert change



Designation	BD	LB	H	B	Head
QC-12D28EXC	28	80	25	25	QC12...
QC-16D28EXC	28	80	25	25	QC16...

Note: This is a dedicated modular-head holder designed to facilitate insert changes. Do not use this holder for machining as it may cause damages to tool, workpiece, machine, and possible human injury.

SPARE PARTS

Designation	Fixing screw
QC-12D28EXC	KNOBM5X10
QC-16D28EXC	KNOBM5X10

ModuMini-Turn modular heads are small. When it is difficult to change inserts while holding the modular head with fingers, use the dedicated holder to facilitate insert changes.

QC12/16-STOPPER

MODUMINI-TURN

Protective plug for shank

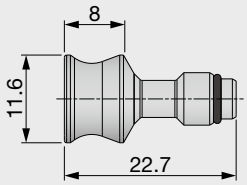


Fig. 1

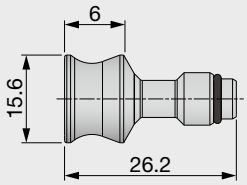


Fig. 2

Designation	Fig.	Shank
QC12-STOPPER	1	QC-12...
QC16-STOPPER	2	QC-16...

SPARE PARTS

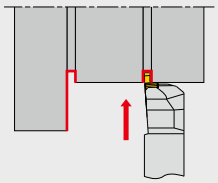
Designation	O-ring
QC12-STOPPER	ORSS-0454.5X1.0NBR70
QC16-STOPPER	ORSS-0757.5X1.0NBR70

Attach the plug to the shank to protect the coupling surface from chips, as well as prevent coolant leakage during machining

TOOLHOLDER

STCR/L-18

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



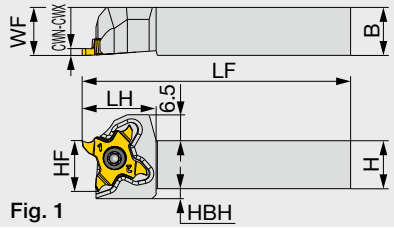


Fig. 1

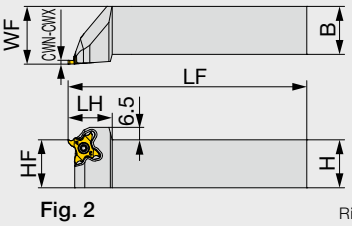
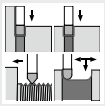


Fig. 2



Right-hand (R) shown.

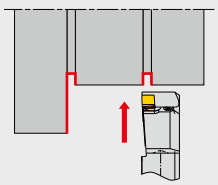
Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18R/L...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18R/L...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18R/L...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16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

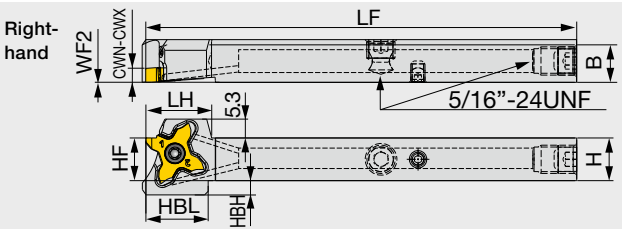
The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
Torque*: Recommended clamping torque (N·m)

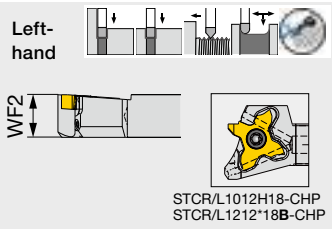
STCR/L-18-CHP

Direct connection

External grooving and threading toolholder, high pressure coolant compatible







Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF2 (1)	HBH	Insert	Torque*
STCR/L1012H18-CHP	0.33	3.18	10	12	100	17.1	17.1	10	0/12	4	TC*18R/L...	1.2
STCR/L1212X18B-CHP	0.33	3.18	12	12	120	18.5	17.5	12	0/12	4	TC*18R/L...	1.2
STCR/L1616X18-CHP	0.33	3.18	16	16	120	18.5	-	16	0/16	0	TC*18R/L...	1.2

The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS



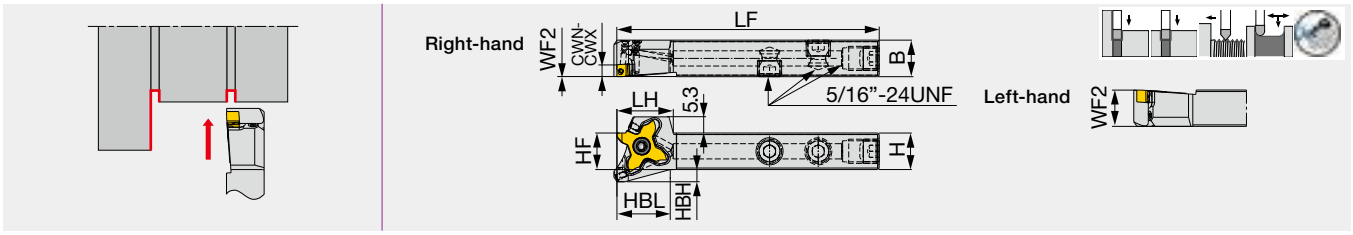



Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**18	CSTC-4L100DL	T-1008/5	-	-	-	-
STCL**18	CSTC-4L100DR	T-1008/5	-	-	-	-
STCL**18-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
STCR**18-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

STCR/L-18-CHP

Tube connection

External grooving and threading toolholder. High pressure coolant capability.



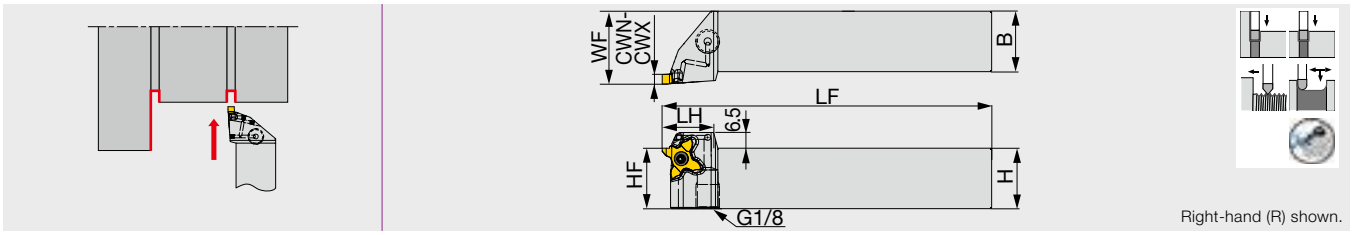
Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF2(1)	HBH	Insert	Torque*
STCR/L1212F18B-CHP	0.33	3.18	12	12	85	18.5	17.5	12	0/12	4	TC*18R/L...	1.2

The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
(1) The first value before "/" indicates for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

STCR/L-18-CHP

Tube connection

Threading tool - for external theading with high pressure coolant capability



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

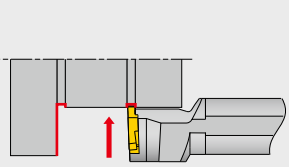
The right hand insert (R) is used for the right hand toolholders (R), and the left hand insert (L) is used for the left hand toolholders (L).
Torque*: Recommended clamping torque (N·m)

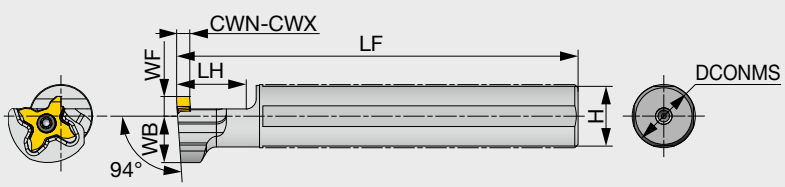
SPARE PARTS

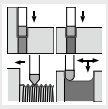
Designation	Clamping screw	Wrench	Coolant plug	Wrench
STCL**F18B-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4
STCR**F18B-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4
STCL**18-CHP	CSTC-4L100DR	T-1008/5	-	-
STCR**18-CHP	CSTC-4L100DL	T-1008/5	-	-

JS-STCL18

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







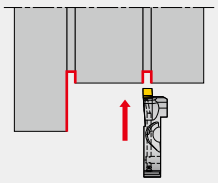
Left-hand (L) shown.

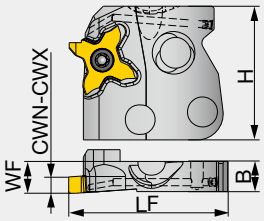
Designation	CWN	CWX	DCONMS	LF	LH	H	WB	WF	Insert	Torque*
JS14H-STCL18	0.33	3.18	14	100	20	13	14	6	TC*18R...	1.2
JS159F-STCL18	0.33	3.18	15.875	85	20	15	14	6	TC*18R...	1.2
JS16F-STCL18	0.33	3.18	16	85	20	15	14	6	TC*18R...	1.2
JS19G-STCL18	0.33	3.18	19.05	90	20	18	14	6	TC*18R...	1.2
JS19X-STCL18	0.33	3.18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

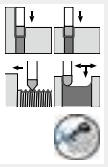
The left hand toolholder (STCL...) is used with the right hand inserts (TC*18R...)
Torque*: Recommended clamping torque (N·m)

STCAR/L18-CHP

External grooving and threading adapter, with high pressure coolant capability







Right-hand (R) shown.

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

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

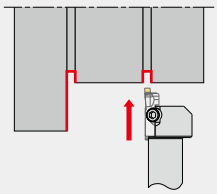
SPARE PARTS

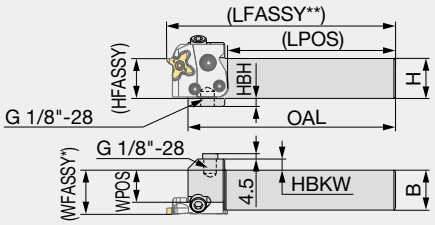
Designation	Clamping screw	Wrench
JS**STCL18	CSTC-4L100DL	T-1008/5
STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCAR18-CHP	CSTC-4L100DL	T-1008/5

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

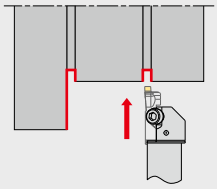
Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L18-CHP	6.5

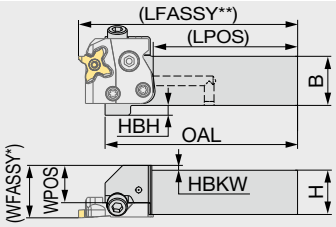
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

Recommended clamping torque (N·m)

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

Combination of adapter and shank

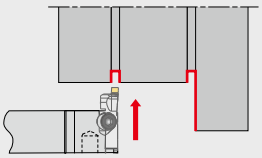
Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

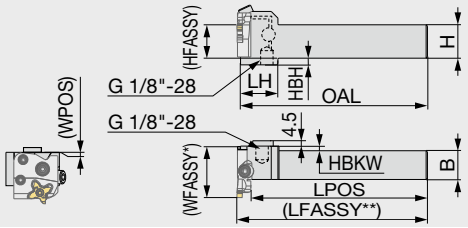
● : Corresponding

CHFVR/L-CHP

Tube connection

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





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

Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	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)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

Recommended clamping torque (N·m)

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

Combination of adapter and shank

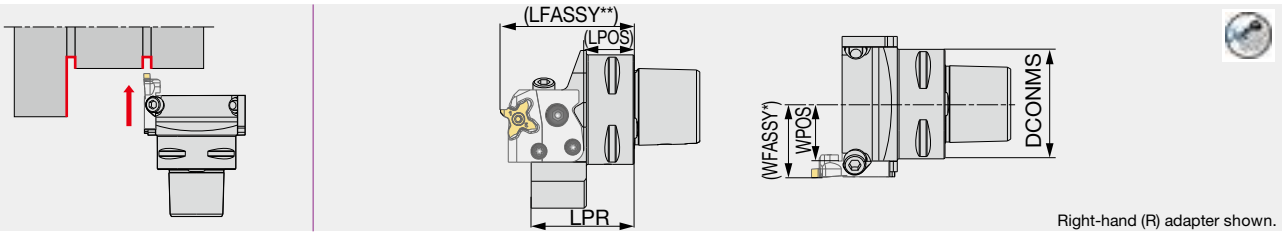
Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

C*CHSN-CHP

Direct connection

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



Right-hand (R) adapter shown.

