

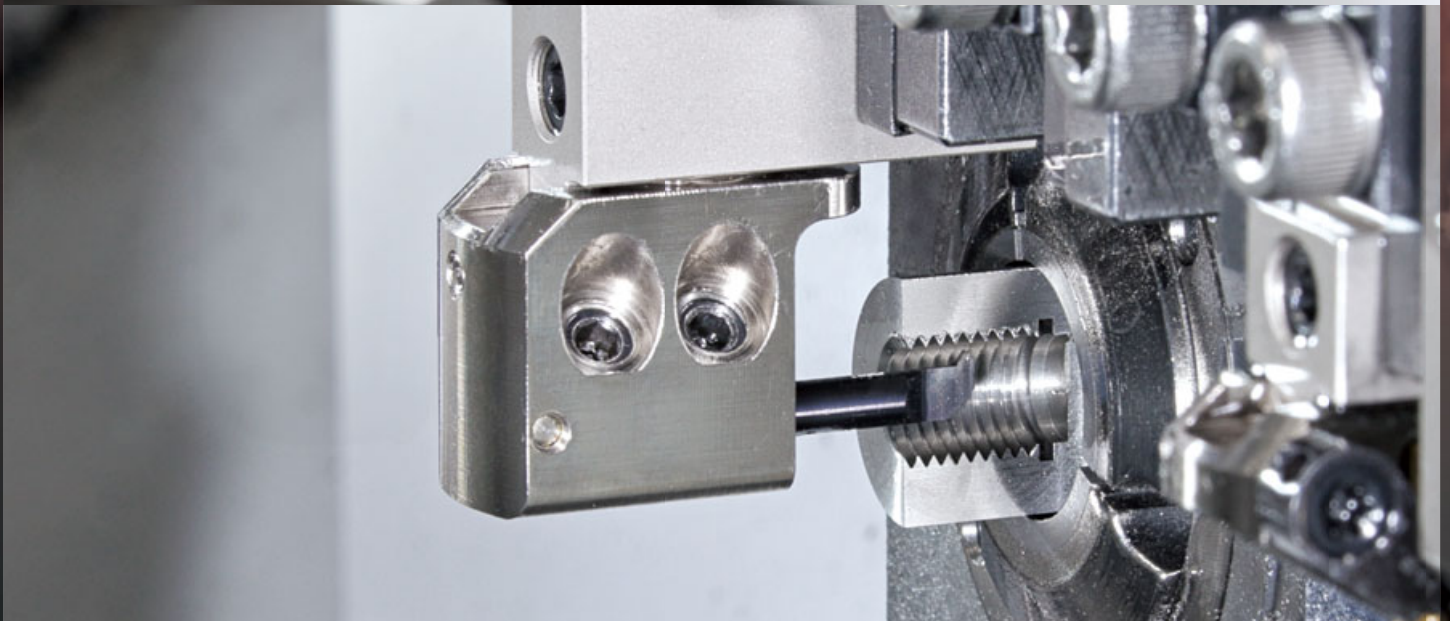


Exchangeable head turning tool system for Swiss machines

MODUM^{INI}TURN

Tungaloy Report No. 541-G

Introducing two new modular heads— ER11 collet connection and TinyMini-Turn







MODUM^{INI}TURN



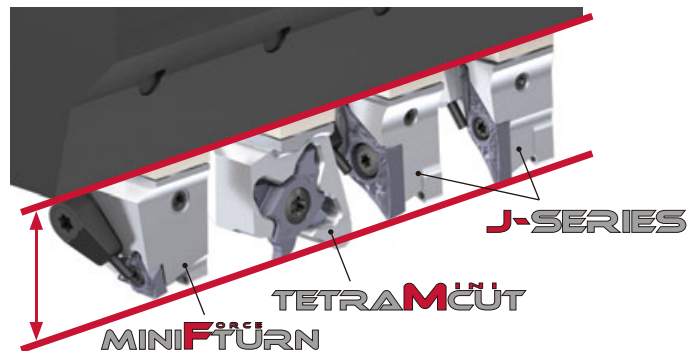
Significantly reduces machine downtime
for changing tools and setups

Modular style Swiss turning tool system facilitates tool changes with high repeatability

Features

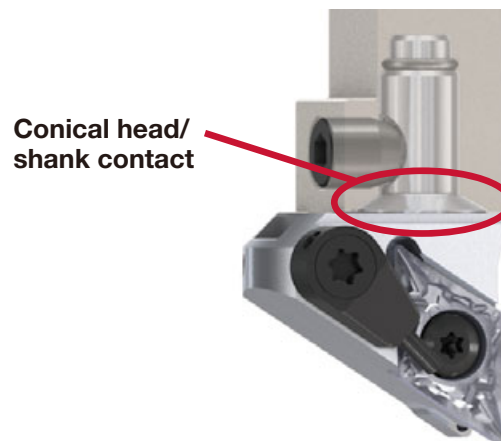
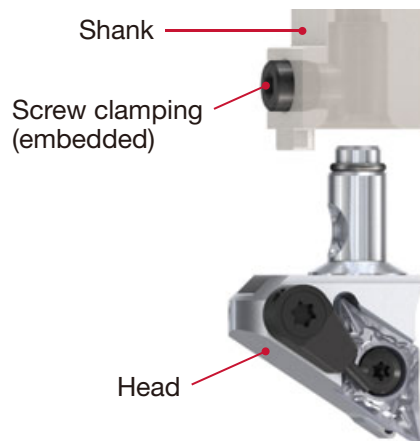
■ Unified cutting head sizes

The cutting heads allow easy tool changes without removing the shank from the tool post.



■ Unique coupling design

Simply loosen the clamping screw for easy tool exchanges. Unique coupling design allows extremely high repeatability.

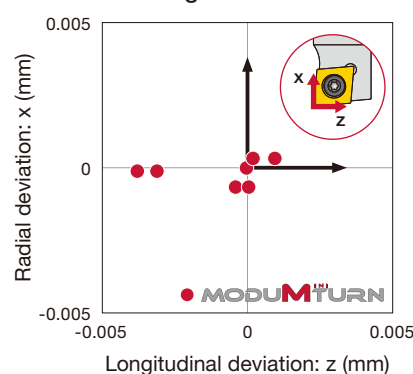


■ High repeatability*

ModuMini-Turn provides the cutting edge point position with high repeatability with an accuracy of $\pm 5 \mu\text{m}$ or less for the x and z axis.

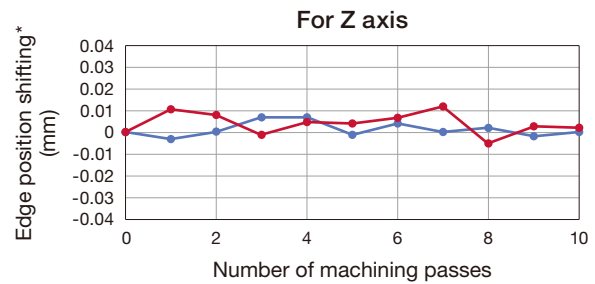
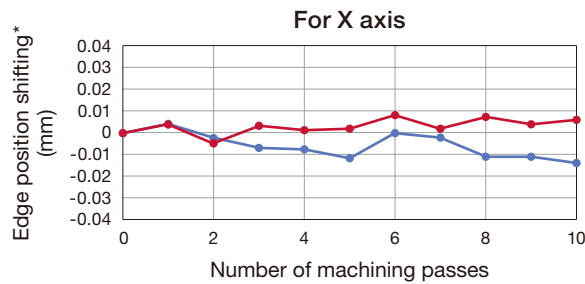
*Using the same type of head, shank, and insert shape

Deviations of cutting point positions after insert changes on the same head



■ Edge positions before and after machining

ModuMini-Turn ensures high rigidity coupling to the head and shank, providing extra stability equivalent of monoblock tools.



MODUMINI-TURN
 Standard monoblock

***Edge position shifting:** shifting of cutting edge positions from the zero point (initially measured point) after machining.

P Insert : DCGT11T302FN-JS SH725
 Workpiece material : S45C / C45
 Cutting speed : $V_c = 100$ m/min
 Feed : $f = 0.07$ mm/rev
 Depth of cut : $a_p = 1.0$ mm
 Machining : External turning
 Coolant : Wet

■ Reduced machine downtime

The modular tooling system significantly reduces changeover times for inserts and tool setups. In addition, since **ModuMini-Turn** requires no coolant hose connection, significant downtime reduction can be expected in through-coolant operations.

Setup time reduced by 60 - 75%

Tool setup time:
38 sec.

Head exchange: 24 sec.

Insert exchange: 14 sec.

MODUMINI-TURN

Tool setup time:
152 sec.

Hose connection: 60 sec.

Toolholder exchange: 78 sec.

Insert exchange: 14 sec.

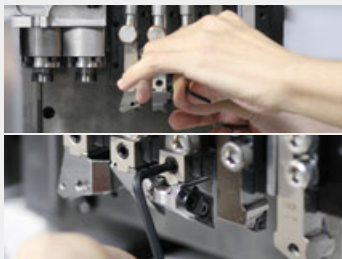
Standard monoblock turning tool
(w/external coolant setup)

Tool setup time:
92 sec.

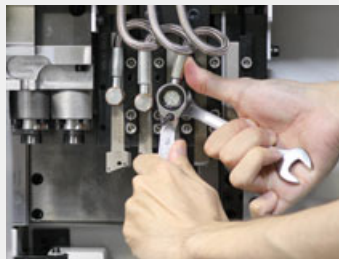
Toolholder exchange: 78 sec.

Insert exchange: 14 sec.

Standard monoblock turning tool
(w/direct coolant-thru setup)



VS



>>>



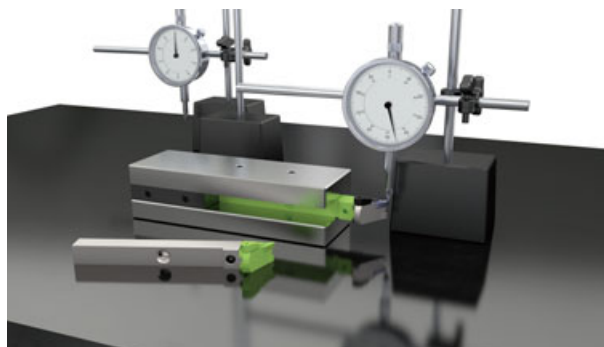
Watch the video to see how the **ModuMini-Turn** modular tooling system can reduce machine downtime.

MODUMINI-TURN
Cost Saving Calculator



Offline tool presetting

Thanks to the modular tooling system, tools can be preset outside the machine, reducing machine downtime.



Offline presetting using the master set (example)

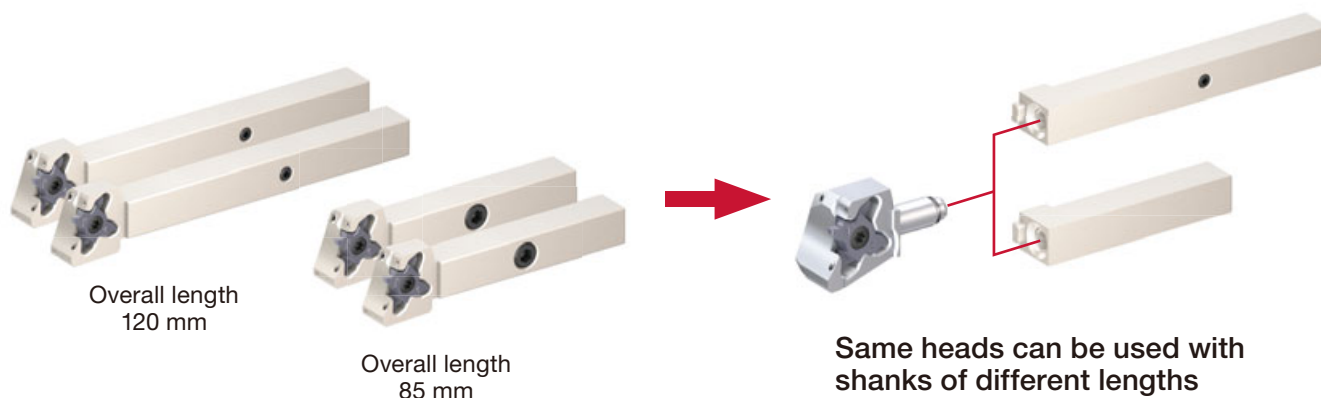


Watch the video here for details

Master set	Shank	Head
X-axis : 0 mm	X-axis : +0.002 mm	X-axis : +0.026 mm
Y-axis : 0 mm	Y-axis : -0.011 mm	Y-axis : -0.018 mm
Z-axis : 0 mm	Z-axis : +0.029 mm	Z-axis : -0.013 mm

Shank size flexibility

Applicable for many types of machines, due to the large variety of shank lengths. The same coupling shape allows shared heads to all types of shanks.



Accessories

P44

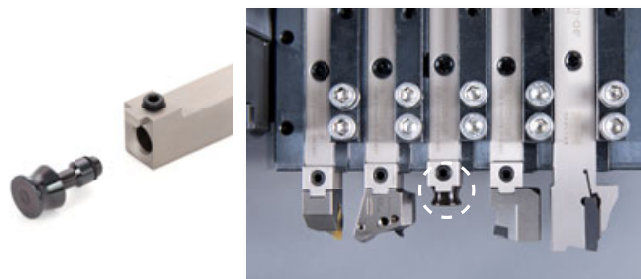
Modular head holder for insert change

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.