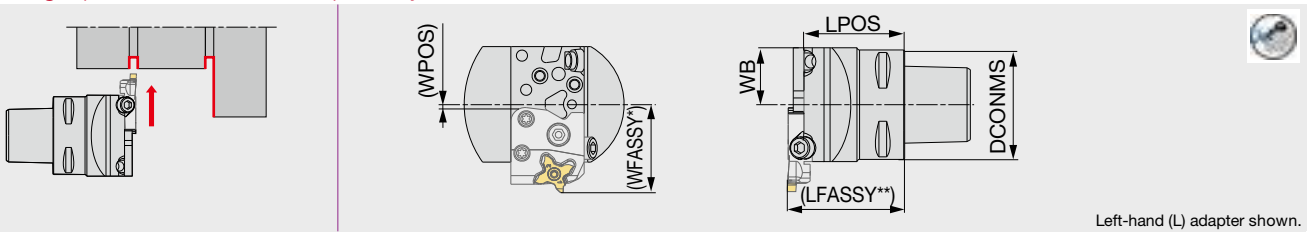
Designation	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L18-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L18-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L18-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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



Left-hand (L) adapter shown.

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

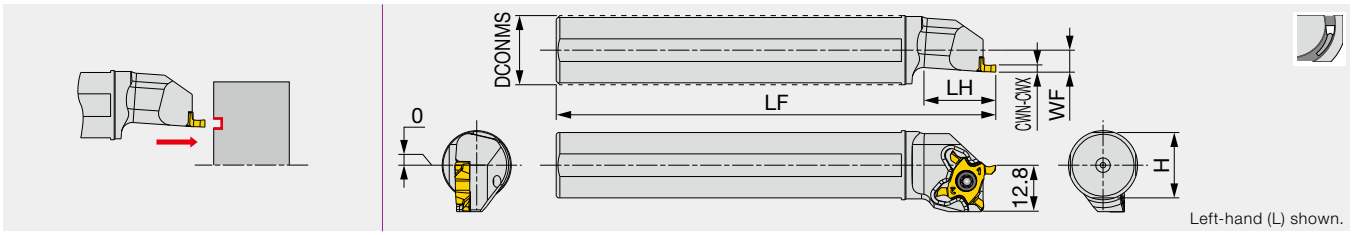
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CH**N**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

Recommended clamping torque (N·m)

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

JS-STCFL18

Face grooving toolholder with round shank

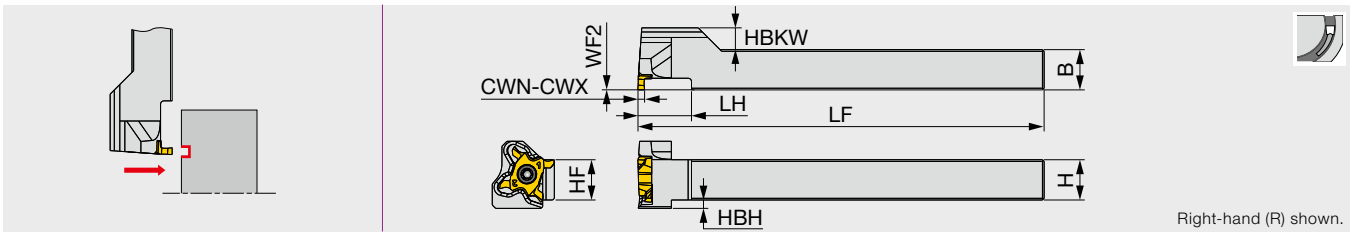


Designation	CWN	CWX	DCONMS	LF	LH	H	WF	Insert	Torque*
JS16F-STCFL18	0.5	2.5	16	85	20	15	6	TCF18L...	1.2
JS19G-STCFL18	0.5	2.5	19.05	90	20	18	6	TCF18L...	1.2
JS19X-STCFL18	0.5	2.5	19.05	120	20	18	6	TCF18L...	1.2
JS20G-STCFL18	0.5	2.5	20	90	20	19	6	TCF18L...	1.2
JS20X-STCFL18	0.5	2.5	20	120	20	19	6	TCF18L...	1.2
JS22X-STCFL18	0.5	2.5	22	120	20	21	6	TCF18L...	1.2
JS25H-STCFL18	0.5	2.5	25	100	20	24	6	TCF18L...	1.2
JS254X-STCFL18	0.5	2.5	25.4	120	20	24.5	6	TCF18L...	1.2

The left hand insert (L) is used for the left hand toolholders (L).
Torque*: Recommended clamping torque (N·m)

STCFVR-18

Face grooving toolholder with square shank, for Swiss lathes



Designation	CWN	CWX	H	B	LF	LH	HF	WF2	HBKW	HBH	Insert	Torque*
STCFVR1010H18	0.5	2.5	10	10	100	12	10	0	8.5	4.5	TCF18L...	1.2
STCFVR1212F18	0.5	2.5	12	12	85	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1212X18	0.5	2.5	12	12	120	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1616X18	0.5	2.5	16	16	120	20	16	0	2.5	0	TCF18L...	1.2

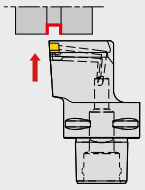
The left hand insert (L) is used for the right hand toolholders (R).
Torque*: Recommended clamping torque (N·m)

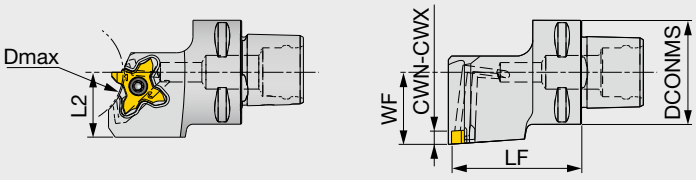
SPARE PARTS

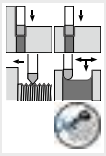

Designation	Clamping screw	Wrench
JS**-STCFL18 / STCFVR**18	CSTC-4L100DR	T-1008/5

C-STCR/L-18-CHP

External grooving and threading toolholder, with high pressure coolant capability







Right hand (R) shown.

Designation	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque*
C3STCR/L22040-18-CHP	0.33	3	32	40	20	22	32	TC*18R/L...	1.2
C4STCR/L27050-18-CHP	0.33	3	40	50	25	27	75 (1)	TC*18R/L...	1.2

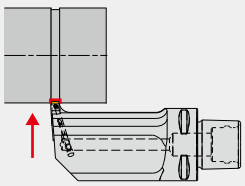
Applicable for 14 MPa coolant
Use the right hand insert (TC*18R...) with the right hand holder (STCR...). Use the left hand insert (TC*18...) with the left hand holder (STCL...).
(1) The value for 3.5 mm groove depth. Dmax varies according to the grooving depth required. Please see P9 for more detail.
Torque*: Recommended clamping torque (N·m)

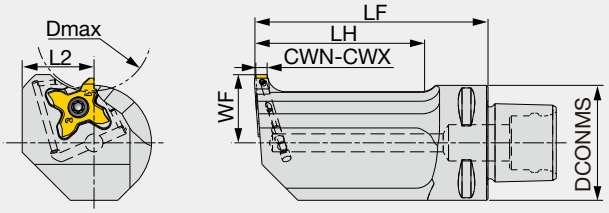
SPARE PARTS

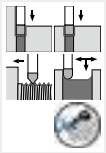
Designation	Clamping screw	Wrench
C*STCL**-18-CHP	CSTC-4L100DR	T-1008/5
C*STCR**-18-CHP	CSTC-4L100DL	T-1008/5

C-STCFL-18-CHP

External grooving and threading toolholder, with high pressure coolant capability







Left hand (L) shown.

Designation	CWN	CWX	DCONMS	LF	LH	L2	WF	Dmax	Insert	Torque*
C3STCFL18040-18-CHP	0.33	3	32	40	21.5	20	18	32	TC*18R...	1.2
C3STCFL18065-18-CHP	0.33	3	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, C3STCFL**-18-CHP	CSTC-4L100DL	T-1008/5

STANDARD LINEUP OF TETRAMINI-CUT GROOVING INSERTS

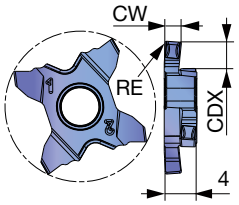
Groove width CW (mm)	Corner rad. RE (mm)	TCL18R/L (P28)			TCS18R/L (P28)			TCG18R/L (P30)				TCP18R/L (P32)	TCP18R/L-F (P33)		TCF18L (P34)	
		AH8005	AH7025	AH6235	AH8005	AH7025	AH6235	AH8005	AH7025	AH6235	NS9530	AH725	SH7025	SH725	SH7025	SH725
0.33	0.05											●	●	●		
0.43	0.05											●	●	●		
0.50	0.05											●	●	●	●	●
0.75	0.05											●	●	●		
0.95	0.05											●	●	●		
1.00	0.05												●	●	●	●
	0.1				★	●	★	★	●	★	●	●	●	●		
1.20	0.05												●	●		
	0.1				★	●	★	★	●	★		●	●	●		
1.25	0.05												●	●		
	0.1				★	●	★	★	●	★	●	●	●	●		
	0.2				★	●	★	★	●	★	●					
1.30	0.2				★	●	★	★	●	★						
1.40	0.1				★	●	★	★	●	★		●	●	●		
	0.2				★	●	★	★	●	★						
1.45	0.05												●	●		
	0.1				★	●	★	★	●	★		●				
	0.2							★	●	★	●					
1.50	0.05												●	●	●	●
	0.1	★	●	★	★	●	★	★	●	★	●	●	●	●		
	0.2	★	●	★	★	●	★	★	●	★	●					
1.60	0.2				★	●	★	★	●	★						
1.70	0.2				★	●	★	★	●	★						
1.75	0.05															
	0.1				★	●	★	★	●	★		●	●	●		
	0.2	★	●	★	★	●	★	★	●	★	●					
1.85	0.2				★	●	★	★	●	★	●					
1.95	0.2				★	●	★	★	●	★						
2.00	0.05												●	●	●	●
	0.1	★	●	★	★	●	★	★	●	★	●	●	●	●		
	0.2	★	●	★	★	●	★	★	●	★	●					
2.25	0.2				★	●	★	★	●	★						
2.30	0.2				★	●	★	★	●	★	●					
2.50	0.1				★	●	★	★	●	★		●	●	●	●	●
	0.2				★	●	★	★	●	★						
	0.3	★	●	★	★	●	★	★	●	★	●					
2.65	0.3				★	●	★	★	●	★	●					
2.80	0.3				★	●	★	★	●	★	●					
3.00	0.1	★	●	★	★	●	★	★	●	★	●	●	●	●		
	0.2	★	●	★	★	●	★	★	●	★						
	0.3	★	●	★	★	●	★	★	●	★	●					

For standard threading inserts of TetraMini-Cut, please see P36

★: Will be released in March 2025
●: Line up

INSERT

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

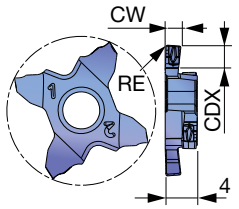
Designation	Right hand	Left hand	CW±0.02	RE	Coated AH8005	Coated AH7025	Coated AH6235	CDX
TCL18R150-010	✓		1.5	0.1	★	●	★	3.5
TCL18L150-010		✓	1.5	0.1	★	●	★	3.5
TCL18R150-020	✓		1.5	0.2	★	●	★	3.5
TCL18L150-020		✓	1.5	0.2	★	●	★	3.5
TCL18R175-020	✓		1.75	0.2	★	●	★	3.5
TCL18L175-020		✓	1.75	0.2	★	●	★	3.5
TCL18R200-010	✓		2	0.1	★	●	★	3.5
TCL18L200-010		✓	2	0.1	★	●	★	3.5
TCL18R200-020	✓		2	0.2	★	●	★	3.5
TCL18L200-020		✓	2	0.2	★	●	★	3.5
TCL18R250-030	✓		2.5	0.3	★	●	★	3.5
TCL18L250-030		✓	2.5	0.3	★	●	★	3.5
TCL18R300-010	✓		3	0.1	★	●	★	3.5
TCL18L300-010		✓	3	0.1	★	●	★	3.5
TCL18R300-020	✓		3	0.2	★	●	★	3.5
TCL18L300-020		✓	3	0.2	★	●	★	3.5
TCL18R300-030	✓		3	0.3	★	●	★	3.5
TCL18L300-030		✓	3	0.3	★	●	★	3.5

5 pieces per package

★: Will be released in March 2025

●: 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	Right hand	Left hand	CW±0.02	RE	Coated AH8005	Coated AH7025	Coated AH6235	CDX
TCS18R100-010	✓		1	0.1	★	●	★	2
TCS18L100-010		✓	1	0.1	★	●	★	2
TCS18R120-010	✓		1.2	0.1	★	●	★	2
TCS18L120-010		✓	1.2	0.1	★	●	★	2

5 pieces per package

★: Will be released in March 2025

●: Line up

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

★ : First choice

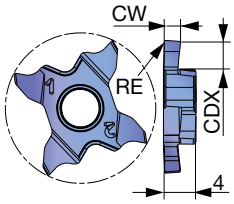
Designation	Right hand	Left hand	CW±0.02	RE	Coated			CDX
					AH8005	AH7025	AH6235	
TCS18R125-010	✓		1.25	0.1	★	●	★	2
TCS18L125-010		✓	1.25	0.1	★	●	★	2
TCS18R125-020	✓		1.25	0.2	★	●	★	2
TCS18L125-020		✓	1.25	0.2	★	●	★	2
TCS18R130-020	✓		1.3	0.2	★	●	★	3.5
TCS18L130-020		✓	1.3	0.2	★	●	★	3.5
TCS18R140-010	✓		1.4	0.1	★	●	★	3.5
TCS18L140-010		✓	1.4	0.1	★	●	★	3.5
TCS18R140-020	✓		1.4	0.2	★	●	★	3.5
TCS18L140-020		✓	1.4	0.2	★	●	★	3.5
TCS18R145-010	✓		1.45	0.1	★	●	★	3.5
TCS18L145-010		✓	1.45	0.1	★	●	★	3.5
TCS18R150-010	✓		1.5	0.1	★	●	★	3.5
TCS18L150-010		✓	1.5	0.1	★	●	★	3.5
TCS18R150-020	✓		1.5	0.2	★	●	★	3.5
TCS18L150-020		✓	1.5	0.2	★	●	★	3.5
TCS18R160-020	✓		1.6	0.2	★	●	★	3.5
TCS18L160-020		✓	1.6	0.2	★	●	★	3.5
TCS18R170-020	✓		1.7	0.2	★	●	★	3.5
TCS18L170-020		✓	1.7	0.2	★	●	★	3.5
TCS18R175-010	✓		1.75	0.1	★	●	★	3.5
TCS18L175-010		✓	1.75	0.1	★	●	★	3.5
TCS18R175-020	✓		1.75	0.2	★	●	★	3.5
TCS18L175-020		✓	1.75	0.2	★	●	★	3.5
TCS18R185-020	✓		1.85	0.2	★	●	★	3.5
TCS18L185-020		✓	1.85	0.2	★	●	★	3.5
TCS18R195-020	✓		1.95	0.2	★	●	★	3.5
TCS18L195-020		✓	1.95	0.2	★	●	★	3.5
TCS18R200-010	✓		2	0.1	★	●	★	3.5
TCS18L200-010		✓	2	0.1	★	●	★	3.5
TCS18R200-020	✓		2	0.2	★	●	★	3.5
TCS18L200-020		✓	2	0.2	★	●	★	3.5
TCS18R225-020	✓		2.25	0.2	★	●	★	3.5
TCS18L225-020		✓	2.25	0.2	★	●	★	3.5
TCS18R230-020	✓		2.3	0.2	★	●	★	3.5
TCS18L230-020		✓	2.3	0.2	★	●	★	3.5
TCS18R250-010	✓		2.5	0.1	★	●	★	3.5
TCS18L250-010		✓	2.5	0.1	★	●	★	3.5
TCS18R250-020	✓		2.5	0.2	★	●	★	3.5
TCS18L250-020		✓	2.5	0.2	★	●	★	3.5
TCS18R250-030	✓		2.5	0.3	★	●	★	3.5
TCS18L250-030		✓	2.5	0.3	★	●	★	3.5
TCS18R265-030	✓		2.65	0.3	★	●	★	3.5
TCS18L265-030		✓	2.65	0.3	★	●	★	3.5
TCS18R280-030	✓		2.8	0.3	★	●	★	3.5
TCS18L280-030		✓	2.8	0.3	★	●	★	3.5
TCS18R300-010	✓		3	0.1	★	●	★	3.5
TCS18L300-010		✓	3	0.1	★	●	★	3.5
TCS18R300-020	✓		3	0.2	★	●	★	3.5
TCS18L300-020		✓	3	0.2	★	●	★	3.5
TCS18R300-030	✓		3	0.3	★	●	★	3.5
TCS18L300-030		✓	3	0.3	★	●	★	3.5

5 pieces per package

★: Will be released in March 2025

●: Line up

TCG18R/L



Right-hand (R) shown.

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

★ : First choice

Designation	Right hand	Left hand	CW±0.02	RE	Coated			Cermet		CDX
					AH8005	AH7025	AH6235	NS9530		
TCG18R100-010	✓		1	0.1	★	●	★	●		2
TCG18L100-010		✓	1	0.1	★	●	★	●		2
TCG18R120-010	✓		1.2	0.1	★	●	★			2
TCG18L120-010		✓	1.2	0.1	★	●	★			2
TCG18R125-010	✓		1.25	0.1	★	●	★	●		2
TCG18L125-010		✓	1.25	0.1	★	●	★	●		2
TCG18R125-020	✓		1.25	0.2	★	●	★	●		2
TCG18L125-020		✓	1.25	0.2	★	●	★	●		2
TCG18R130-020	✓		1.3	0.2	★	●	★			2
TCG18L130-020		✓	1.3	0.2	★	●	★			2
TCG18R140-010	✓		1.4	0.1	★	●	★			3.5
TCG18L140-010		✓	1.4	0.1	★	●	★			3.5
TCG18R140-020	✓		1.4	0.2	★	●	★			3.5
TCG18L140-020		✓	1.4	0.2	★	●	★			3.5
TCG18R145-010	✓		1.45	0.1	★	●	★			3.5
TCG18L145-010		✓	1.45	0.1	★	●	★			3.5
TCG18R145-020	✓		1.45	0.2	★	●	★	●		3.5
TCG18L145-020		✓	1.45	0.2	★	●	★	●		3.5
TCG18R150-010	✓		1.5	0.1	★	●	★	●		3.5
TCG18L150-010		✓	1.5	0.1	★	●	★	●		3.5
TCG18R150-020	✓		1.5	0.2	★	●	★	●		3.5
TCG18L150-020		✓	1.5	0.2	★	●	★	●		3.5
TCG18R160-020	✓		1.6	0.2	★	●	★			3.5
TCG18L160-020		✓	1.6	0.2	★	●	★			3.5
TCG18R170-020	✓		1.7	0.2	★	●	★			3.5
TCG18L170-020		✓	1.7	0.2	★	●	★			3.5
TCG18R175-010	✓		1.75	0.1	★	●	★			3.5
TCG18L175-010		✓	1.75	0.1	★	●	★			3.5
TCG18R175-020	✓		1.75	0.2	★	●	★	●		3.5
TCG18L175-020		✓	1.75	0.2	★	●	★	●		3.5
TCG18R185-020	✓		1.85	0.2	★	●	★	●		3.5
TCG18L185-020		✓	1.85	0.2	★	●	★	●		3.5
TCG18R195-020	✓		1.95	0.2	★	●	★			3.5
TCG18L195-020		✓	1.95	0.2	★	●	★			3.5
TCG18R200-010	✓		2	0.1	★	●	★	●		3.5
TCG18L200-010		✓	2	0.1	★	●	★	●		3.5
TCG18R200-020	✓		2	0.2	★	●	★	●		3.5
TCG18L200-020		✓	2	0.2	★	●	★	●		3.5

5 pieces per package

★: Will be released in March 2025

●: Line up

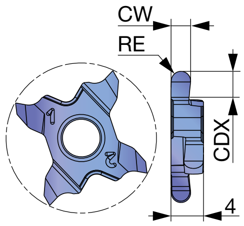
		AH8005	AH7025	AH6235	NS9530
P	Steel	★	★	★	★
M	Stainless	★	★	★	
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		
H	Hard materials				

★ : First choice

Designation	Right hand	Left hand	CW±0.02	RE	Coated			Cermet	CDX
					AH8005	AH7025	AH6235	NS9530	
TCG18R225-020	✓		2.25	0.2	★	●	★		3.5
TCG18L225-020		✓	2.25	0.2	★	●	★		3.5
TCG18R230-020	✓		2.3	0.2	★	●	★	●	3.5
TCG18L230-020		✓	2.3	0.2	★	●	★	●	3.5
TCG18R250-010	✓		2.5	0.1	★	●	★		3.5
TCG18L250-010		✓	2.5	0.1	★	●	★		3.5
TCG18R250-020	✓		2.5	0.2	★	●	★		3.5
TCG18L250-020		✓	2.5	0.2	★	●	★		3.5
TCG18R250-030	✓		2.5	0.3	★	●	★	●	3.5
TCG18L250-030		✓	2.5	0.3	★	●	★	●	3.5
TCG18R265-030	✓		2.65	0.3	★	●	★	●	3.5
TCG18L265-030		✓	2.65	0.3	★	●	★	●	3.5
TCG18R280-030	✓		2.8	0.3	★	●	★	●	3.5
TCG18L280-030		✓	2.8	0.3	★	●	★	●	3.5
TCG18R300-010	✓		3	0.1	★	●	★	●	3.5
TCG18L300-010		✓	3	0.1	★	●	★	●	3.5
TCG18R300-020	✓		3	0.2	★	●	★		3.5
TCG18L300-020		✓	3	0.2	★	●	★		3.5
TCG18R300-030	✓		3	0.3	★	●	★	●	3.5
TCG18L300-030		✓	3	0.3	★	●	★	●	3.5

5 pieces per package
★: Will be released in March 2025
●: Line up

TCG18R/L (Full R)



Right-hand (R) shown.

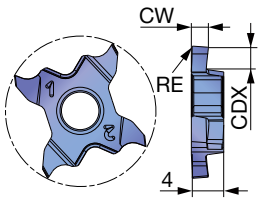
		AH8005	AH7025	AH6235
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

★ : First choice

Designation	Right hand	Left hand	CW±0.02	RE	Coated			CDX
					AH8005	AH7025	AH6235	
TCG18R100-050	✓		1	0.5	★	●	★	2
TCG18L100-050		✓	1	0.5	★	●	★	2
TCG18R158-079	✓		1.58	0.79	★	●	★	3.5
TCG18L158-079		✓	1.58	0.79	★	●	★	3.5
TCG18R200-100	✓		2	1	★	●	★	3.5
TCG18L200-100		✓	2	1	★	●	★	3.5
TCG18R239-120	✓		2.39	1.2	★	●	★	3.5
TCG18L239-120		✓	2.39	1.2	★	●	★	3.5
TCG18R300-150	✓		3	1.5	★	●	★	3.5
TCG18L300-150		✓	3	1.5	★	●	★	3.5
TCG18R318-159	✓		3.18	1.59	★	●	★	3.5
TCG18L318-159		✓	3.18	1.59	★	●	★	3.5

5 pieces per package
★: Will be released in March 2025
●: Line up

TCP18R/L (lightly honed edge)



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

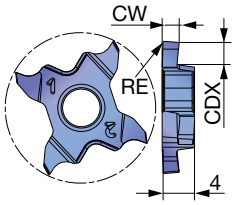
★ : First choice

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

5 pieces per package

● : Line up

TCP18R/L-F (sharp edge)



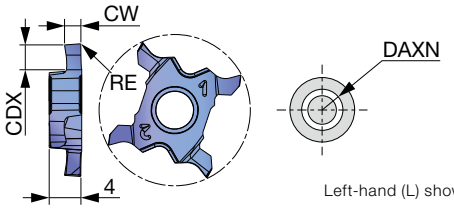
P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	★
N	Non-ferrous		
S	Superalloys	★	★
H	Hard materials		