Protective plug for shank

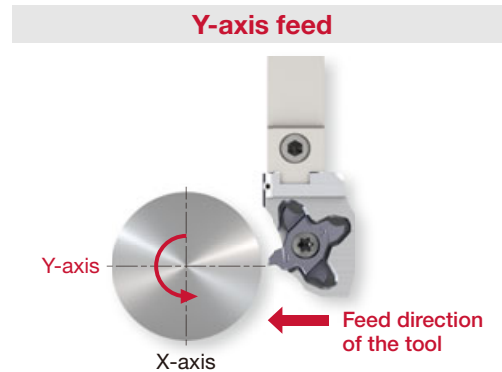
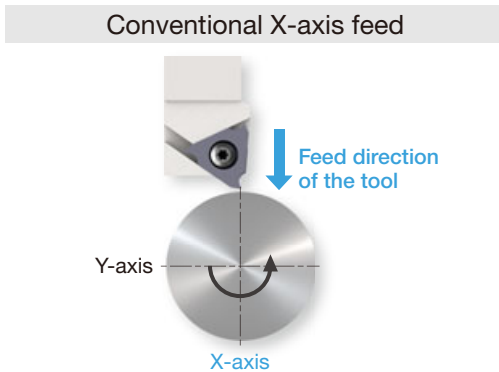
Attach the plug to the shank to protect the coupling surface from chips, as well as prevent coolant leakage during machining.



Y-axis cutting heads

What is Y-axis feed

A machining method that moves the gang slide in the Y-axis direction, instead of traditional X-axis direction.



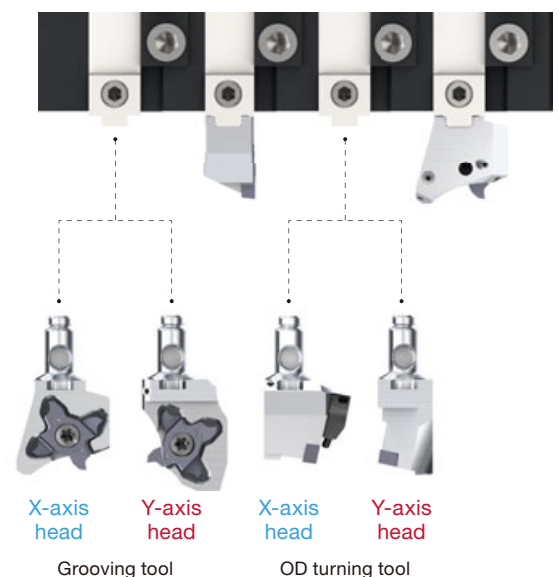
Benefits of Y-axis feed

No chip entanglements — Chips are directed downward and away from the cutting zone



ModuMini-Turn features

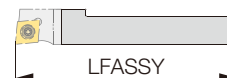
- The cutting heads can be swapped while the holder remains in the gang slide
- Easy handling for reduced downtime
- Y-axis cutting heads and X-axis cutting heads are easily interchangeable



Lineup — Square shanks

Shanks

		Square shank (height x width)					Page
		10 x 12	12 x 12	12 x 16	16 x 16	16 x 20	
LFASSY* (mm)	85		○	○			41, 42
	100	○					
	120		○	○	○	○	
Shank type		-	-	Stepped-head shank	-	Stepped-head shank	



*Overall length with the head attached

Modular heads

For external turning

Application	Insert shape	Insert Designation	Approach angle	Square shank (height x width)					Y-axis feed	Page
				10 x 12	12 x 12	12 x 16	16 x 16	16 x 20		
Front turning	J-SERIES 	CC**0602... CC**09T3...	95°	○	○	○	○	○	✓	13, 14
	MINIFTURN 	WXGU0403...	95°	○	○	○	○	○	✓	16, 17
	J-SERIES 	DC**0702... DC**11T3...	93°	○	○	○	○	○	✓	18, 19
	MINIFTURN 	DX*U0703...	93°	○	○	○	○	○	✓	22, 23
			62.5°	○	○	○	○	○		24
	J-SERIES 	VB**1103...	93°		○	○	○	○		27
	MINIFTURN 	VXGU09T2...	93°	○	○	○	○	○		29
			72.5°	○	○	○	○	○		30
Back turning	J-SERIES 	TN**1604...	95°				○	○	✓	32, 33
				○	○	○	○	○		34

For parting

Application	Insert shape	Insert Designation	Groove width CW (mm)	Square shank (height x width)					Y-axis feed	Page
				10 x 12	12 x 12	12 x 16	16 x 16	16 x 20		
Parting and grooving		DGS**S...	0.8, 1	○	○	○				35
		DG..., SG...	1.2 - 3.18	○	○	○	○	○		35, 36

For grooving

Application	Insert shape	Insert Designation	Groove width CW (mm)	Square shank (height x width)					Y-axis feed	Page
				10 x 12	12 x 12	12 x 16	16 x 16	16 x 20		
Grooving		VGP10...	0.5 - 1	○	○	○				36
		TC*18R/L...	0.33 - 3.18		○	○	○	○	✓	37, 38

For threading

Application	Insert shape	Insert Designation	Thread pitch range (mm)	Square shank (height x width)					Y-axis feed	Page
				10 x 12	12 x 12	12 x 16	16 x 16	16 x 20		
Threading		VGT10...	0.4 - 2	○	○	○				36
		TCT18R...	0.4 - 3		○	○	○	○	✓	37, 38
		11ER...	0.35 - 1.5	○						39

New For small-diameter drilling and turning

Application	Shape	Designation	Min. bore diameter DMIN (mm)	Square shank (height x width)					Y-axis feed	Page
				10 x 12	12 x 12	12 x 16	16 x 16	16 x 20		
Drilling and turning (internal, external, and face)		TB... JB...	0.6			○		○		12

Lineup — Round shanks

Shanks

		Round shank (shank dia.)			Page
		ø16	ø19.05	ø20	
LFASSY* (mm)	85	○			43
	90		○	○	
	120	○	○	○	



*Overall length with the head attached

Modular heads

For external turning

Application	Insert shape	Insert Designation	Approach angle	Round shank (shank dia.)			Page
				ø16	ø19.05	ø20	
Front turning	J-SERIES 	CC**09T3...	95°	○	○	○	15
	J-SERIES 	DC**11T3...	93°	○	○	○	20
			95°	○	○	○	20
			107.5°	○	○	○	21
	MINIFTURN 	DX*U0703...	93°	○	○	○	25
			95°	○	○	○	25
			107.5°	○	○	○	26
	J-SERIES 	VB**1103...	93°	○	○	○	28
	MINIFTURN 	VXGU09T2...	93°	○	○	○	31
			117.5°	○	○	○	31

For grooving

Application	Insert shape	Insert Designation	Groove width CW (mm)	Round shank (shank dia.)			Page
				ø16	ø19.05	ø20	
Grooving		TC*18R...	0.33 - 3.18	○	○	○	39
		JX**R...	0.6 - 2.5	○	○	○	40

For threading

Application	Insert shape	Insert Designation	Thread pitch range (mm)	Round shank (shank dia.)			Page
				ø16	ø19.05	ø20	
Threading		TCT18R...	0.4 - 3	○	○	○	39
		JXTG12R...	0.2 - 1.5	○	○	○	40

New For drilling

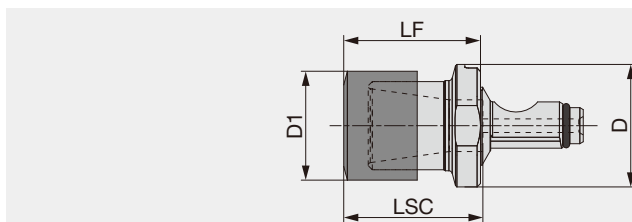
Application	Shape	Designation	Tool diameter DC (mm)	Round shank (shank dia.)			Page
				ø16	ø19.05	ø20	
Drilling		TID... DSW...	ø3 - ø6	○	○	○	12

MODULAR HEADS

New

QR12-ER

Modular head for ER collet chuck, with internal coolant supply



Designation	D	D1	LF	LSC	Collet size	Coupling size	Shank
QR12-18ER11	18	16	23	23	ER11	QR12	A**-QR12

SPARE PARTS



Designation	Nut	O-ring	Wrench for nut (Optional)
QR12-18ER11	NUT ER11 MINI	ORSS-0454.5X1.0NBR70	(WRENCH ER11 MINI)

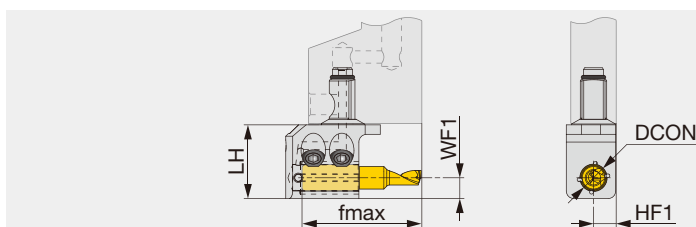
Related Items



New

QC-JBBS-4N

Modular head for TinyMini-Turn adaptation, with internal coolant supply through 4 peripheral holes



Designation	DCON	LH	fmax	WF1	HF1	Coupling size	Shank
QC12-JBBS-4-4N	4	19.5	31.5	5.5	6	QC12	QC-1216*-F15-CHP
QC12-JBBS-7-4N	7	19.5	31.5	5.5	6	QC12	QC-1216*-F15-CHP
QC16-JBBS-4-4N	4	24.5	35.5	5.5	8	QC16	QC-1620X-F15-CHP
QC16-JBBS-7-4N	7	24.5	35.5	5.5	8	QC16	QC-1620X-F15-CHP

SPARE PARTS



Designation	Clamping screw	Wrench	O-ring
QC12-JBBS...	SSH5-4PF-S	P-2.5	ORSS-0454.5X1.0NBR70
QC16-JBBS-4-4N	SSH5-6PF-S	P-2.5	ORSS-0757.5X1.0NBR70
QC16-JBBS-7-4N	SSH5-4PF-S	P-2.5	ORSS-0757.5X1.0NBR70

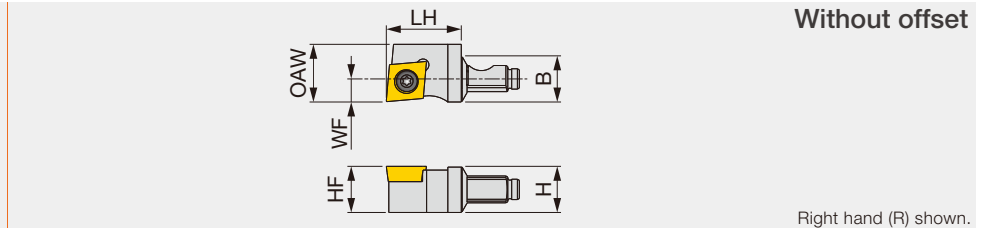
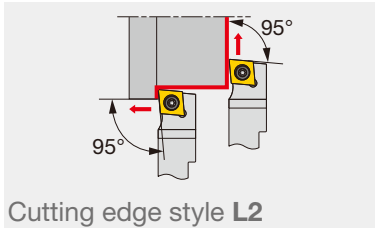
Related Items



QC-JSCL2CR

J-SERIES

Screw-on modular head with 95° approach angle, for positive 80° rhombic inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSCL2CR09	12	12	19.5	12	6	15	0.2	CC**09T3...	1.2	QC12
QC16-JSCL2CR09	16	16	21	16	8	20	0.2	CC**09T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



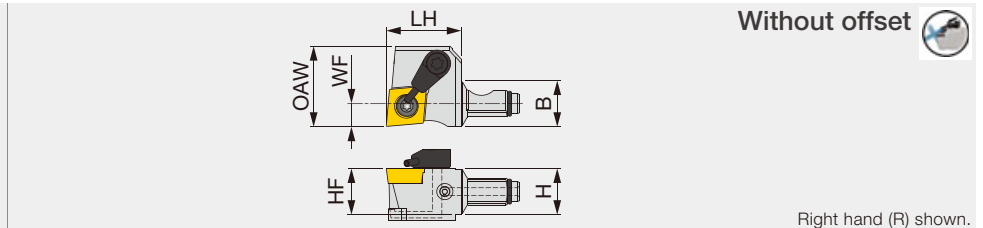
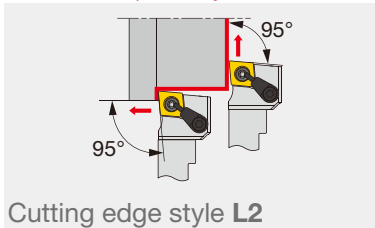
SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSCL2CR09	CSTB-4SD	T-8F

QC-JSCL2CR-CHP

J-SERIES

Screw-on modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSCL2CR06-CHP	10	10	17	10	5	13	0.2	CC**0602...	1.2	QC10
QC12-JSCL2CR09-CHP	12	12	19.5	12	6	21	0.2	CC**09T3...	1.2	QC12
QC16-JSCL2CR09-CHP	16	16	21	16	8	20	0.2	CC**09T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



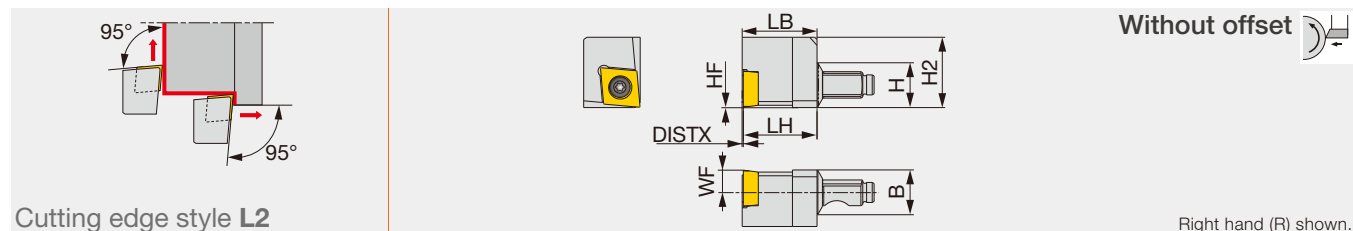
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSCL2CR06-CHP	CSTB-2.5	-	T-8F	ORSS-0353.5X1.0NBR70
QC12-JSCL2CR09-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSCL2CR09-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0757.5X1.0NBR70

QC-JSCL2CR-Y

J-SERIES

Screw-on Y-axis turning modular head with 95° approach angle, for positive 80° rhombic inserts



Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSCL2CR09-Y	12	12	19.5	0	6	19.8	18.6	0.3	0.2	CC**09T3...	1.2	QC12