★ : First choice

Designation	Right hand	Left hand	CW±0.02	RE	Coated		CDX
					SH7025	SH725	
TCP18R033F-005	✓		0.33	0.05	●	●	0.8
TCP18L033F-005		✓	0.33	0.05	●	●	0.8
TCP18R043F-005	✓		0.43	0.05	●	●	1.2
TCP18L043F-005		✓	0.43	0.05	●	●	1.2
TCP18R050F-005	✓		0.5	0.05	●	●	1.2
TCP18L050F-005		✓	0.5	0.05	●	●	1.2
TCP18R075F-005	✓		0.75	0.05	●	●	2
TCP18L075F-005		✓	0.75	0.05	●	●	2
TCP18R095F-005	✓		0.95	0.05	●	●	2
TCP18L095F-005		✓	0.95	0.05	●	●	2
TCP18R100F-005	✓		1	0.05	●	●	2
TCP18R100F-010	✓		1	0.1	●	●	2
TCP18L100F-010		✓	1	0.1	●	●	2
TCP18R120F-005	✓		1.2	0.05	●	●	2
TCP18R120F-010	✓		1.2	0.1	●	●	2
TCP18L120F-010		✓	1.2	0.1	●	●	2
TCP18R125F-005	✓		1.25	0.05	●	●	2
TCP18R125F-010	✓		1.25	0.1	●	●	2
TCP18L125F-010		✓	1.25	0.1	●	●	2
TCP18R140F-010-35	✓		1.4	0.1	●	●	3.5
TCP18R145F-005-35	✓		1.45	0.05	●	●	3.5
TCP18R145F-010	✓		1.45	0.1		●	2
TCP18L145F-010		✓	1.45	0.1		●	2
TCP18R145F-010-35	✓		1.45	0.1	●	●	3.5
TCP18L145F-010-35		✓	1.45	0.1	●	●	3.5
TCP18R150F-005-35	✓		1.5	0.05	●	●	3.5
TCP18R150F-010	✓		1.5	0.1		●	2
TCP18L150F-010		✓	1.5	0.1		●	2
TCP18R150F-010-35	✓		1.5	0.1	●	●	3.5
TCP18L150F-010-35		✓	1.5	0.1	●	●	3.5
TCP18R175F-005-35	✓		1.75	0.05	●	●	3.5
TCP18R175F-010	✓		1.75	0.1		●	2
TCP18L175F-010		✓	1.75	0.1		●	2
TCP18R175F-010-35	✓		1.75	0.1	●	●	3.5
TCP18L175F-010-35		✓	1.75	0.1	●	●	3.5
TCP18R200F-005-35	✓		2	0.05	●	●	3.5
TCP18R200F-010	✓		2	0.1		●	2.5
TCP18L200F-010		✓	2	0.1		●	2.5
TCP18R200F-010-35	✓		2	0.1	●	●	3.5
TCP18L200F-010-35		✓	2	0.1	●	●	3.5
TCP18R250F-010	✓		2.5	0.1		●	2.5
TCP18L250F-010		✓	2.5	0.1		●	2.5
TCP18R250F-010-35	✓		2.5	0.1	●	●	3.5
TCP18L250F-010-35		✓	2.5	0.1	●	●	3.5
TCP18R300F-010	✓		3	0.1		●	2.5
TCP18L300F-010		✓	3	0.1		●	2.5
TCP18R300F-010-35	✓		3	0.1	●	●	3.5
TCP18L300F-010-35		✓	3	0.1	●	●	3.5

5 pieces per package
● : Line up

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	RE	Coated SH7025	Coated SH725	CDX	DAXN
TCF18L050F-005	L	0.5	0.05	●	●	1	6
TCF18L100F-005	L	1	0.05	●	●	2.5	6
TCF18L150F-005	L	1.5	0.05	●	●	2.5	6
TCF18L200F-005	L	2	0.05	●	●	3	6
TCF18L250F-005	L	2.5	0.05	●	●	3	6

5 pieces per package
●: Line up

STANDARD CUTTING CONDITIONS

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

ISO	Workpiece materials	Grades	Cutting speed *Vc* (m/min)	Feed: *f* (mm/rev)		
				TCL18	TCS18	TCG18
P	Carbon steel S45C / C45, etc.	AH8005	100 - 300	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	100 - 200			
		AH6235	80 - 120			
		NS9530	120 - 250			
	Alloy steel SCM435 / 34CrMo4, etc.	AH8005	80 - 250	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	50 - 180			
		AH6235	50 - 100			
		NS9530	100 - 200			
M	Stainless steel SUS304 / X5CrNi18-9, etc.	AH8005	100 - 150	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	80 - 120			
		AH6235	50 - 120			
K	Grey cast iron FC250 / 250, etc.	AH8005	80 - 250	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	50 - 180			
		AH6235	50 - 100			
		NS9530	50 - 180			
	Ductile cast iron FCD400 / 400-15, etc.	AH8005	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	50 - 120			
		AH6235	50 - 80			
		NS9530	50 - 180			
S	Titanium alloys Ti-6Al-4V, etc.	AH8005	50 - 70	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	30 - 60			
	Superalloys Inconel718, etc.	AH8005	40 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
		AH7025	20 - 50			

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

ISO	Workpiece materials	Grades	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Carbon steel S45C / C45, etc.	SH7025	80 - 180	0.01 - 0.08
		AH725	80 - 180	0.03 - 0.1
	Alloy steel SCM435 / 34CrMo4, etc.	SH7025	80 - 180	0.01 - 0.08
		AH725	80 - 180	0.03 - 0.1
M	Stainless steel SUS304 / X5CrNi18-9, etc.	SH7025	50 - 120	0.01 - 0.08
		AH725	50 - 120	0.03 - 0.1
K	Grey cast iron FC250 / 250, etc.	AH725	50 - 180	0.03 - 0.1
		SH7025	50 - 180	0.01 - 0.08
	Ductile cast iron FCD400 / 400-15, etc.	AH725	50 - 180	0.03 - 0.1
		SH7025	50 - 180	0.01 - 0.08
S	Titanium alloys Ti-6Al-4V, etc.	SH7025	30 - 80	0.01 - 0.08
		AH725	30 - 80	0.03 - 0.1
	Superalloys Inconel718, etc.	SH7025	20 - 60	0.01 - 0.08
		AH725	20 - 60	0.03 - 0.1

TCF18L (Face grooving)

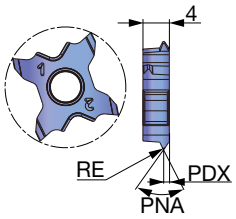
ISO	Workpiece materials	Grades	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Carbon steel S45C / C45, etc.	SH7025	30 - 100	0.01 - 0.04
	Alloy steel SCM435 / 34CrMo4, etc.	SH7025	30 - 100	0.01 - 0.04
M	Stainless steel SUS304 / X5CrNi18-9, etc.	SH7025	30 - 100	0.01 - 0.04
K	Grey cast iron FC250 / 250, etc.	SH7025	30 - 100	0.01 - 0.04
	Ductile cast iron FCD400 / 400-15, etc.	SH7025	30 - 100	0.01 - 0.04
S	Titanium alloys Ti-6Al-4V, etc.	SH7025	20 - 40	0.01 - 0.04
	Superalloys Inconel718, etc.	SH7025	10 - 30	0.01 - 0.04

Expanded product lineup

Thread type	Partial		Full profile				
	60° (P37)	55° (P37)	ISO (P36)	UN (P38)	W (P38)		UNJ (P39)
	ISO metric threads	Whitworth threads	ISO metric threads	Unified national threads series	Whitworth threads	British standard parallel pipe	Unified inch screw threads
	Unified national threads series		Coarse and fine	60° inch threads	British standard whitworth, British standard fine	55° inch thread	
	M, UN, UNC, UNF, UNEF, UNS	G, BSP, PF, BSPP	M	UN, UNR, UNC, UNRC, UNF, UNRF, UNEF, UNREF, UNS, UNRS	BSW, BSF, W	G, BSP, PF, BSPP	UNJ, UNJC, UNJF, UNEF, UNJS
TETRAMINI-CUT Threading insert	●	●	●	●	●	●	●

INSERTS

TCT18FR/R-ISO (Full profile threading insert)



Right-hand (R) shown.

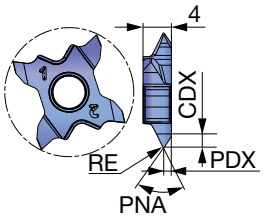
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	★
H	Hard materials			

★ : First choice

Designation	Right hand	RE	Coated SH7025	Coated SH725	Coated AH725	Pitch	PDX	PNA
TCT18FR-05ISO	✓	0.06	●	●		0.5	0.35	60°
TCT18FR-07ISO	✓	0.09	●	●		0.7	0.45	60°
TCT18FR-075ISO	✓	0.09	●	●		0.75	0.5	60°
TCT18FR-08ISO	✓	0.1	●	●		0.8	0.5	60°
TCT18R-10ISO	✓	0.13			●	1	0.6	60°
TCT18R-125ISO	✓	0.17			●	1.25	0.7	60°
TCT18R-15ISO	✓	0.2			●	1.5	0.8	60°

5 pieces per package
● : Line up

TCT18FR/R/L (Threading insert)



Right-hand (R) shown.

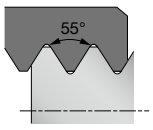
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	★
H	Hard materials			

★ : First choice

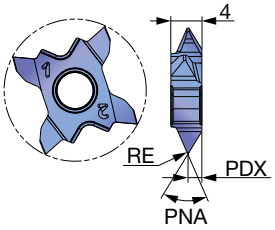
Designation	Right hand	Left hand	RE	Coated			Pitch min	Pitch max	PDX	CDX	PNA
				SH7025	SH725	AH725					
TCT18FR-60A-005	✓		0.05	●	●		0.4	1	0.6	0.99	60°
TCT18FR-60A-010	✓		0.1	●	●		1	2	1	1.63	60°
TCT18R-60N-010	✓		0.1			●	0.8	3	1.6	2.67	60°
TCT18L-60N-010		✓	0.1			●	0.8	3	1.6	2.67	60°
TCT18R-60N-020	✓		0.2			●	1.5	3	1.6	2.57	60°
TCT18L-60N-020		✓	0.2			●	1.5	3	1.6	2.57	60°

5 pieces per package
● : Line up

TCT18R/L-55 (Threading insert)



55˚ thread angle
(General purpose)



Right-hand (R) shown.

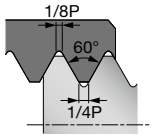
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice

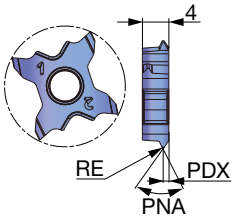
Designation	Right hand	Left hand	RE	Coated	TPI	PDX	PNA
				AH8015			
TCT18R-55N-010	✓		0.1	●	28 - 8	1.6	55°
TCT18L-55N-010		✓	0.1	●	28 - 8	1.6	55°
TCT18R-55N-020	✓		0.2	●	16 - 8	1.6	55°
TCT18L-55N-020		✓	0.2	●	16 - 8	1.6	55°

5 pieces per package
● : Line up

TCT18R-UN (Full profile threading insert)



Unified
(General purpose)



Right-hand (R) shown.

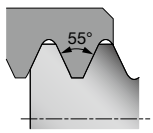
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

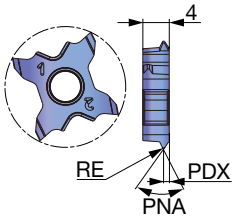
Designation	Right hand	RE	Coated AH8015	TPI	PDX	PNA
TCT18R-32UN	✓	0.1	●	32	0.5	60°
TCT18R-28UN	✓	0.12	●	28	0.55	60°
TCT18R-24UN	✓	0.13	●	24	0.65	60°
TCT18R-20UN	✓	0.16	●	20	0.75	60°
TCT18R-18UN	✓	0.18	●	18	0.8	60°
TCT18R-16UN	✓	0.2	●	16	0.9	60°

5 pieces per package
● : Line up

TCT18R-W (Full profile threading insert)



Whitworth, Parallel
pipe thread



Right-hand (R) shown.

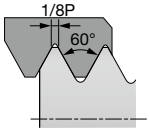
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

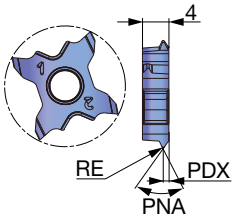
Designation	Right hand	RE	Coated AH8015	TPI	PDX	PNA
TCT18R-28W	✓	0.11	●	28	0.6	55°
TCT18R-19W	✓	0.17	●	19	0.8	55°
TCT18R-14W	✓	0.23	●	14	1.05	55°
TCT18R-11W	✓	0.29	●	11	1.3	55°

5 pieces per package
● : Line up

TCT18R-UNJ (Full profile threading insert)



UNJ
(Aerospace industry)



Right-hand (R) shown.

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

★ : First choice

Designation	Right hand	RE	Coated AH8015	TPI	PDX	PNA
TCT18R-32UNJ	✓	0.13	●	32	0.5	60°
TCT18R-28UNJ	✓	0.15	●	28	0.55	60°

5 pieces per package
● : Line up

STANDARD CUTTING CONDITIONS

TCT18R/L ／ TCT18FR

ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)
P	Steel / Alloy steel S45C, SCM440, etc. C45, 42CrMoS4, etc.	AH8015	80 - 180
		AH725	60 - 150
		SH7025	60 - 150
		AH8015	60 - 160
		AH725	60 - 150
		SH7025	60 - 150
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH8015	50 - 130
		AH725	50 - 80
		SH7025	50 - 80
K	Cast iron FC250, FC300, etc. 250, 300, etc.	AH8015	60 - 150
		AH725	50 - 100
		SH7025	50 - 100
S	Superalloys Ti-6Al-4V, Inconel718, etc.	AH8015	20 - 80
		AH725	20 - 80
		SH7025	20 - 80

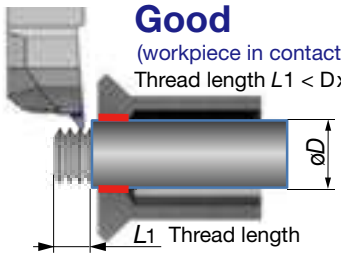
Cautions when machining in guide bushing

Right-hand tool holder

Good

(workpiece in contact with guide bush)

Thread length $L1$ < Dx1.5

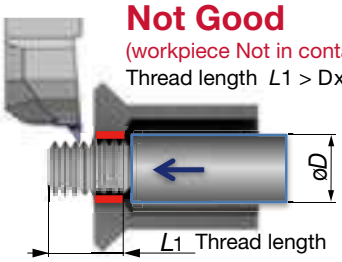


Right-hand tool holder

Not Good

(workpiece Not in contact with guide bush)

Thread length $L1$ > Dx1.5



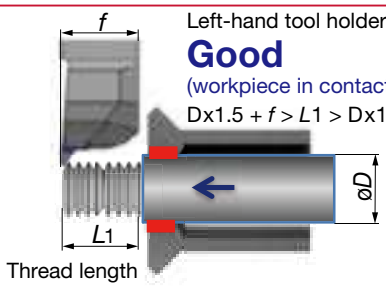
Threading operation following back-turning

Left-hand tool holder

Good

(workpiece in contact with guide bush)

Dx1.5 + f > $L1$ > Dx1.5

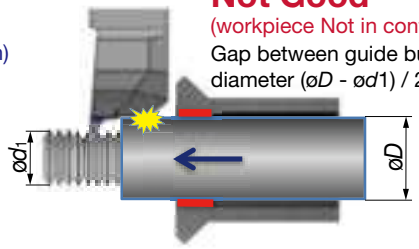


Left-hand tool holder

Not Good

(workpiece Not in contact with guide bush)

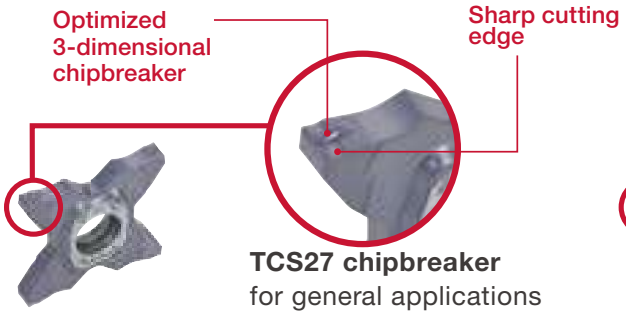
Gap between guide bush diameter and workpiece diameter (øD - ød1) / 2 > 3 mm



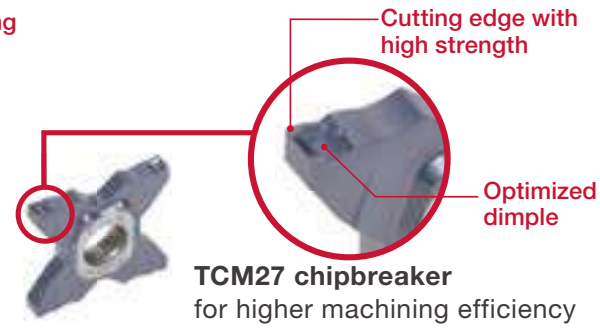
TETRAFORCE CUT

INNOVATIVE INSERTS

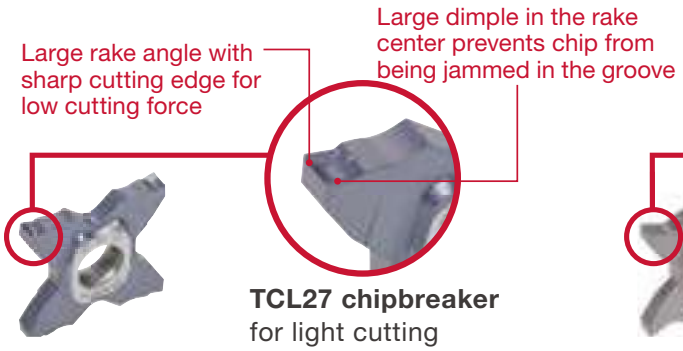
- Suitable for precision grooving or parting-off in general machining including small parts
- Two types of chipbreakers available for TC*27 inserts



TCS27 chipbreaker
for general applications

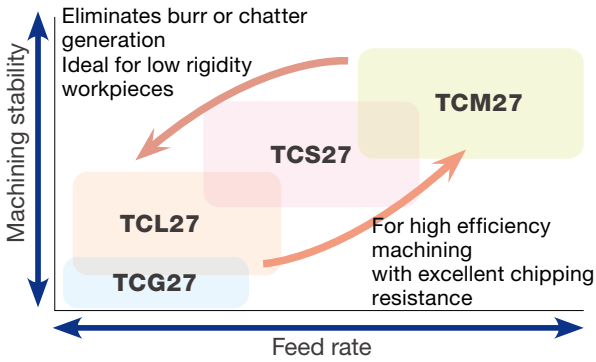


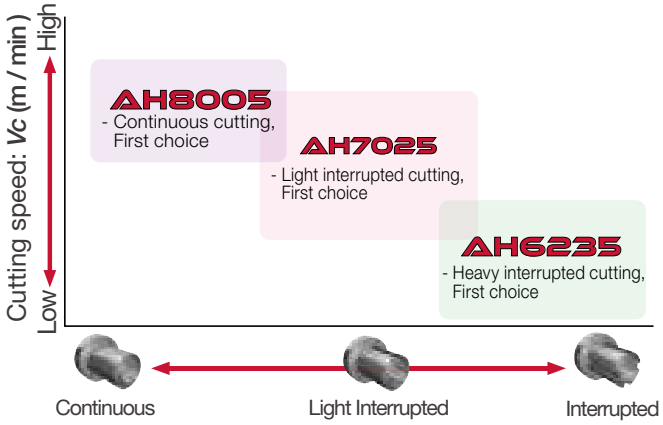
TCM27 chipbreaker
for higher machining efficiency



TCL27 chipbreaker
for light cutting

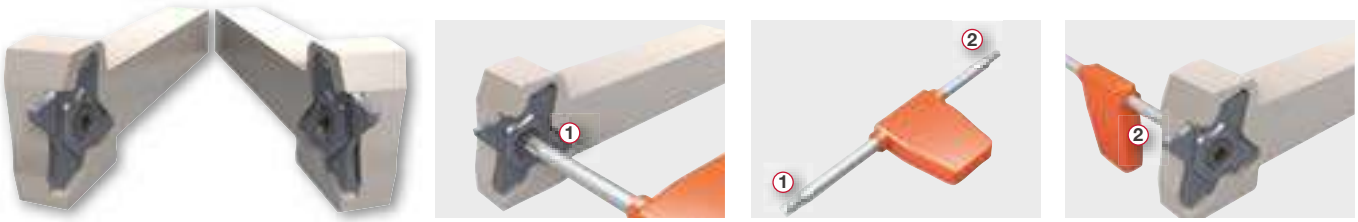
TCL27 chipbreaker
for light cutting



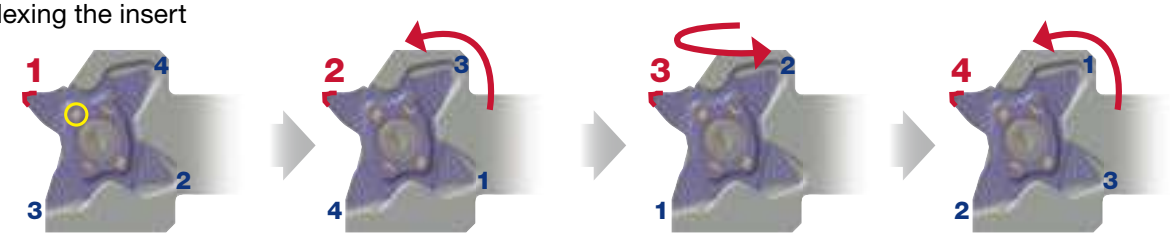


The same insert can be mounted on either the right- or left-hand holder

Insert can be clamped either from front or back side of the holder



Indexing the insert

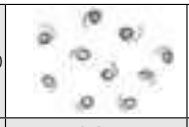
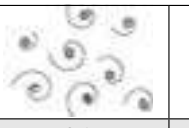


1. Right-hand edge (R) is used for the right- hand toolholders.
2. Rotate the insert
3. Flip over the insert
4. Rotate the insert

CUTTING PERFORMANCE

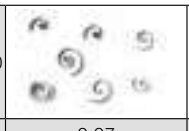
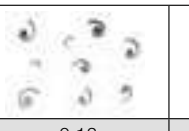
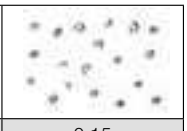
With TCL27 style 3D chipbreaker

Toolholder : STCL2525-27
Insert : TCL27-200-020 AH7025
Workpiece material : SCM415

Cutting speed: Vc (m/min)	Feed: f (mm/rev)			
	0.05	0.07	0.1	0.12
150				

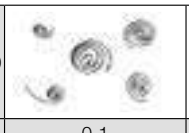
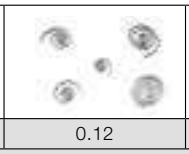
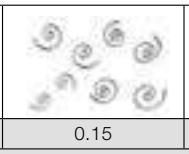
With TCS27 style 3D chipbreaker

Toolholder : STCL2525-27
Insert : TCS27-200-020 AH7025
Workpiece material : SCM415

Cutting speed: Vc (m/min)	Feed: f (mm/rev)			
	0.07	0.1	0.12	0.15
150				

With TCM27 style 3D chipbreaker

Toolholder : STCL2525-27
Insert : TCM27-200-020 AH7025
Workpiece material : SCM415

Cutting speed: Vc (m/min)	Feed: f (mm/rev)			
	0.1	0.12	0.15	0.2
150				

With TCG27 style Ground-in chipbreaker

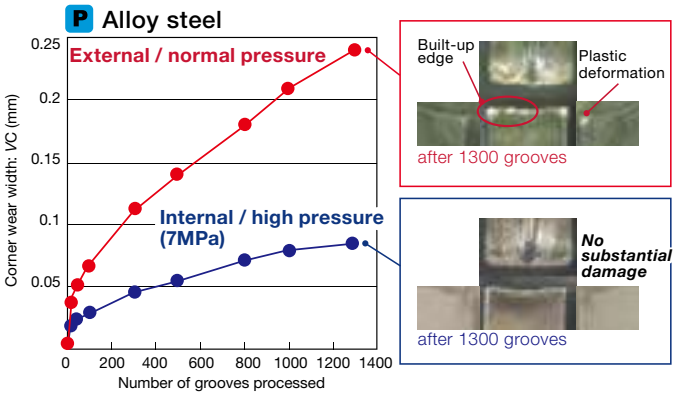
Toolholder : STCL2525-27
Insert : TCG27-200-020 NS9530
Workpiece material : SCM415

Cutting speed: Vc (m/min)	Feed: f (mm/rev)			
	0.03	0.05	0.07	0.1
150				

Benefits of using high pressure coolant

Coolant pressure comparison

Tool life



Chip form

Small and compact curls for easy evacuation

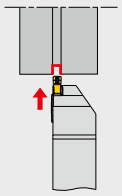
Toolholder : STCR2525-27-CHP
Insert : TCS27-200-020 AH7025
Workpiece material : SCM440 / 42CrMo4
Cutting speed : *Vc* = 180 m/min
Feed : *f* = 0.12 mm/rev
Groove width : 2 mm
Groove depth : 5 mm

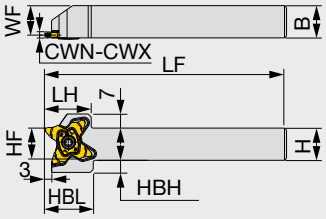
CHP type toolholders for high-pressure coolant

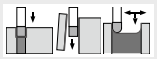
The coolant is supplied to the cutting edge providing good chip control and long tool life.