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



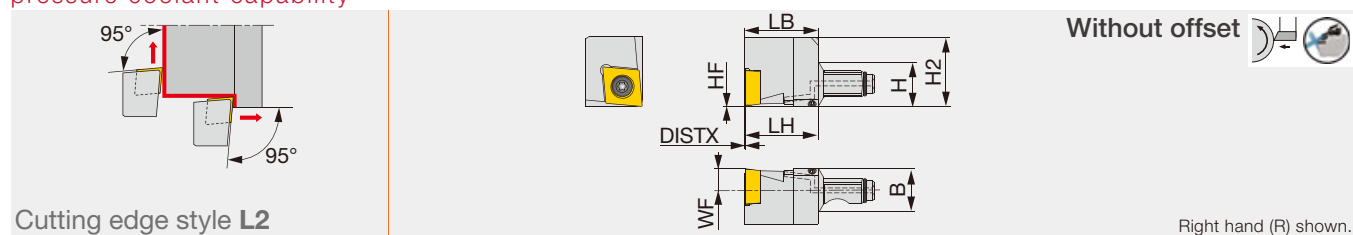
SPARE PARTS

Designation	Clamping screw	Wrench
QC12-JSCL2CR09-Y	CSTB-4SD	T-8F

QC-JSCL2CR-Y-CHP

J-SERIES

Screw-on Y-axis turning modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSCL2CR09-Y-CHP	12	12	19.5	0	6	19.8	18.6	0.3	0.2	CC**09T3...	1.2	QC12
QC16-JSCL2CR09-Y-CHP	16	16	21	0	8	21.3	16	0.3	0.2	CC**09T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



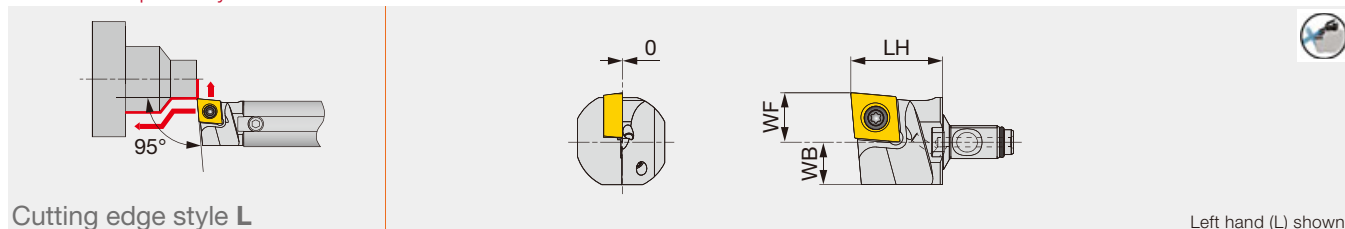
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-JSCL2CR09-Y-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSCL2CR09-Y-CHP	CSTB-4SD	T-8F	ORSS-0757.5X1.0NBR70

QR12-SCLCL-CHP

J-SERIES

Screw-on modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SCLCL09-CHP	19.5	8.5	8	0.2	CC**09T3...	1.2	QR12	A16*-QR12
QR12D-SCLCL09-CHP	19.5	10.5	9	0.2	CC**09T3...	1.2	QR12	A19/20*-QR12

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

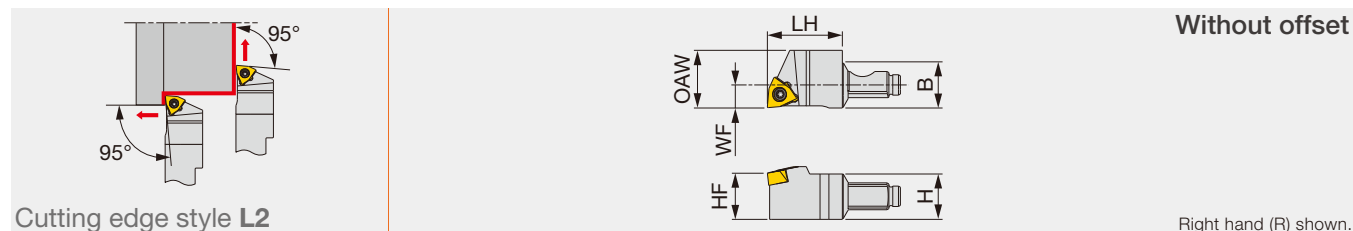


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SCLCL09-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

QC-JSWL2XR

Screw-on modular head with 95° approach angle, for WXGU inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSWL2XR04	12	12	19.5	12	6	15	0.2	WXGU0403**L...	0.9	QC12
QC16-JSWL2XR04	16	16	21	16	8	20	0.2	WXGU0403**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

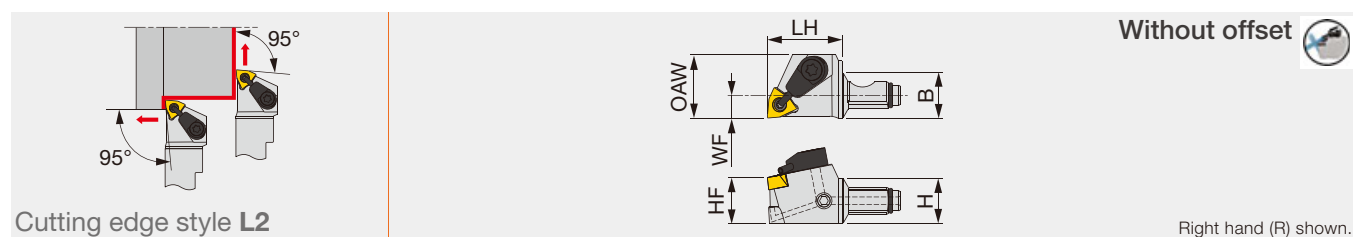


SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSWL2XR04	SR 34-514	T-7F

QC-JSWL2XR-CHP

Screw-on modular head with 95° approach angle, for WXGU inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSWL2XR04-CHP	10	10	17	10	5	13	0.2	WXGU0403**L...	0.9	QC10
QC12-JSWL2XR04-CHP	12	12	19.5	12	6	16.5	0.2	WXGU0403**L...	0.9	QC12
QC16-JSWL2XR04-CHP	16	16	21	16	8	20	0.2	WXGU0403**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



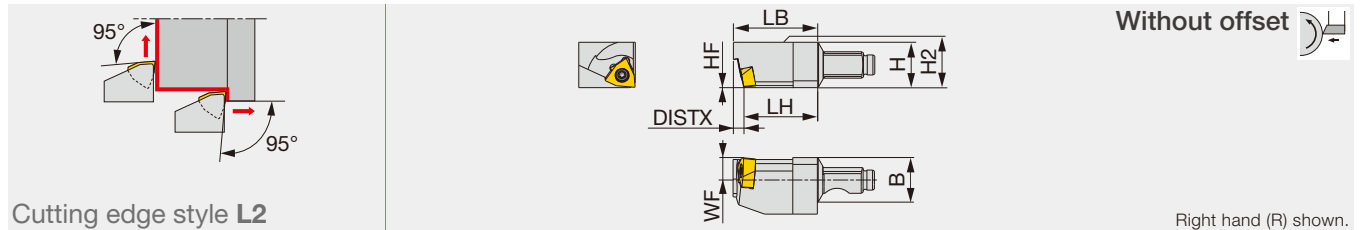
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSWL2XR04-CHP	SR 34-514	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSWL2XR04-CHP	SR 34-514	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSWL2XR04-CHP	SR 34-514	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

QC-JSWL2XR-Y

MINIFURN

Screw-on Y-axis turning modular head with 95° approach angle, for WXGU inserts



Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSWL2XR04-Y	12	12	19.5	0	6	22.3	12	2.8	0.2	WXGU0403**L...	0.9	QC12

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

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



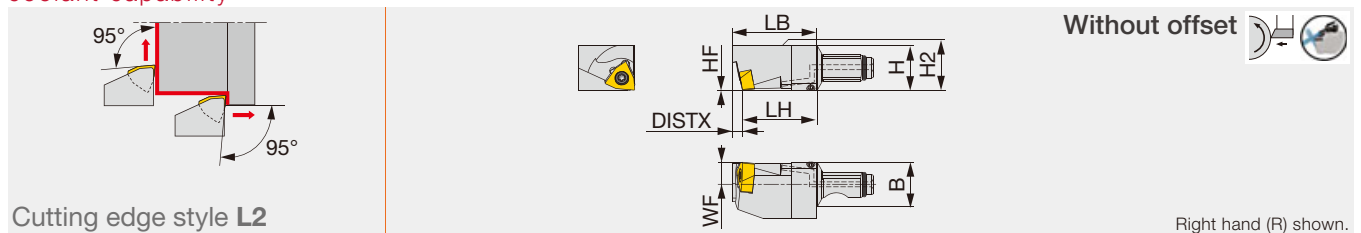
SPARE PARTS

Designation	Clamping screw	Wrench
QC12-JSWL2XR04-Y	SR 34-514	T-7F

QC-JSWL2XR-Y-CHP

MINIFURN

Screw-on Y-axis turning modular head with 95° approach angle, for WXGU inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSWL2XR04-Y-CHP	12	12	19.5	0	6	22.3	12	2.8	0.2	WXGU0403**L...	0.9	QC12
QC16-JSWL2XR04-Y-CHP	16	16	21	0	8	23.8	16	2.8	0.2	WXGU0403**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



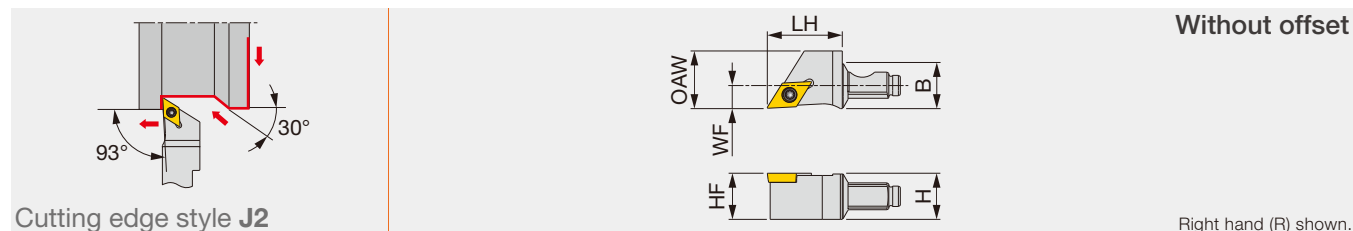
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-JSWL2XR04-Y-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSWL2XR04-Y-CHP	SR 34-514	T-7F	ORSS-0757.5X1.0NBR70

QC-JSDJ2CR

J-SERIES

Screw-on modular head with 93° approach angle, for positive 55° rhombic inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2CR07	12	12	19.5	12	6	15	0.2	DC**0702...	1.2	QC12
QC12-JSDJ2CR11	12	12	19.5	12	6	15	0.2	DC**11T3...	1.2	QC12
QC16-JSDJ2CR11	16	16	21	16	8	20	0.2	DC**11T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



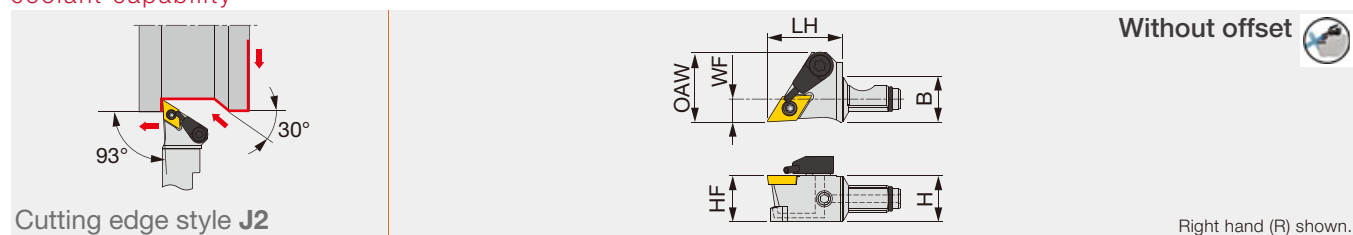
SPARE PARTS

Designation	Clamping screw	Wrench
QC12-JSDJ2CR07	CSTB-2.5	T-8F
QC**~JSDJ2CR11	CSTB-4SD	T-8F

QC-JSDJ2CR-CHP

J-SERIES

Screw-on modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSDJ2CR07-CHP	10	10	17	10	5	13	0.2	DC**0702...	1.2	QC10
QC12-JSDJ2CR07-CHP	12	12	19.5	12	6	18	0.2	DC**0702...	1.2	QC12
QC12-JSDJ2CR11-CHP	12	12	19.5	12	6	21	0.2	DC**11T3...	1.2	QC12
QC16-JSDJ2CR11-CHP	16	16	21	16	8	20	0.2	DC**11T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



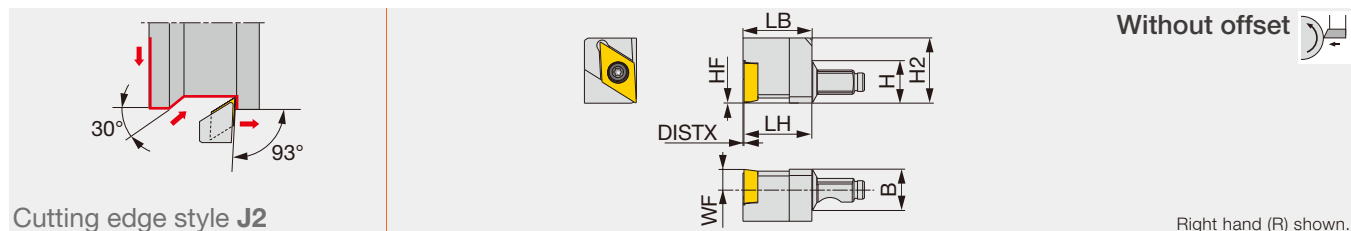
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSDJ2CR07-CHP	CSTB-2.5	-	T-8F	ORSS-0353.5X1.0NBR70
QC12-JSDJ2CR07-CHP	CSTB-2.5	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC12-JSDJ2CR11-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2CR11-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0757.5X1.0NBR70