STCR/L-27

External toolholders for grooving, parting







Right-hand (R) shown.

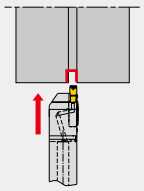
Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque*
STCR/L1010-27	0.5	3.18	10	10	120	23	24	10	8.5	9.5	TC*27...	2.5
STCR/L1212-27	0.5	3.18	12	12	120	23	24	12	10.5	8	TC*27...	2.5
STCR/L1616-27	0.5	3.18	16	16	120	23	24	16	14.5	6	TC*27...	2.5
STCR/L2020-27	0.5	3.18	20	20	120	23	24	20	18.5	2	TC*27...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

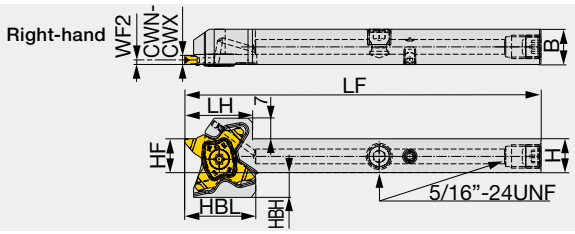
Torque*: Recommended clamping torque (N·m)

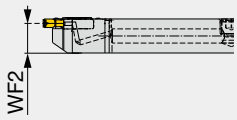
STCR/L-27-CHP

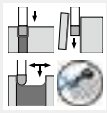
Direct connection

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









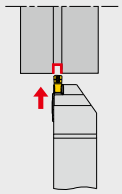
Designation	CWN	CWX	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Insert	Torque*
STCR/L1212-27-CHP	0.5	3.18	12	12	120	23	12	1.5/10.5	8	24	TC*27...	2.5

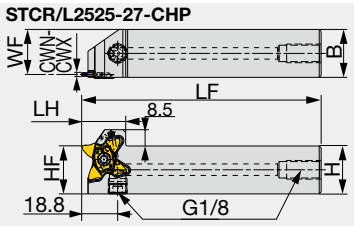
- Make sure to avoid tool interferences when used on Swiss machines
(1) The above WF2 value is valid when an insert width of CW=3 is mounted.
Torque*: Recommended clamping torque (N·m)

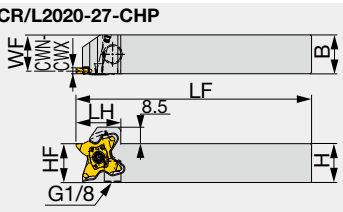
STCR/L-27-CHP

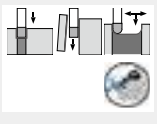
Tube connection

External grooving and parting toolholder, with high pressure coolant capability









Right-hand (R) shown.

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

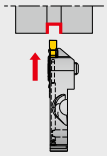
Torque*: Recommended clamping torque (N·m)

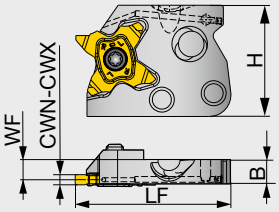
SPARE PARTS

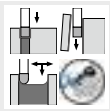
Designation	Screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**-27, STCR**-27-CHP	SR16-212-01397L	T-2010/5	-	-	-	-
STCL**-27, STCL**-27-CHP	SR16-212-01397	T-2010/5	-	-	-	-
STCR1212-27-CHP	SR16-212-01397L	T-2010/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
STCL1212-27-CHP	SR16-212-01397	T-2010/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

STCAR/L27-CHP

External grooving and parting adapter, with high pressure coolant capability







Right-hand (R) shown.

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

Torque*: Recommended clamping torque (N·m)

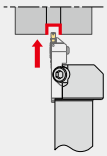
SPARE PARTS

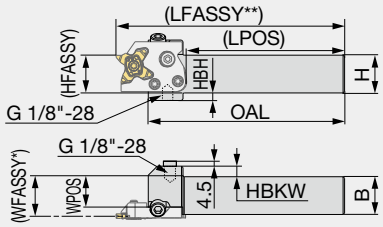
Designation	Screw	Wrench
STCAR27-CHP	SR16-212-01397L	T-2010/5
STCAL27-CHP	SR16-212-01397	T-2010/5

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/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)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 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

Recommended clamping torque (N·m)

Clamping screw	Torque (N·m)
SR M5-04451	5
SR M6X12DIN6912	8.5
SR M6X20-XT	8.5

Combination of adapter and shank

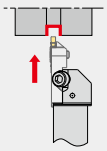
Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

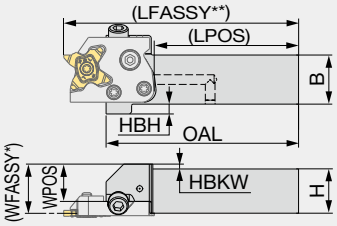
● : Corresponding

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	STCAR/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)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 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-MC	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	-

Recommended clamping torque (N·m)

Clamping screw	Torque (N·m)
SR M5-04451	5
SR M6X12DIN6912	8.5
SR M6X20-XT	8.5

Combination of adapter and shank

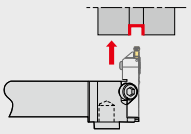
Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

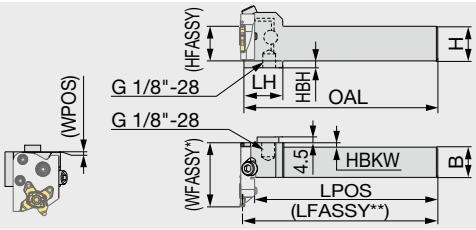
● : Corresponding

CHFVR/L-CHP

Tube connection

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





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

Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	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)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

Recommended clamping torque (N·m)

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

Combination of adapter and shank

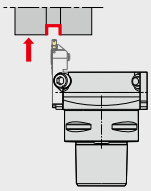
Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

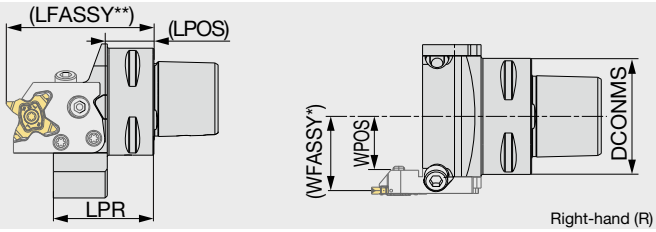
● : Corresponding

C*CHSN-CHP

Direct connection

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





Right-hand (R) adapter shown.

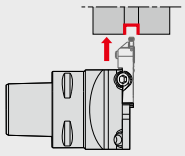
Designation	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L27-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L27-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L27-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L27-CHP	6.5

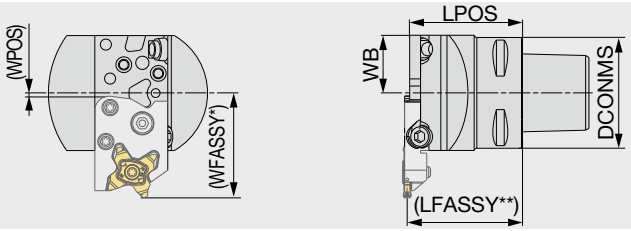
WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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





Left-hand (L) adapter shown.

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
Depending on the adapter type, the value of LFASSY or WFASSY may change.
Torque*: Recommended clamping torque (N·m)
Applicable for 30 MPa coolant
Please see P58 for instructions on installing and removing the adapter or the insert.

SPARE PARTS





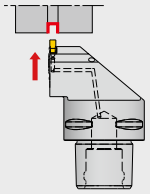

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CH**N**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

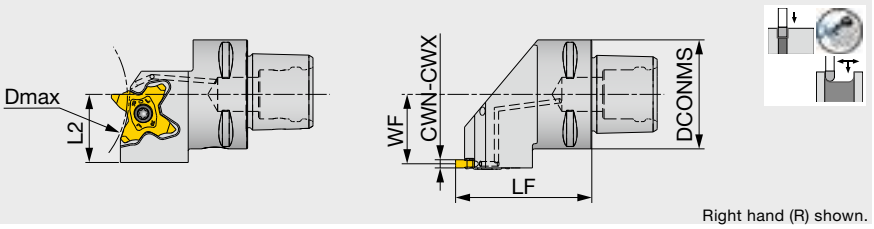
Recommended clamping torque (N·m)

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

C-STCR/L-27-CHP

External grooving toolholder, with high pressure coolant capability





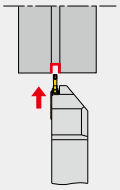
Right hand (R) shown.

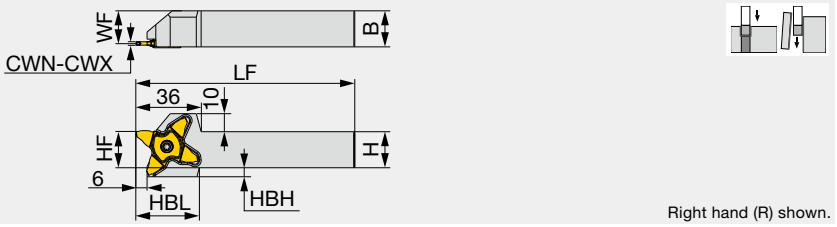
Designation	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque*
C4STCR/L27050-27-CHP	0.5	3.18	40	50	25	25.5	68 (1)	TC*27...	2.5

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

STCR/L-38

External grooving and parting toolholder





Right hand (R) shown.

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

Torque*: Recommended clamping torque (N·m)

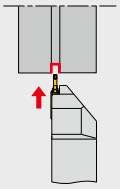
SPARE PARTS

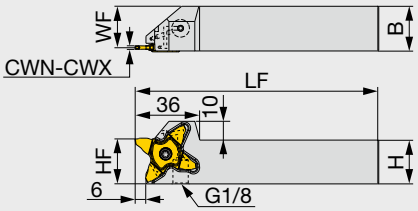
Designation	Screw	Wrench
C4STCR27050-27-CHP	SR16-212-01397L	T-2010/5
C4STCL27050-27-CHP	SR16-212-01397	T-2010/5
STCR...	SR16-212-01397L	T-2010/5
STCL...	SR16-212-01397	T-2010/5

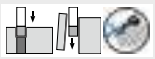
STCR/L-38-CHP

Tube connection

External grooving and parting toolholder, with high pressure coolant capability







Right hand (R) shown.

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

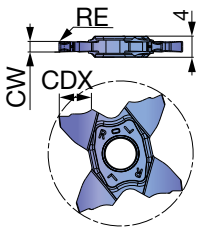
Torque*: Recommended clamping torque (N·m)

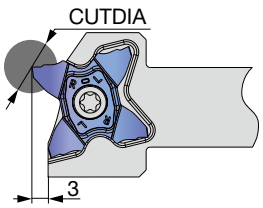
SPARE PARTS

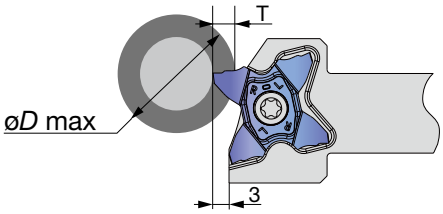
Designation	Screw	Wrench
C4STCR27050-27-CHP	SR16-212-01397L	T-2010/5
C4STCL27050-27-CHP	SR16-212-01397	T-2010/5

INSERTS

TCL27 (for grooving and parting off)







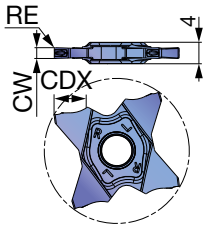
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

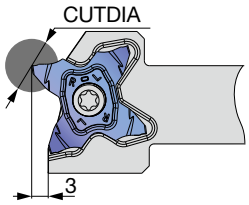
★ : First choice

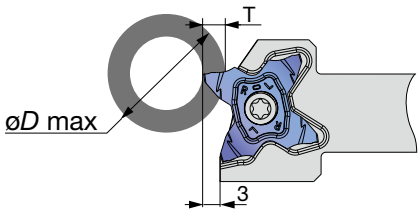
Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH8005	AH7025	AH6235	AH725			T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCL27-150-015	1.5	0.15	●	●	●	▲	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCL27-200-020	2	0.2	●	●	●	▲	6.4	12.8	∞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

5 pieces per package
●: Line up
▲: To be discontinued

TCS27 (for grooving and parting off)







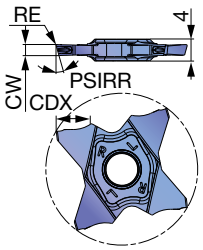
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

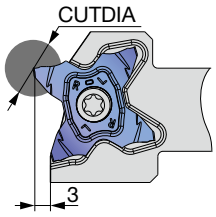
★ : First choice

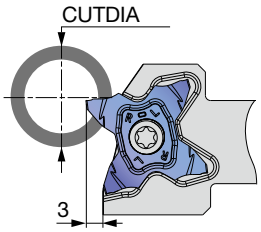
Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)											
			AH8005	AH7025	AH6235	AH725			T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCS27-050-000	0.5	0	●	●	●	▲	1	2	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.04	●	●	●	▲	2.5	5	∞	∞	-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

5 pieces per package
●: New product
●: Line up
▲: To be discontinued

TCS27-R/L (for parting off)







Right hand (R) shown.