QC-JSDJ2CR-Y

J-SERIES

Screw-on Y-axis turning modular head with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **J2**

Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2CR11-Y	12	12	19.5	0	6	19.8	18.7	0.3	0.2	DC**11T3...	1.2	QC12

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



SPARE PARTS

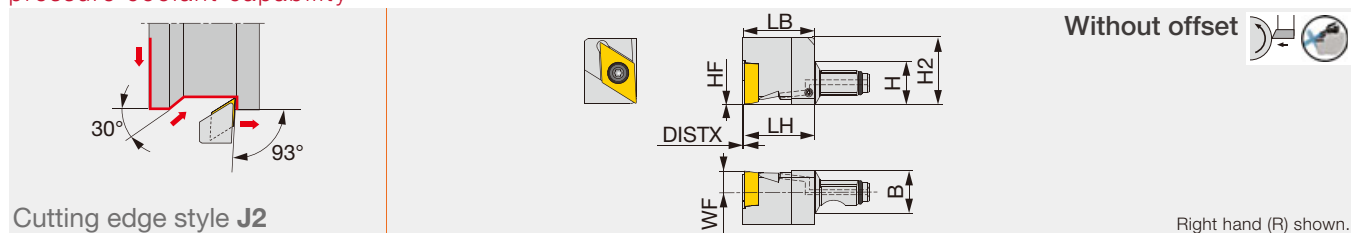


Designation	Clamping screw	Wrench
QC12-JSDJ2CR11-Y	CSTB-4SD	T-8F

QC-JSDJ2CR-Y-CHP

J-SERIES

Screw-on Y-axis turning modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **J2**

Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2CR11-Y-CHP	12	12	19.5	0	6	19.8	18.7	0.3	0.2	DC**11T3...	1.2	QC12
QC16-JSDJ2CR11-Y-CHP	16	16	21	0	8	21.3	18.7	0.3	0.2	DC**11T3...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



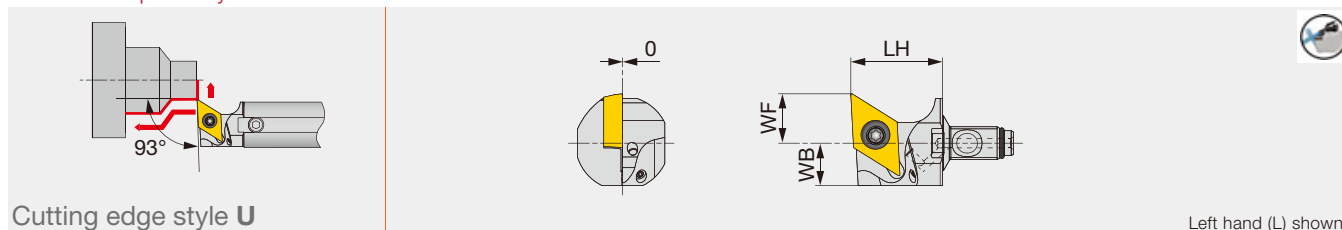
SPARE PARTS



Designation	Clamping screw	Wrench	O-ring
QC12-JSDJ2CR11-Y-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2CR11-Y-CHP	CSTB-4SD	T-8F	ORSS-0757.5X1.0NBR70

QR12-SDUCL-CHP

Screw-on modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style U

Left hand (L) shown.

Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDUCL11-CHP	19.5	8.5	10.7	0.2	DC**11T3...	1.2	QR12	A16*-QR12
QR12D-SDUCL11-CHP	19.5	10.5	9	0.2	DC**11T3...	1.2	QR12	A19/20*-QR12

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

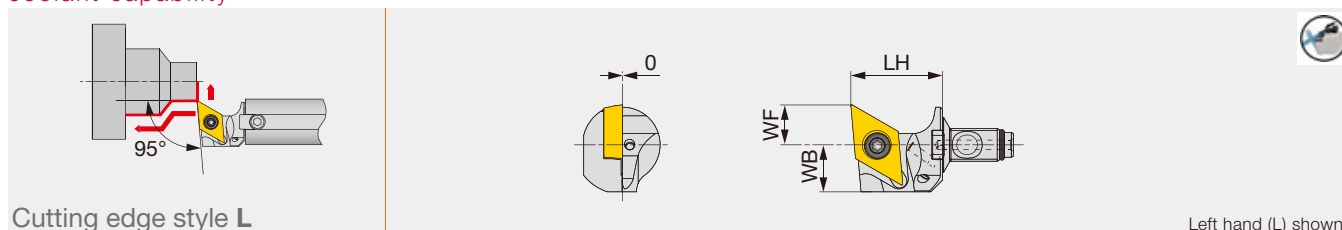


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDUCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

QR12-SDLCL-CHP

Screw-on modular head with 95° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style L

Left hand (L) shown.

Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDLCL11-CHP	19.5	8.5	10	0.2	DC**11T3...	1.2	QR12	A16*-QR12
QR12D-SDLCL11-CHP	19.5	10.5	9	0.2	DC**11T3...	1.2	QR12	A19/20*-QR12

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

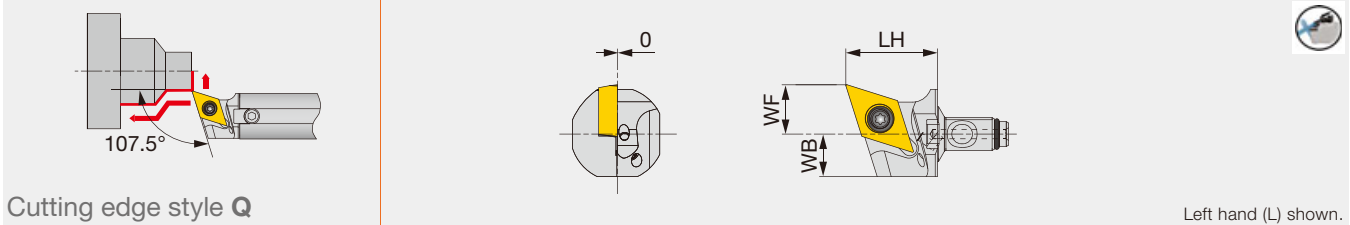


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDLCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

QR12-SDQCL-CHP

Screw-on modular head with 107.5° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDQCL11-CHP	19.5	8.5	8	0.2	DC**11T3...	1.2	QR12	A16*-QR12
QR12D-SDQCL11-CHP	19.5	10.5	9	0.2	DC**11T3...	1.2	QR12	A19/20*-QR12

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

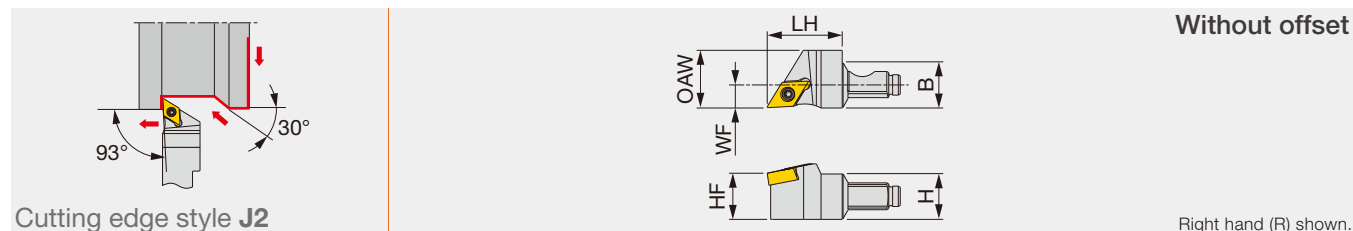


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDQCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

QC-JSDJ2XR

Screw-on modular head with 93° approach angle, for DX*U inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2XR07	12	12	19.5	12	6	15	0.2	DX*U0703**L...	0.9	QC12
QC16-JSDJ2XR07	16	16	21	16	8	20	0.2	DX*U0703**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

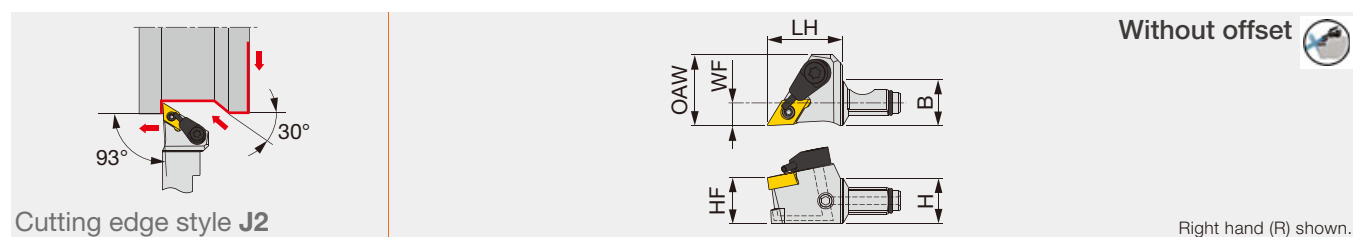


SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSDJ2XR07	SR 34-514	T-7F

QC-JSDJ2XR-CHP

Screw-on modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSDJ2XR07-CHP	10	10	17	10	5	13	0.2	DX*U0703**L...	0.9	QC10
QC12-JSDJ2XR07-CHP	12	12	19.5	12	6	18.4	0.2	DX*U0703**L...	0.9	QC12
QC16-JSDJ2XR07-CHP	16	16	21	16	8	20	0.2	DX*U0703**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



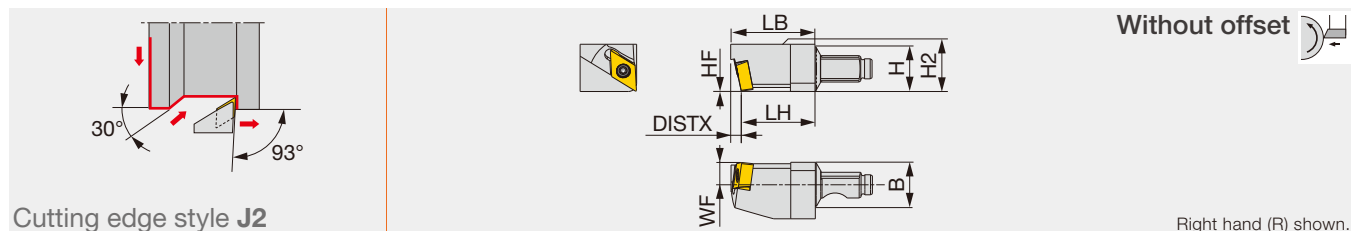
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSDJ2XR07-CHP	SR 34-514	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSDJ2XR07-CHP	SR 34-514	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2XR07-CHP	SR 34-514	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

QC-JSDJ2XR-Y

MINIFURN

Screw-on Y-axis turning modular head with 93° approach angle, for DX*U inserts



Cutting edge style J2

Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2XR07-Y	12	12	19.5	0	6	22.3	12.5	2.8	0.2	DX*U0703**L...	0.9	QC12

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



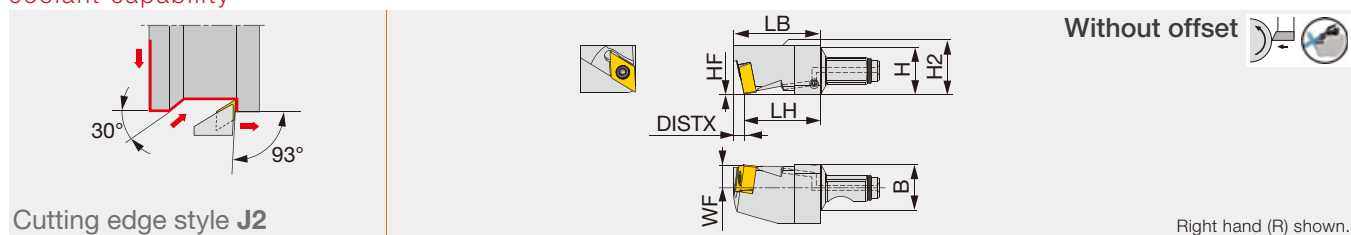
SPARE PARTS

Designation	Clamping screw	Wrench
QC12-JSDJ2XR07-Y	SR 34-514	T-7F

QC-JSDJ2XR-Y-CHP

MINIFURN

Screw-on Y-axis turning modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style J2

Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC12-JSDJ2XR07-Y-CHP	12	12	19.5	0	6	22.3	12.5	2.8	0.2	DX*U0703**L...	0.9	QC12
QC16-JSDJ2XR07-Y-CHP	16	16	21	0	8	23.8	16	2.8	0.2	DX*U0703**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

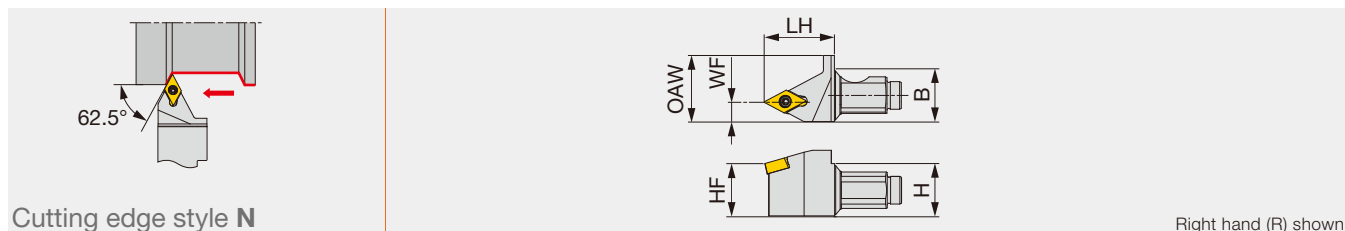


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-JSDJ2XR07-Y-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2XR07-Y-CHP	SR 34-514	T-7F	ORSS-0757.5X1.0NBR70

QC-JSDNXR

Screw-on modular head with 62.5° approach angle, for DX*U inserts,



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC16-JSDNXR07	16	16	21	16	6	20	0.2	DX*U0703**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

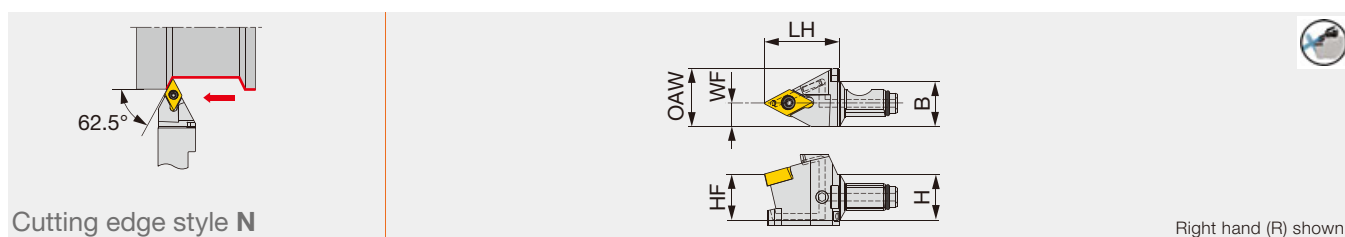


SPARE PARTS

Designation	Clamping screw	Wrench
QC16-JSDNXR07	SR 34-514	T-7F

QC-JSDNXR-CHP

Screw-on modular head with 62.5° approach angle, for DX*U inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSDNXR07-CHP	10	10	17	10	6	13	0.2	DX*U0703**L...	0.9	QC10
QC12-JSDNXR07-CHP	12	12	19.5	12	6	15	0.2	DX*U0703**L...	0.9	QC12
QC16-JSDNXR07-CHP	16	16	21	16	6	20	0.2	DX*U0703**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



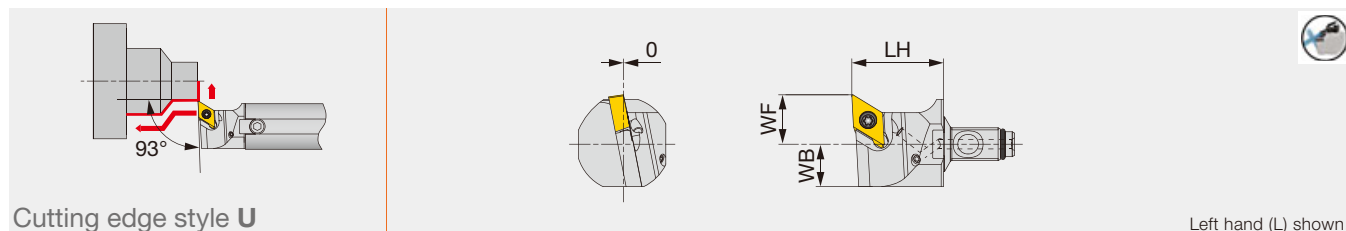
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC10-JSDNXR07-CHP	SR 34-514	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSDNXR07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDNXR07-CHP	SR 34-514	T-7F	ORSS-0757.5X1.0NBR70

QR12-SDUXL-CHP

MINIFURN

Screw-on modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDUXL07-CHP	19.5	8.5	8	0.2	DX*U0703**L...	0.9	QR12	A16*-QR12
QR12D-SDUXL07-CHP	19.5	10.5	9	0.2	DX*U0703**L...	0.9	QR12	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items



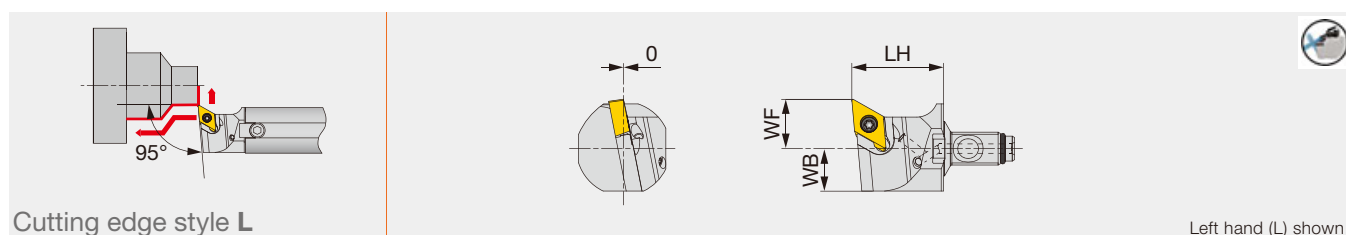
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDUXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

QR12-SDLXL-CHP

MINIFURN

Screw-on modular head with 95° approach angle, for DX*U inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDLXL07-CHP	19.5	8.5	8	0.2	DX*U0703**L...	0.9	QR12	A16*-QR12
QR12D-SDLXL07-CHP	19.5	10.5	9	0.2	DX*U0703**L...	0.9	QR12	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

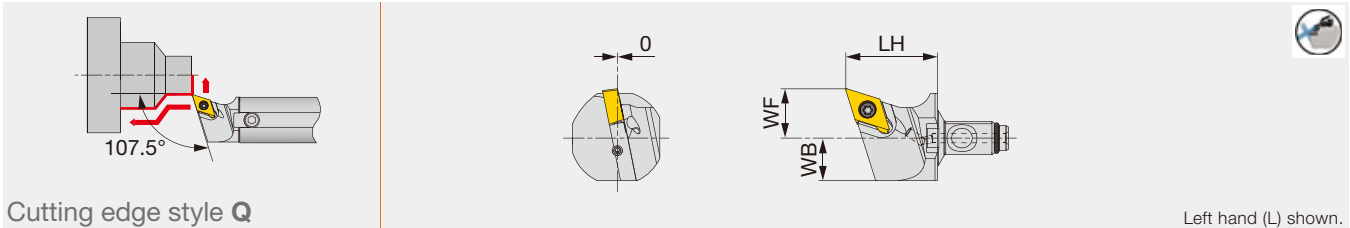


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDLXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

QR12-SDQXL-CHP

Screw-on modular head with 107.5° approach angle, for DX*U inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SDQXL07-CHP	19.5	8.5	8	0.2	DX*U0703**L...	0.9	QR12	A16*-QR12
QR12D-SDQXL07-CHP	19.5	10.5	9	0.2	DX*U0703**L...	0.9	QR12	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items



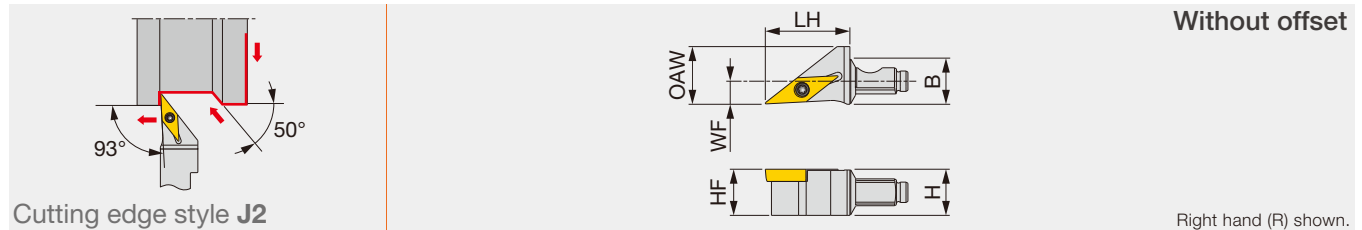
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDQXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

QC-JSVJ2BR

J-SERIES

Screw-on modular head with 93° approach angle, for positive 35° rhombic inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSVJ2BR11	12	12	22	12	6	15	0.2	VB**1103...	1.2	QC12
QC16-JSVJ2BR11	16	16	21	16	8	20	0.2	VB**1103...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



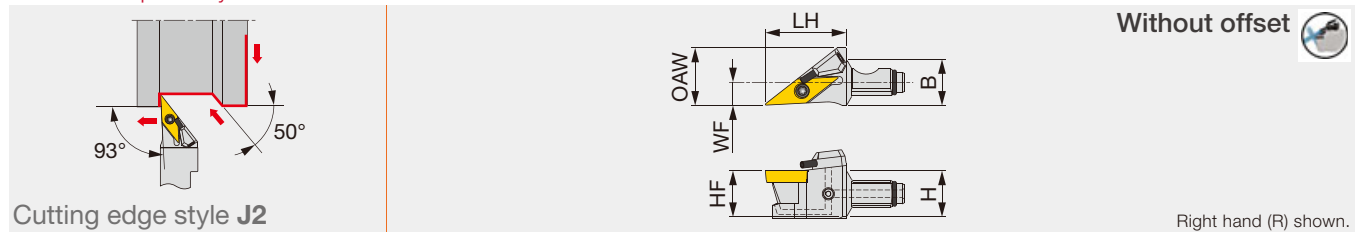
SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSVJ2BR11	CSTB-2.5	T-8F

QC-JSVJ2BR-CHP

J-SERIES

Screw-on modular head with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSVJ2BR11-CHP	12	12	21	12	6	15	0.2	VB**1103...	1.2	QC12
QC16-JSVJ2BR11-CHP	16	16	21	16	8	20	0.2	VB**1103...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



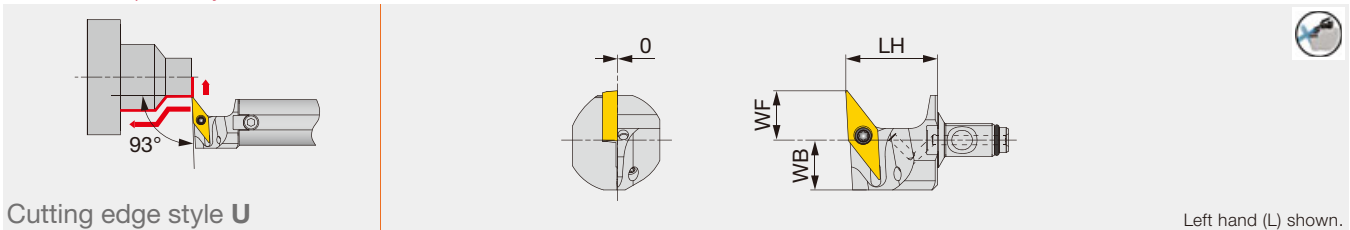
SPARE PARTS

Designation	Clamping screw	Wrench 1	O-ring	Coolant nozzle	Screw	Wrench 2
QC12-JSVJ2BR11-CHP	CSTB-2.5	T-8F	ORSS-0454.5X1.0NBR70	NZ-1.10-7-CHP	SSHM4-4-TB	P-2
QC16-JSVJ2BR11-CHP	CSTB-2.5	T-8F	ORSS-0757.5X1.0NBR70	NZ-1.10-7-CHP	SSHM3-3	-

QR12-SVUBL-CHP

J-SERIES

Screw-on modular head with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SVUBL11-CHP	19.5	8.5	13	0.2	VB**1103...	1.2	QR12	A16*-QR12
QR12D-SVUBL11-CHP	19.5	10.5	10.6	0.2	VB**1103...	1.2	QR12	A19/20*-QR12

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items



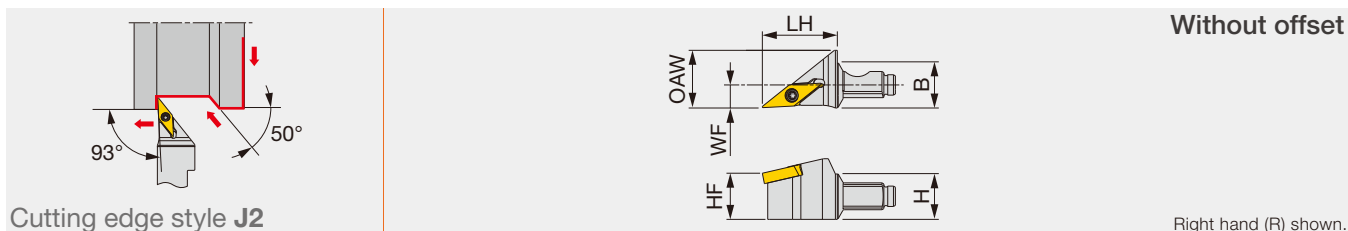
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SVUBL11-CHP	CSTB-2.5	T-8F	ORSS-0454.5X1.0NBR70

QC-JSVJ2XR

MINIFURN

Screw-on modular head with 93° approach angle, for VXGU inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC12-JSVJ2XR09	12	12	19.5	12	6	15	0.2	VXGU09T2**L...	0.9	QC12
QC16-JSVJ2XR09	16	16	21	16	8	20	0.2	VXGU09T2**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



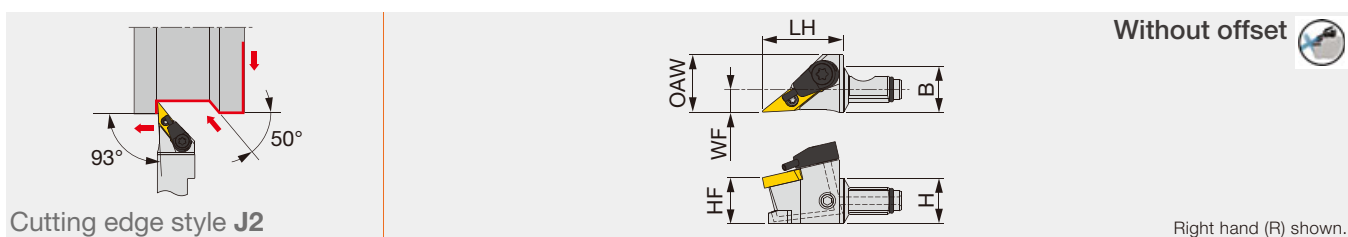
SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSVJ2XR09	SR 34-508	T-7F

QC-JSVJ2XR-CHP

MINIFURN

Screw-on modular head with 93° approach angle, for VXGU inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSVJ2XR09-CHP	10	10	17	10	5	13	0.2	VXGU09T2**L...	0.9	QC10
QC12-JSVJ2XR09-CHP	12	12	21	12	6	15	0.2	VXGU09T2**L...	0.9	QC12
QC16-JSVJ2XR09-CHP	16	16	21	16	8	20	0.2	VXGU09T2**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