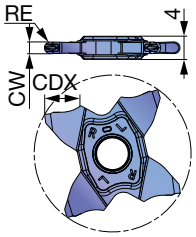
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

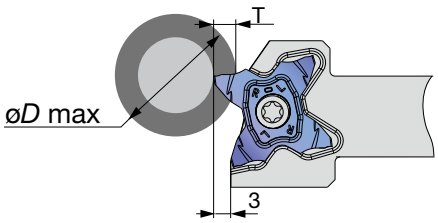
★ : First choice

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

5 pieces per package
●: Line up
▲: To be discontinued

TCS27 (for grooving and profiling, full R)





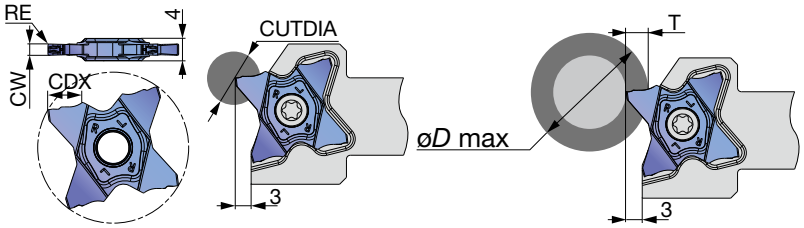
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

★ : First choice

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

5 pieces per package
●: Line up
▲: To be discontinued

TCM27 (for grooving and parting off)



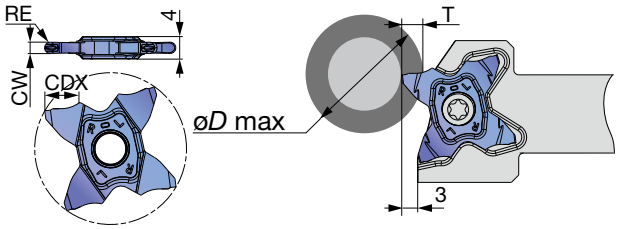
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

★ : First choice

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

5 pieces per package
●: New product
●: Line up
▲: To be discontinued

TCM27 (for grooving and profiling, full R)



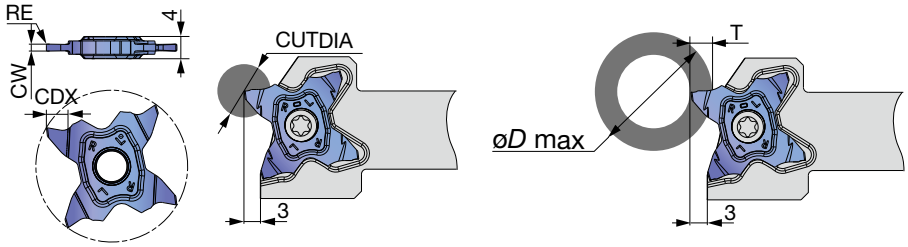
P	Steel	★	★	★	★
M	Stainless	★	★	★	★
K	Cast iron	★	★	★	★
N	Non-ferrous				
S	Superalloys	★	★		★
H	Hard materials				

★ : First choice

Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH8005	AH7025	AH6235	AH725			T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCM27-157-079	1.57	0.79	●	●	●	▲	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-200-100	2	1	●	●	●	▲	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	1.2	●	●	●	▲	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-300-150	3	1.5	●	●	●	▲	6.4	12.8	∞	600	280	180	135	105	95	85	78	55

5 pieces per package
●: Line up
▲: To be discontinued

TCG27 (for grooving and parting off)



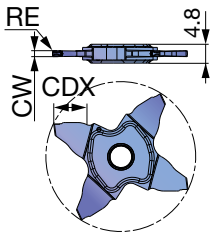
P	Steel	★			
M	Stainless				
K	Cast iron	★			
N	Non-ferrous				
S	Superalloys				
H	Hard materials				

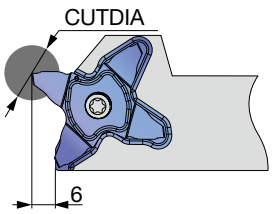
★ : First choice

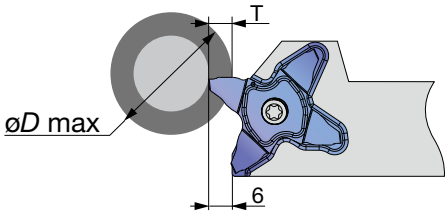
Designation	CW±0.02	RE	Cermet			CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)							
			NS9530					T≤3	T≤3.5	T≤4	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCG27-125-020	1.25	0.2	●			3.5	7	∞	600	-	-	-	-	-	-	-
TCG27-150-020	1.5	0.2	●			5.7	11.4	∞	600	280	130	50	35	-	-	-
TCG27-175-020	1.75	0.2	●			5.7	11.4	∞	600	280	130	50	35	-	-	-
TCG27-200-020	2	0.2	●			6.4	12.8	∞	600	280	130	105	85	60	50	30
TCG27-230-020	2.3	0.2	●			6.4	12.8	∞	600	280	130	105	85	60	50	30
TCG27-250-030	2.5	0.3	●			6.4	12.8	∞	600	280	130	105	85	60	50	30
TCG27-265-030	2.65	0.3	●			6.4	12.8	∞	600	280	130	105	85	60	50	30
TCG27-280-030	2.8	0.3	●			6.4	12.8	∞	600	280	130	105	95	85	78	55
TCG27-300-030	3	0.3	●			6.4	12.8	∞	600	280	135	105	95	85	78	55

5 pieces per package
●: Line up

TCL38







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

★ : First choice

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

5 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

TCL27, TCS27, TCM27, TCG27, TCL38

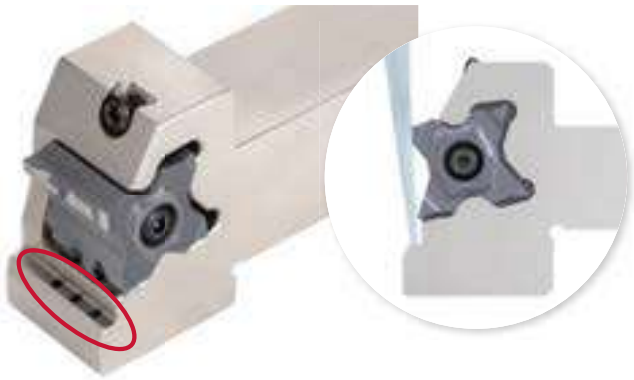
ISO	Workpiece materials	Grades	Cutting speed *Vc* (m/min)	Feed: *f* (mm/rev)							Depth of cut for profiling (with full radius insert)
				Grooving, Parting off				Parting off (with hand)	Profiling (with full radius insert)		
				TCL	TCS	TCM	TCG	TCS	TCS	TCM	
P	Carbon steel S45C / C45, etc.	AH8005	100 - 300	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
		AH7025	100 - 200								
		AH6235	80 - 120								
		NS9530	120 - 250								
	Alloy steel SCM435 / 34CrMo4, etc.	AH8005	80 - 250	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
		AH7025	50 - 180								
		AH6235	50 - 100								
		NS9530	100 - 200								
M	Stainless steel SUS304 / X5CrNi18-9, etc.	AH8005	100 - 150	0.03 - 0.12	0.05 - 0.15	0.05 - 0.2	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
		AH7025	80 - 120								
		AH6235	50 - 120								
K	Grey cast iron FC250 / 250, etc.	AH8005	80 - 250	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
		AH7025	50 - 180								
		AH6235	50 - 100								
		NS9530	50 - 180								
	Ductile cast iron FCD400 / 400-15, etc.	AH8005	80 - 180	0.03 - 0.12	0.05 - 0.15	0.05 - 0.2	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
		AH7025	50 - 120								
		AH6235	50 - 80								
		NS9530	50 - 180								
S	Titanium alloys Ti-6Al-4V, etc.	AH8005	50 - 70	0.03 - 0.12	0.05 - 0.15	0.05 - 0.15	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.1	0.5
		AH7025	30 - 60								
	Superalloys Inconel718, etc.	AH8005	40 - 60	0.03 - 0.12	0.05 - 0.15	0.05 - 0.15	0.03 - 0.1	0.04 - 0.12	0.05 - 0.1	0.05 - 0.1	0.5
		AH7025	20 - 50								

Economical custom profile grooving tools with four wide cutting edges

Multiple production steps, conventionally required to form a complex profile, can be combined into a single process, enabling reduced cycle time and minimized downtime.

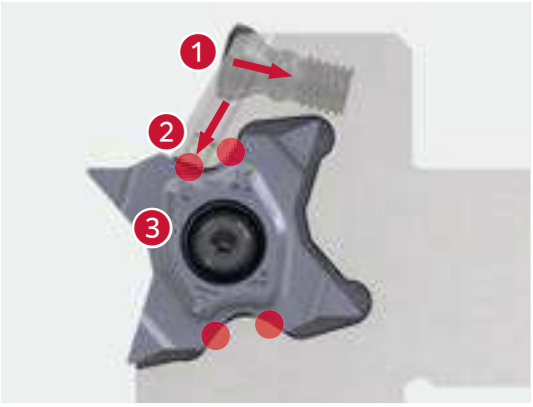
- Insert blanks in 3 different grooving widths: 10, 15 and 20 mm for TetraForce-Cut 27 type
- Custom shaped inserts can be requested based on customers part drawing specifications
- Smart clamping holder design for stable and robust mounting of wide grooving inserts
- High-pressure internal coolant toolholder: 20x20 mm, 25x25 mm

Blank for wide profile grooving

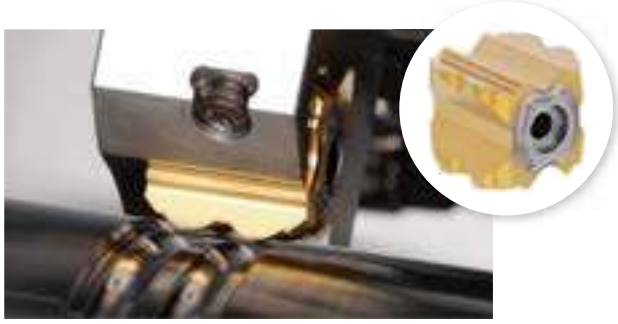


Smart insert clamping

1. The screw pushes the pin downward as tightened
2. The pin descends so that it pushes down the insert
3. Securely fix the insert in place by providing support at four points within the pocket, effectively preventing the screw from loosening due to cutting forces during machining



Reference for custom profile grooving inserts with wide cutting edges

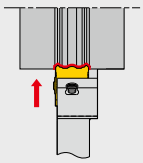


TOOLHOLDER

STCR/L-27W-CHP

Tube connection

External profile grooving toolholder, with high pressure coolant capability



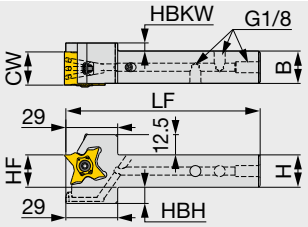


Fig. 1

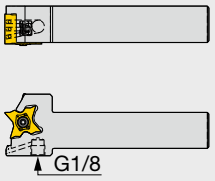


Fig. 2

Right-hand (R) shown.

Designation	CW	H	B	LF	HF	HBH	HBKW	Insert	Torque*	Fig.
STCR/L2020-27W10-CHP	10.5	20	20	120	20	13	-	TCGB27W10	2.2	1
STCR/L2020-27W15-CHP	15.5	20	20	120	20	13	-	TCGB27W15	2.2	1
STCR/L2020-27W20-CHP	20.5	20	20	120	20	13	5	TCGB27W20	2.2	1
STCR/L2525-27W10-CHP	10.5	25	25	135	25	8	-	TCGB27W10	2.2	2
STCR/L2525-27W15-CHP	15.5	25	25	135	25	8	-	TCGB27W15	2.2	2
STCR/L2525-27W20-CHP	20.5	25	25	135	25	8	-	TCGB27W20	2.2	2

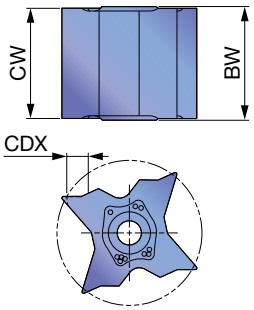
Torque*: Recommended clamping torque (N·m)

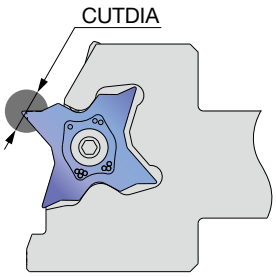
SPARE PARTS

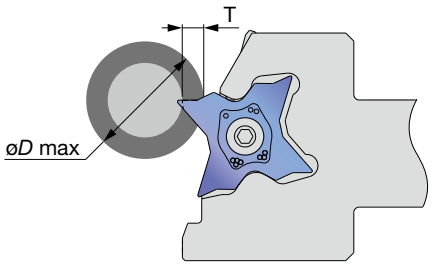
Designation	Clamping pin	Pin screw	Wrench 1	Clamping screw	Wrench 2	Coolant plug	Wrench 3
STCR/L2020-27W10-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X16-D7	P-2.5	PLUGG1/8-6.5TL360	P-5
STCR/L2020-27W15-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X20-D7	P-2.5	PLUGG1/8-6.5TL360	P-5
STCR/L2020-27W20-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X23-D7	P-2.5	PLUGG1/8-6.5TL360	P-5
STCR/L2525-27W10-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X16-D7	P-2.5	-	-
STCR/L2525-27W15-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X20-D7	P-2.5	-	-
STCR/L2525-27W20-CHP	PIN-TQ-W-T	TS40F120A	T-15F	BH M4X0.7X23-D7	P-2.5	-	-

INSERT

TCGB27W (Blank for wide profile grooving)







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

★ : First choice

Designation	CW±0.1	BW	Uncoated TH10	CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max) T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCGB27W10	10.5	11.1	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCGB27W15	15.5	16.1	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCGB27W20	20.5	21.1	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55

These are blanks (semi-finished products) for wide profile grooving inserts that can be tailored.

1 piece per package

● : Line up

INSTRUCTIONS FOR CHP BLADE ASSEMBLY/ DISASSEMBLY

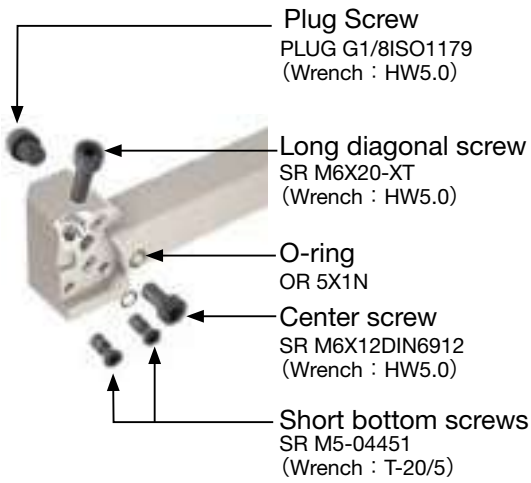
Blade assembly

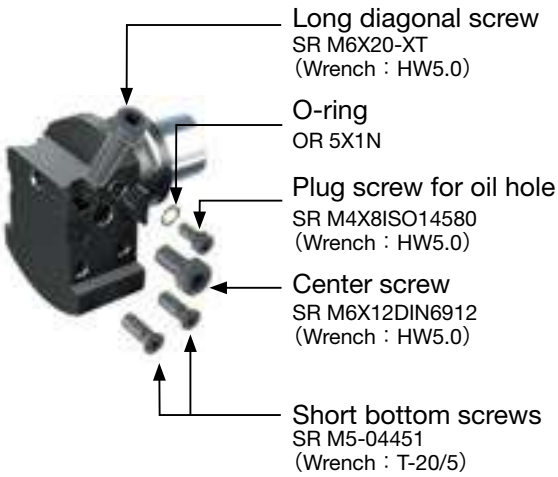
Remove all 4 screws and ensure the O rings are all in place.

Place the blade and tighten 2 bottom clamping screws.

Tighten the fixing screw in the center.

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





▶ All parts listed here are included in the tool holder.

Connecting hose

Fig.1

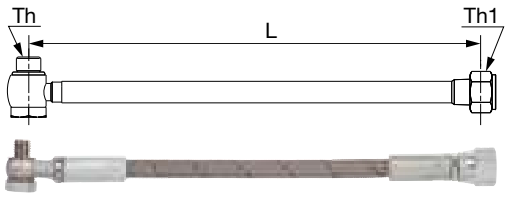
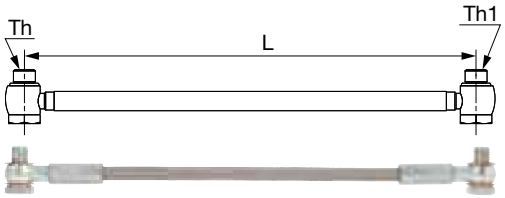
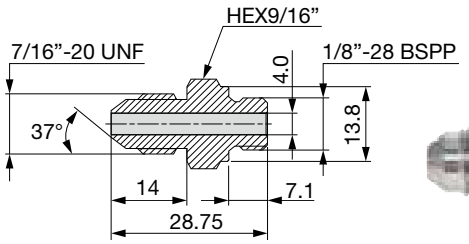


Fig.2



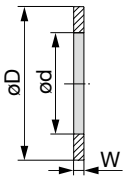
Designation	Length L	Screw Th	Screw Th1	Max. pressure (MPa)	Fig.
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

Connector



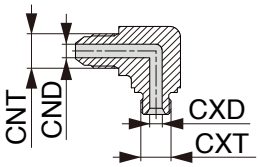
Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer

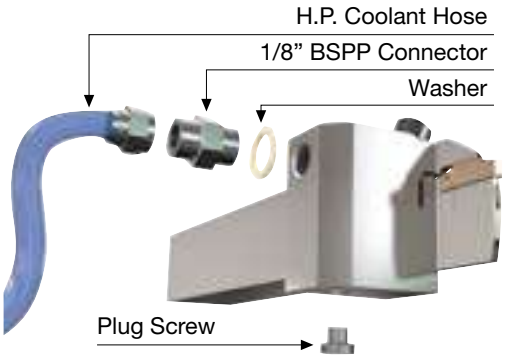


Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1
CHP-COPPER-SEAL5/16	11.9	8.15	1.35
CHP-COPPER-SEAL5/16-2.5	9.4	8	2.5

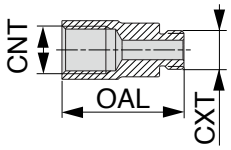
Connector elbow



Designation	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



Connector for small lathe with seal washer



Designation	CNT	CXT	OAL
CHP-CONECTOR5/16-G1/8	G1/8"-28 BSPP	5/16"-24 UNF	25
CHP-CONNECTOR-G1/8-R1/8	G1/8"-28 BSPP	R1/8"-28 BSPT	25

Expedited delivery service for special grooving insert

Expedited delivery service for special grooving inserts is rendered under the following lead time and quantity terms. Please note that this service is applicable only for the order for an initial test batch; a repeat order is to be placed through the regular ordering process.

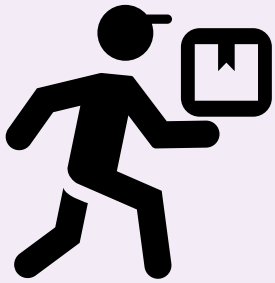
ORDER
3 - 15 pcs.

LEAD TIME
from the point of order receipt
(excluding transportation)

COATED INSERT
4 weeks

NON-COATED INSERT
3 weeks

DELIVERY



Will be updated in March 2025

TETRAMINI-CUT

18 size

Special width & corner radii

With chamfer edges

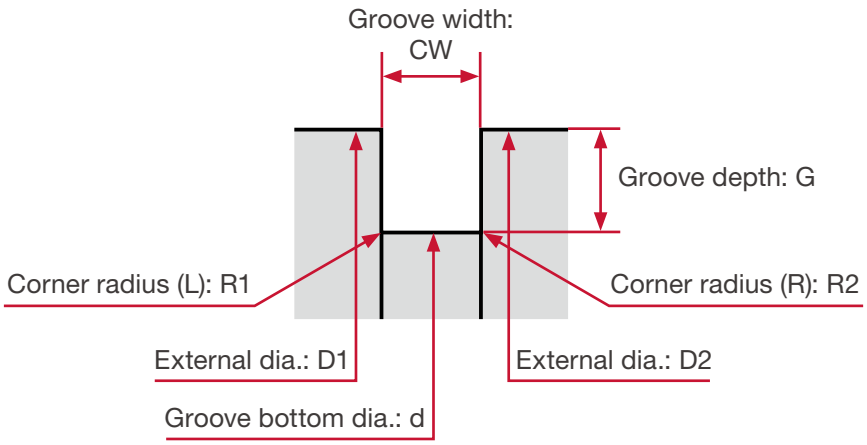
TETRAFORCE-CUT

27 size

Special width & corner radii

With chamfer edges

SPECIAL WIDTH & CORNER RADII



TETRAMINICUT

Groove width (CW)	Max. groove depth (G)	Corner radii (R1 / R2)	Toolholder
0.33 ~ 0.49 mm	~ 1 mm	0 or 0.05 ~ CW/2 (Full radius is available)	STCR/L*****-18
0.50 ~ 0.74 mm	~ 2 mm		
0.75 ~ 3.18 mm	~ 2.5 mm		

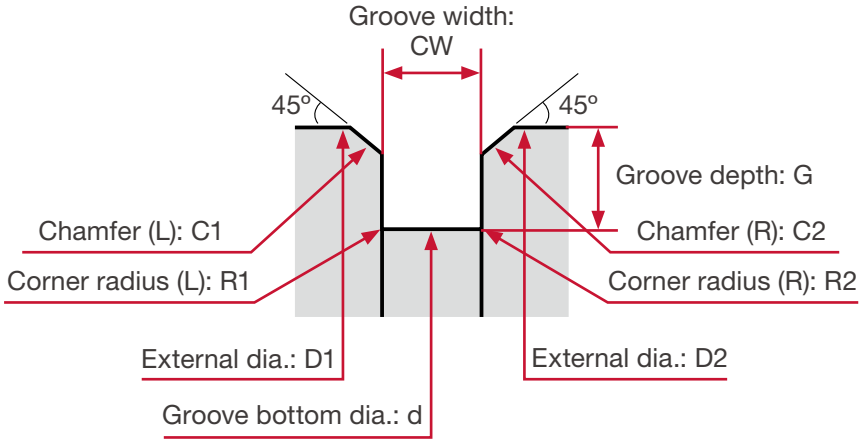
**Tolerances of the insert are based on the standard item.*

TETRAFORCECUT

Groove width (CW)	Max. groove depth (G)	Corner radii (R1 / R2)	Toolholder
0.33 ~ 0.49 mm	~ 1 mm	0 or 0.05 ~ CW/2 (Full radius is available)	STCR/L*****-27
0.50 ~ 0.99 mm	~ 2.5 mm		
1.0 ~ 1.49 mm	~ 3.5 mm		
1.50 ~ 1.99 mm	~ 5.7 mm		
2.00 ~ 3.18 mm	~ 6.4 mm		

**Tolerances of the insert are based on the standard item.*

GROOVING & CHAMFERING



TETRAMINICUT

Groove width + chamfer width (CW+2C)	Max. groove depth (G)	Corner radii (R1 / R2)	Toolholder
0.5 ~ 3.5 mm	0.50 ~ 2 mm	0 or 0.05 ~ CW/2 (Full radius is available)	STCR/L*****-18

**Tolerances of the insert are based on the standard item.*

Max. width of chamfer is 0.5 mm.

Some combinations of a groove width, depth, a corner radius(R), and chamfer may be unable to be manufactured.

TETRAFORCECUT

Groove width + chamfer width (CW+2C)	Max. groove depth (G)	Corner radii (R1 / R2)	Toolholder
0.5 ~ 3 mm	0.50 ~ 3 mm	0 or 0.05 ~ CW/2 (Full radius is available)	STCR/L*****-27

**Tolerances of the insert are based on the standard item.*

Max. width of chamfer is 0.5 mm.

Some combinations of a groove width, depth, a corner radius(R), and chamfer may be unable to be manufactured.

CONTACT US

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