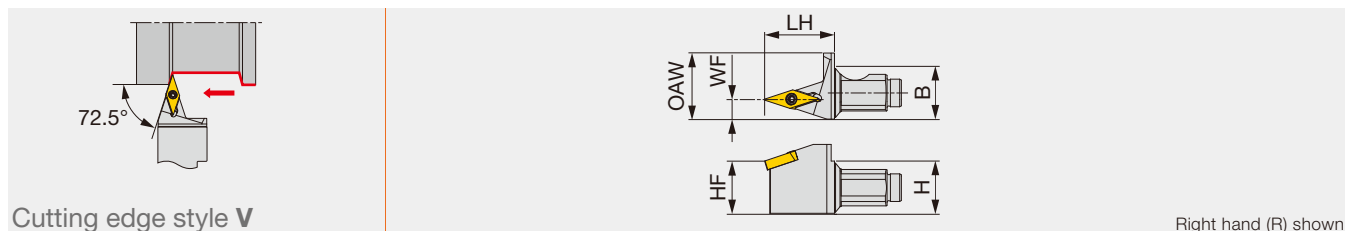


SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSVJ2XR09-CHP	SR 34-508	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSVJ2XR09-CHP	SR 34-508	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSVJ2XR09-CHP	SR 34-508	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

QC-JSVVXR

Screw-on modular head with 72.5° approach angle, for VXGU inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC16-JSVVXR09	16	16	21	16	6	20	0.2	VXGU09T2**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



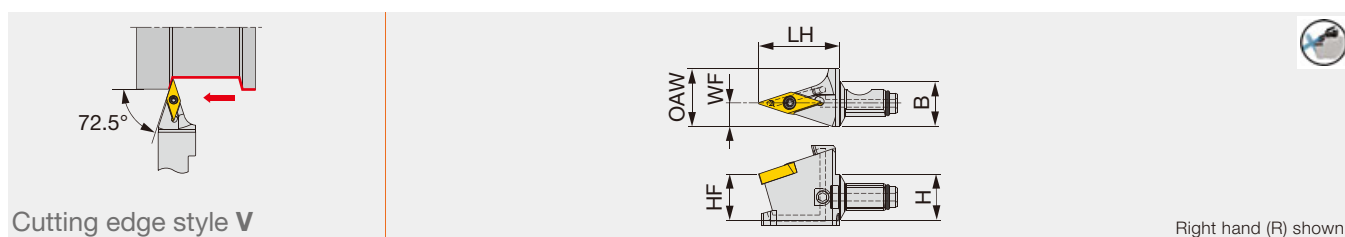
SPARE PARTS



Designation	Clamping screw	Wrench
QC16-JSVVXR09	SR 34-508	T-7F

QC-JSVVXR-CHP

Screw-on modular head with 72.5° approach angle, for VXGU inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC10-JSVVXR09-CHP	10	10	17.5	10	5	13	0.2	VXGU09T2**L...	0.9	QC10
QC12-JSVVXR09-CHP	12	12	21	12	6	15	0.2	VXGU09T2**L...	0.9	QC12
QC16-JSVVXR09-CHP	16	16	21	16	6	20	0.2	VXGU09T2**L...	0.9	QC16

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

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



SPARE PARTS

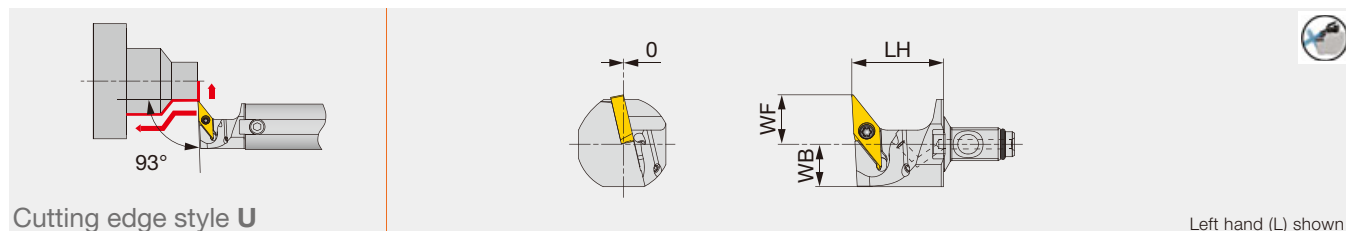


Designation	Clamping screw	Wrench	O-ring
QC10-JSVVXR09-CHP	SR 34-508	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSVVXR09-CHP	SR 34-508	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSVVXR09-CHP	SR 34-508	T-7F	ORSS-0757.5X1.0NBR70

QR12-SVUXL-CHP

MINIFURN

Screw-on modular head with 93° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style U

Left hand (L) shown.

Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SVUXL09-CHP	19.5	8.5	9.5	0.2	VXGU09T2**L...	0.9	QR12	A16*-QR12
QR12D-SVUXL09-CHP	19.5	10.5	9	0.2	VXGU09T2**L...	0.9	QR12	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items



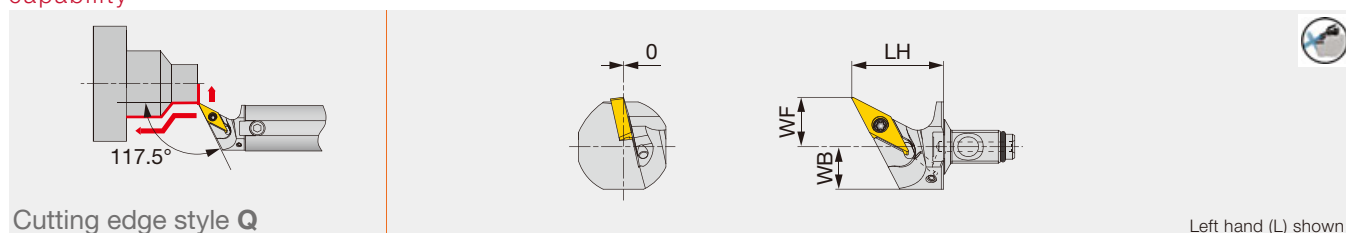
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SVUXL09-CHP	SR 34-508	T-7F	ORSS-0454.5X1.0NBR70

QR12-SVQXL-CHP

MINIFURN

Screw-on modular head with 117.5° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style Q

Left hand (L) shown.

Designation	LH	WF	WB	RE**	Insert	Torque*	Coupling size	Shank
QR12C-SVQXL09-CHP	19.5	8.5	8	0.2	VXGU09T2**L...	0.9	QR12	A16*-QR12
QR12D-SVQXL09-CHP	19.5	10.5	9	0.2	VXGU09T2**L...	0.9	QR12	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 43.

Related Items

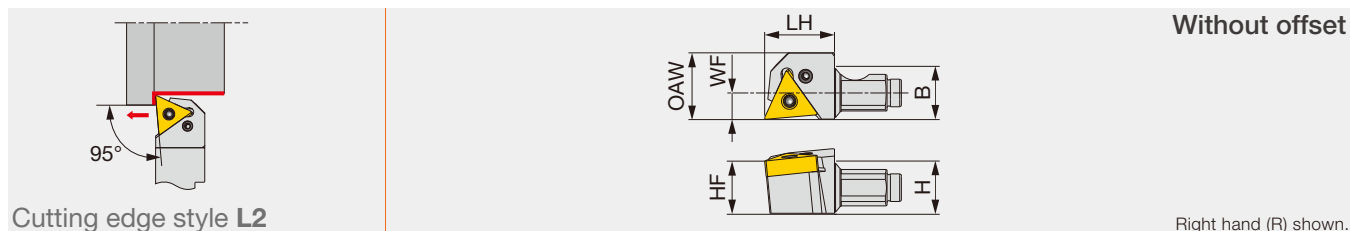


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SVQXL09-CHP	SR 34-508	T-7F	ORSS-0454.5X1.0NBR70

QC-PTL2NR

Lever-lock modular head with 95° approach angle, for negative 60° triangular inserts



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC16-PTL2NR16	16	16	21	16	8	20	0.4	TN**1604...	1.5	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

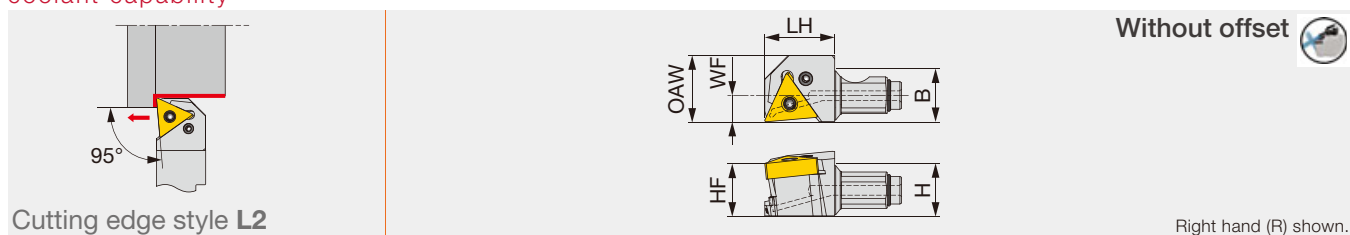


SPARE PARTS

Designation	Clamping screw	Wrench	Lever
QC16-PTL2NR16	LCS33	P-2	LCL33N

QC-PTL2NR-CHP

Lever-lock modular head with 95° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*	Coupling size
QC16-PTL2NR16-CHP	16	16	21	16	8	20	0.4	TN**1604...	1.5	QC16

Torque*: Recommended clamping torque (N-m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items

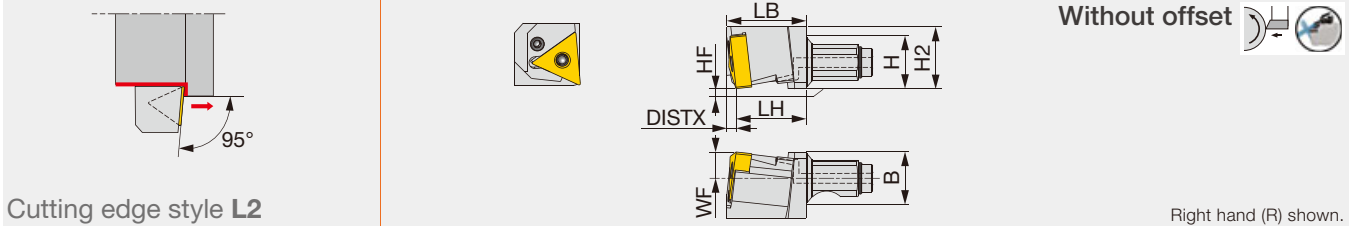


SPARE PARTS

Designation	Clamping screw	Wrench	Lever	O-ring
QC16-PTL2NR16-CHP	LCS33	P-2	LCL33N	ORSS-0757.5X1.0NBR70

QC-PTL2NR-Y-CHP

Lever-lock Y-axis turning modular head with 95° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Coupling size
QC16-PTL2NR16-Y-CHP	16	16	21	0	8	23.8	18.7	2.8	0.4	TN**1604...	1.5	QC16

Torque*: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 41, 42.

Related Items



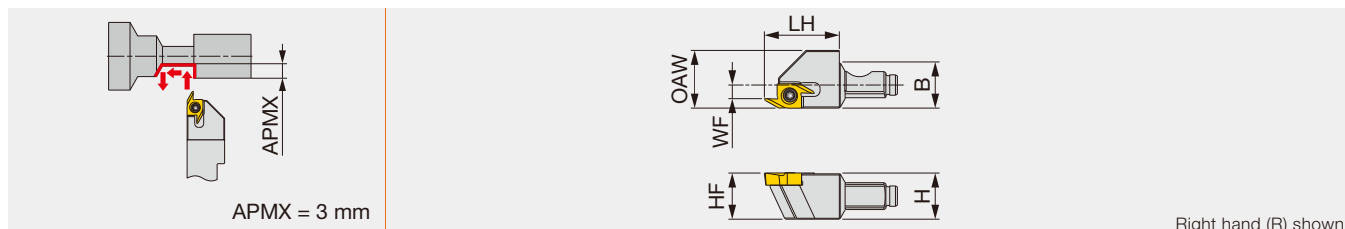
SPARE PARTS

Designation	 Clamping screw	 Wrench	 Lever	 O-ring
QC16-PTL2NR16-Y-CHP	LCS33	P-2	LCL33N	ORSS-0757.5X1.0NBR70

QC-JSEGR

J-SERIES

Screw-on modular head for back turning



Designation	H	B	LH	HF	WF	OAW	Insert	Torque*	Coupling size
QC12-JSEGR10	12	12	19.5	12	3.5	15	J10ER...	1.2	QC12
QC16-JSEGR10	16	16	21	16	5.5	20	J10ER...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



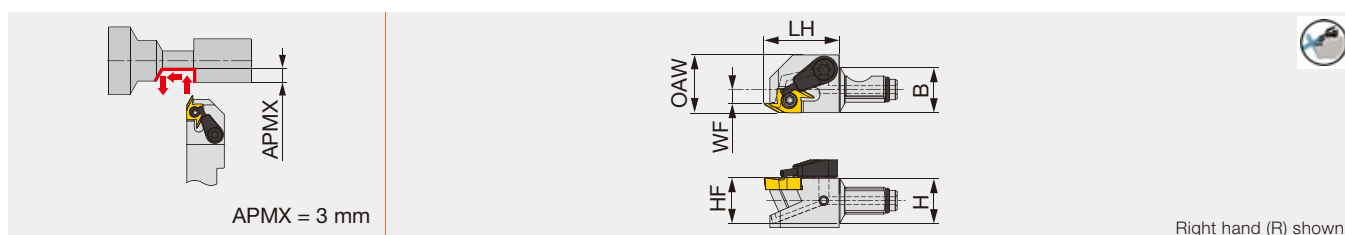
SPARE PARTS

Designation	Clamping screw	Wrench
QC**-JSEGR10	CSTB-2.5	T-8F

QC-JSEGR-CHP

J-SERIES

Screw-on modular head for back turning, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	Insert	Torque*	Coupling size
QC10-JSEGR10-CHP	10	10	17	10	2.5	13	J10ER...	1.2	QC10
QC12-JSEGR10-CHP	12	12	19.5	12	3.5	15	J10ER...	1.2	QC12
QC16-JSEGR10-CHP	16	16	21	16	5.5	20	J10ER...	1.2	QC16

Torque*: Recommended clamping torque (N-m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



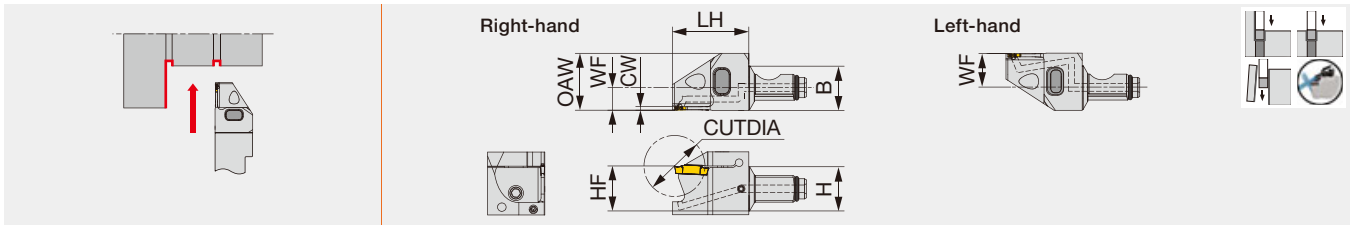
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSEGR10-CHP	CSTB-2.5	-	T-8F	ORSS-0353.5X1.0NBR70
QC12-JSEGR10-CHP	CSTB-2.5	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSEGR10-CHP	CSTB-2.5	S-CU-CHP	T-8F	ORSS-0757.5X1.0NBR70

QC-JTTER/LS-CHP

TUNGSCUT

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



Designation	CW	Seat size	CUTDIA	H	B	LH	HF	WF ⁽¹⁾	OAW	Torque*	Coupling size
QC10-JTTER/LS0.8D16-CHP	0.8	S0.8	16	10	10	17	10	5/8	13	1.5	QC10
QC10-JTTER/LS1D16-CHP	1	S1	16	10	10	17	10	5/8	13	1.5	QC10
QC12-JTTER/LS0.8D16-CHP	0.8	S0.8	16	12	12	19.5	12	6/9	15	1.5	QC12
QC12-JTTER/LS1D16-CHP	1	S1	16	12	12	19.5	12	6/9	15	1.5	QC12

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

Torque*: Recommended clamping torque (N·m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



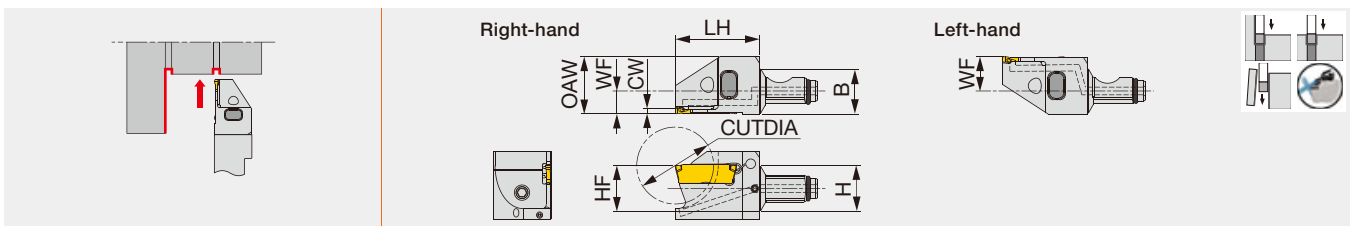
SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench	O-ring
QC10-JTTER/LS...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0353.5X1.0NBR70
QC12-JTTER/LS...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0454.5X1.0NBR70

QC-JTTER/L-CHP

TUNGSCUT

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



Designation	CW	Seat size	CUTDIA	H	B	LH ⁽¹⁾	HF	WF ⁽²⁾	OAW	Torque*	Coupling size
QC10-JTTER/L1.2D12-CHP	1.2	0.9	12	10	10	17/19	10	5/8	13	1.5	QC10
QC10-JTTER/L1.4D16-CHP	1.4	1	16	10	10	19	10	5/8	13	1.5	QC10
QC12-JTTER/L1.2D20-CHP	1.2	0.9	20	12	12	22	12	6/9	15	1.5	QC12
QC12-JTTER/L1.4D20-CHP	1.4	1	20	12	12	22	12	6/9	15	1.5	QC12
QC12-JTTER/L2D20-CHP	2	2	20	12	12	22	12	6/9	15	1.5	QC12

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

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

Torque*: Recommended clamping torque (N·m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



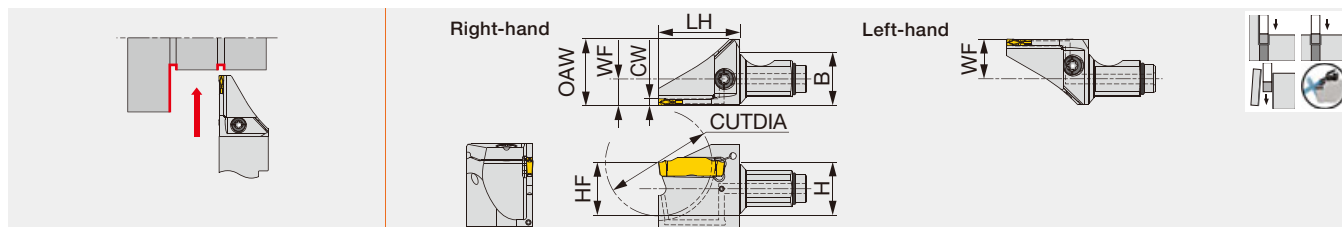
SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench	O-ring
QC10-JTTER/L...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0353.5X1.0NBR70
QC12-JTTER/L...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0454.5X1.0NBR70

QC-JCTER/L-CHP

TUNGCUT

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



Designation	CW	Seat size	CUTDIA	H	B	LH	HF	WF ⁽¹⁾	OAW	Torque*	Coupling size
QC16-JCTER/L1.2D20-CHP	1.2	0.9	20	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L1.4D20-CHP	1.4	1	20	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L2D20-CHP	2	2	20	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L2D26-CHP	2	2	26	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L2D32-CHP	2	2	32	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L3D26-CHP	3	3	26	16	16	24.5	16	8/12	20	3	QC16
QC16-JCTER/L3D32-CHP	3	3	32	16	16	24.5	16	8/12	20	3	QC16

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

Torque*: Recommended clamping torque (N·m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



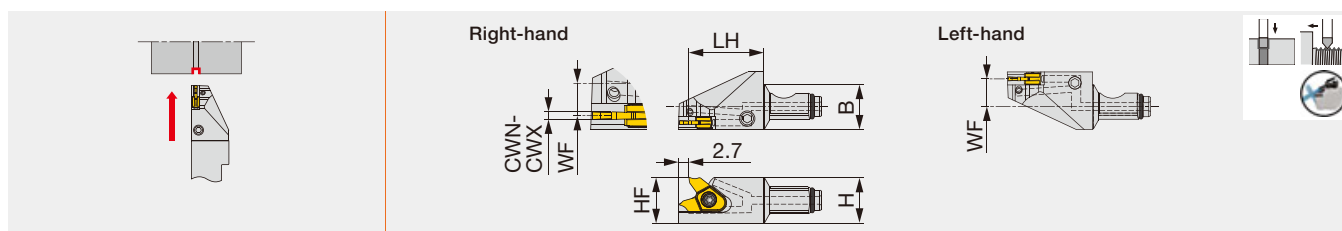
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC16-JCTER/L...	CSHB-4-A	T-15F	ORSS-0757.5X1.0NBR70

QC-SVER/L-CHP

MINILOCK
VERGROOVE

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



Designation	CWN	CWX	H	B	LH	HF	WF ⁽¹⁾	Insert	Torque*	Coupling size
QC10-SVER/L10-CHP	0.5	1	10	10	17	10	3.19/6.19	VG*10...	1.3	QC10
QC12-SVER/L10-CHP	0.5	1	12	12	19.5	12	4.19/7.19	VG*10...	1.3	QC12

Torque*: Recommended clamping torque (N·m)

(1) "WF" indicates the distance from the reference position to the center of the cutting edge width. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.

Assembled dimensions with shank are shown on page 41, 42.

Related Items



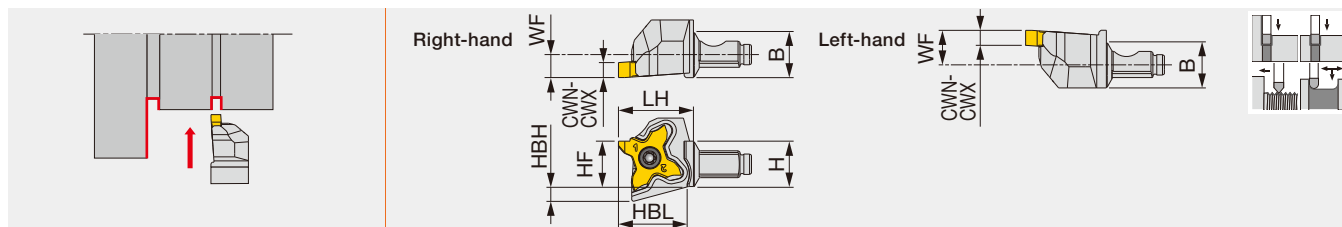
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC10-SVER...	CSTB-2.5L054DL	T-7F	ORSS-0353.5X1.0NBR70
QC10-SVEL...	CSTB-2.5L054DR	T-7F	ORSS-0353.5X1.0NBR70
QC12-SVER...	CSTB-2.5L054DL	T-7F	ORSS-0454.5X1.0NBR70
QC12-SVEL...	CSTB-2.5L054DR	T-7F	ORSS-0454.5X1.0NBR70

QC-STCR/L

TETRAMCUT

Modular head for external grooving and threading



Designation	CWN	CWX	H	B	LH ⁽¹⁾	HF	HBH	HBL ⁽¹⁾	WF ⁽¹⁾	Insert	Torque*	Coupling size
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	QC12

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)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



Right-hand

Left-hand

SPARE PARTS

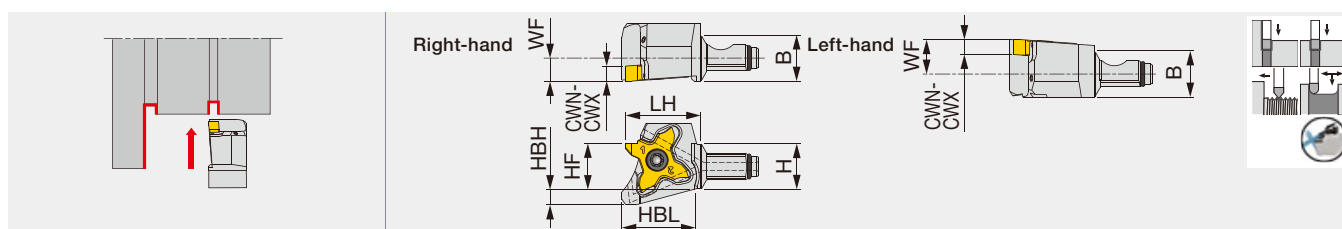


Designation	Clamping screw	Wrench
QC12-STCR18	CSTC-4L100DL	T-1008/5
QC12-STCL18	CSTC-4L100DR	T-1008/5

QC-STCR/L-CHP

TETRAMCUT

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



Designation	CWN	CWX	H	B	LH ⁽¹⁾	HF	HBH	HBL	WF ⁽¹⁾	Insert	Torque*	Coupling size
QC12-STCR/L18-CHP	0.33	3.18	12	12	19.5/21	12	4.2	19.3	6/9	TC*18R/L...	1.2	QC12
QC16-STCR/L18-CHP	0.33	3.18	16	16	21	16	-	22	8/13	TC*18R/L...	1.2	QC16

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)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



Right-hand

Left-hand

SPARE PARTS

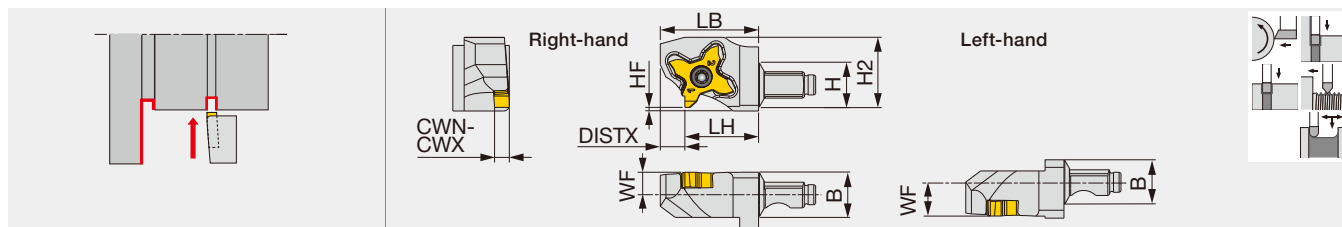


Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

QC-STCR/L-Y

TETRAMCUT

Y-axis turning modular head for external grooving and threading



Designation	CWN	CWX	H	B	LH	HF	WF (1)	LB	H2	DISTX	Insert	Torque*	Coupling size
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	QC12

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)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



Right-hand

Left-hand

SPARE PARTS

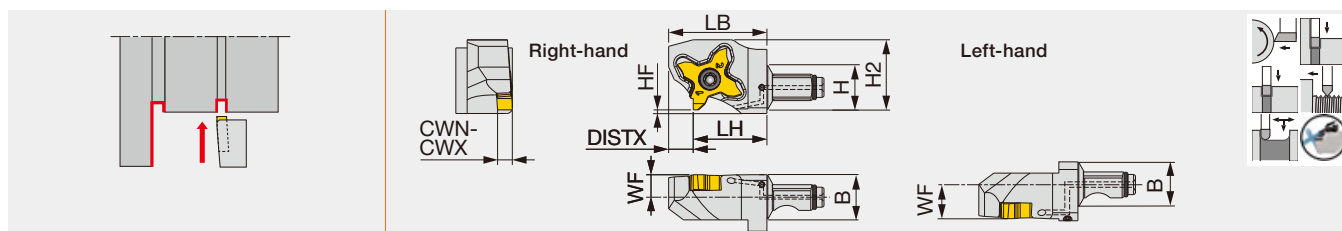


Designation	Clamping screw	Wrench
QC12-STCR18-Y	CSTC-4L100DL	T-1008/5
QC12-STCL18-Y	CSTC-4L100DR	T-1008/5

QC-STCR/L-Y-CHP

TETRAMCUT

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



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

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)

Assembled dimensions with shank are shown on page 41, 42.

Related Items



Right-hand

Left-hand

SPARE PARTS

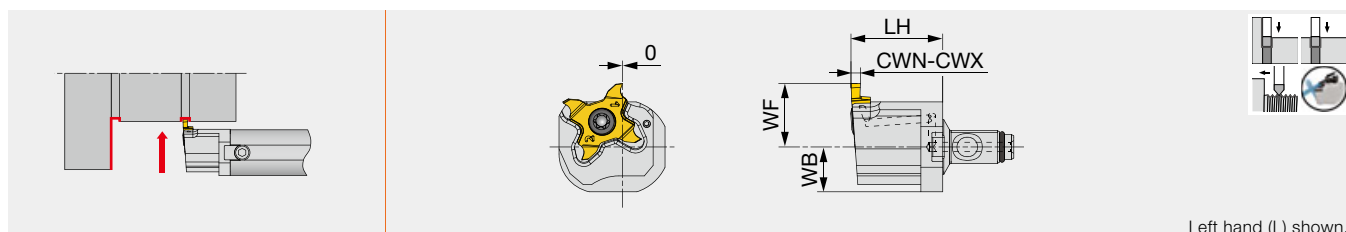


Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-Y-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-Y-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-Y-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-Y-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

QR12-STCL-CHP

TETRAMCUT

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



Left hand (L) shown.

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

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

Torque*: Recommended clamping torque (N-m)

Assembled dimensions with shank are shown on page 43.

Related Items



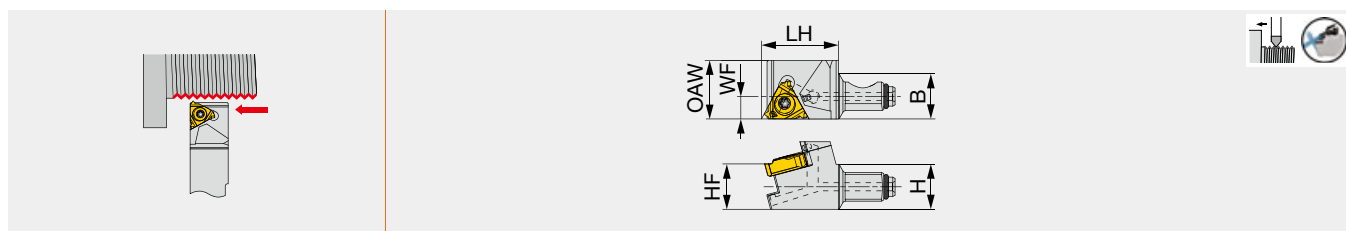
SPARE PARTS

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

QC-SER-CHP

TUNGTHREAD

Modular head for external threading, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	Insert	Torque*	Coupling size
QC10-SER11-CHP	10	10	17	10	5	13	11ER...	1.3	QC10

Torque*: Recommended clamping torque (N-m)

Assembled dimensions with shank are shown on page 41, 42.

Related Items

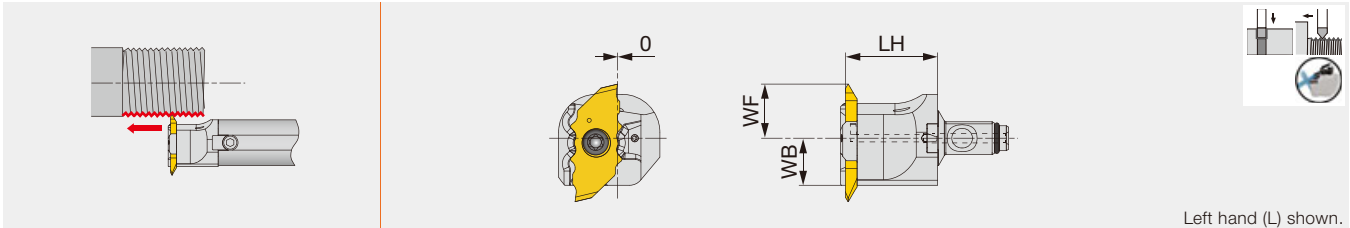


SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC10-SER11-CHP	SR M2.6-L6.7-S11	T-8F	ORSS-0353.5X1.0NBR70

QR12-SXXL-CHP

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



Left hand (L) shown.

Designation	LH	WF ⁽¹⁾	WB	Insert	Torque*	Coupling size	Shank
QR12E-SXXL09-CHP	19.5	11.5	8	JX*G**R...	1.2	QR12	A16*-QR12
QR12G-SXXL09-CHP	19.5	13.5	10	JX*G**R...	1.2	QR12	A19/20*-QR12

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

Torque*: Recommended clamping torque (N·m)

(1) WF (Functional Width) values shown above are true with JX**16... insert. WF will be 2 mm shorter than the above value with JX**12... insert; 4 mm shorter with JX**06... insert; 2 mm longer with JX**20... insert.

Assembled dimensions with shank are shown on page 43.

Related Items



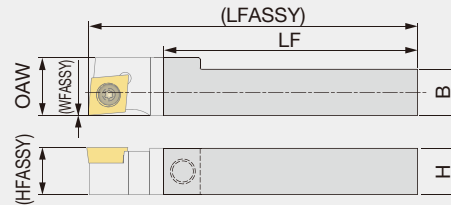
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SXXL09-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70

SHANKS

QC-1212

Shank for modular heads



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

Torque*: Recommended clamping torque (N·m)

(1) The size is true when the modular head with LH = 19.5 mm is mounted.

SPARE PARTS

Designation	Clamping screw	Wrench
QC-1212*	SRM6X0.5-26977	P-3

QC-1012/1212/1616-CHP

Shank for modular heads, with high pressure coolant capability

Tube connection

Direct connection

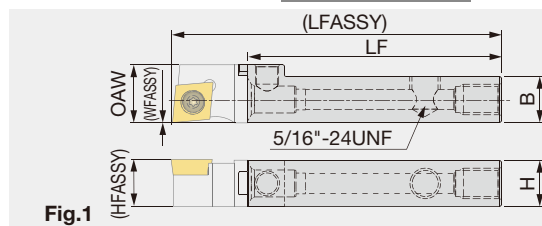


Fig.1

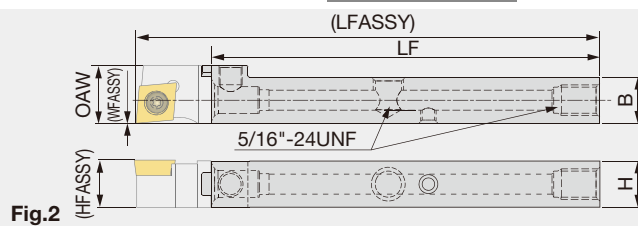


Fig.2

Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY	Torque*	Coupling size	Fig.
QC-1012H-CHP ^(*)	10	12	83	13	0	10	100 ⁽¹⁾	2.5	QC10	2
QC-1212F-CHP	12	12	65	15	0	12	85 ⁽²⁾	3	QC12	1
QC-1212X-CHP ^(*)	12	12	100	15	0	12	120 ⁽²⁾	3	QC12	2
QC-1616X-CHP ^(*)	16	16	99	20	0	16	120 ⁽³⁾	8.5	QC16	2

Torque*: Recommended clamping torque (N·m)

(*) : 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 = 17 mm is mounted.

(2) The size is true when the modular head with LH = 19.5 mm is mounted.

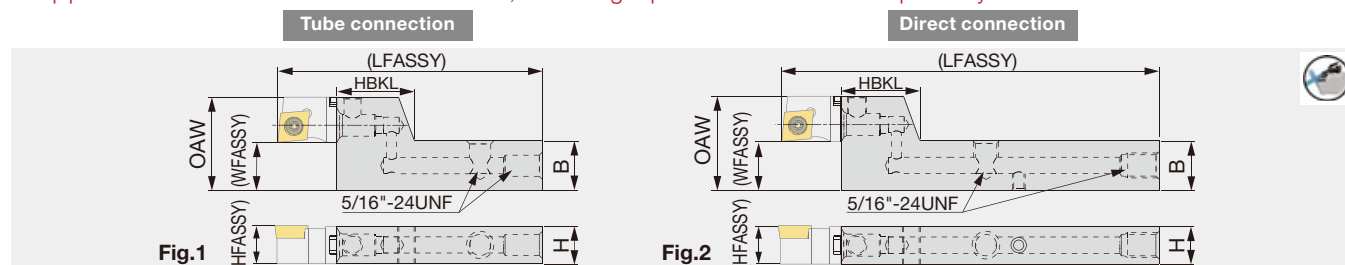
(3) The size is true when the modular head with LH = 21 mm is mounted.

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
QC-1012H-CHP	SRM5X0.5	P-2.5	SR 5/16UNF TL360	P-4	SSH4-4-TB	P-2
QC-1212F-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	-	-
QC-1212X-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	SSH4-6-TB	P-2
QC-1616X-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSH4-6-TB	P-2

QC-1216/1620-F15-CHP

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



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

Torque* : Recommended clamping torque (N.m)

(*) : 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.

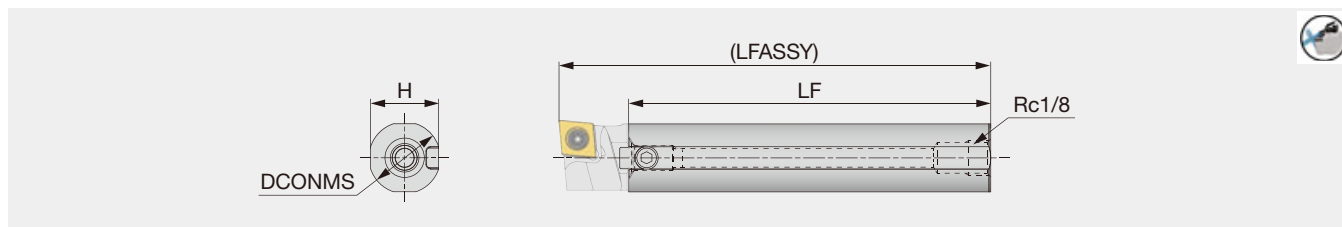
(2) The size is true when the modular head with LH = 21 mm is mounted.

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
QC-1216F-F15-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	-	-
QC-1216X-F15-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-1620X-F15-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

A-QR12

Round shank for modular heads, with high pressure coolant capability



Designation	DCONMS	H	LF	LFASSY ⁽¹⁾	Torque*	Coupling size	Head
A16F-QR12	16	15	65	85	3	QR12	QR12C/E..., QR12-18ER11
A16X-QR12	16	15	100	120	3	QR12	QR12C/E..., QR12-18ER11
A19G-QR12	19.05	18	70	90	3	QR12	QR12D/G..., QR12-18ER11
A19X-QR12	19.05	18	100	120	3	QR12	QR12D/G..., QR12-18ER11
A20G-QR12	20	19	70	90	3	QR12	QR12D/G..., QR12-18ER11
A20X-QR12	20	19	100	120	3	QR12	QR12D/G..., QR12-18ER11

Torque*: Recommended clamping torque (N·m)

(1) The size is true when the modular head with LH = 19.5 mm is mounted.

SPARE PARTS



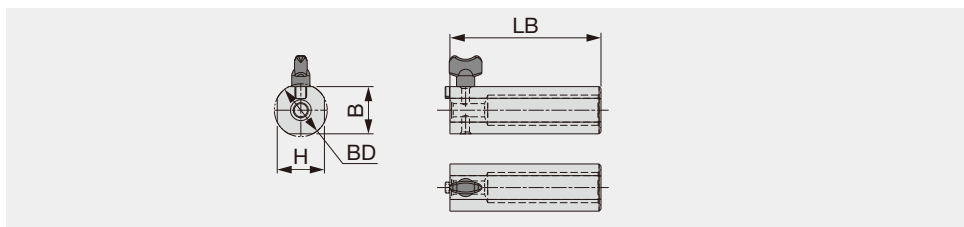
Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
A**-QR12	SRM6X0.5-26977	P-3	(P-3B)

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.

ACCESSORIES

QC-D28EXC

Modular head holder for insert change



Designation	BD	LB	H	B	Head
QC-10D28EXC	27	80	24	24	QC10...
QC-12D28EXC	28	80	25	25	Q*12...
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.

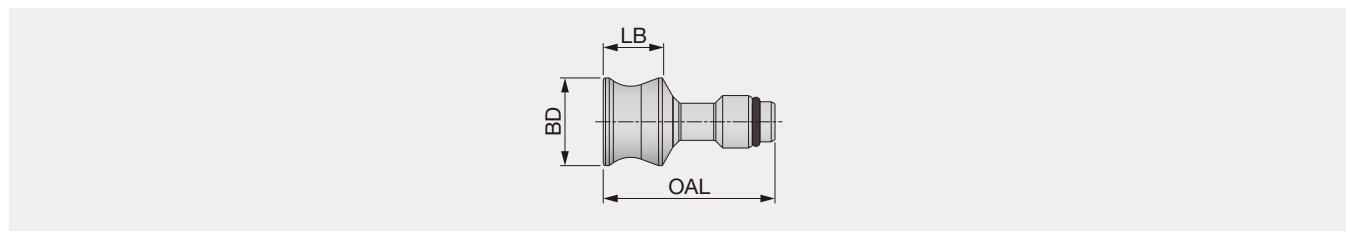
SPARE PARTS



Designation	Fixing screw
QC-**D28EXC	KNOBM5X10

QC-STOPPER

Protective plug for shank



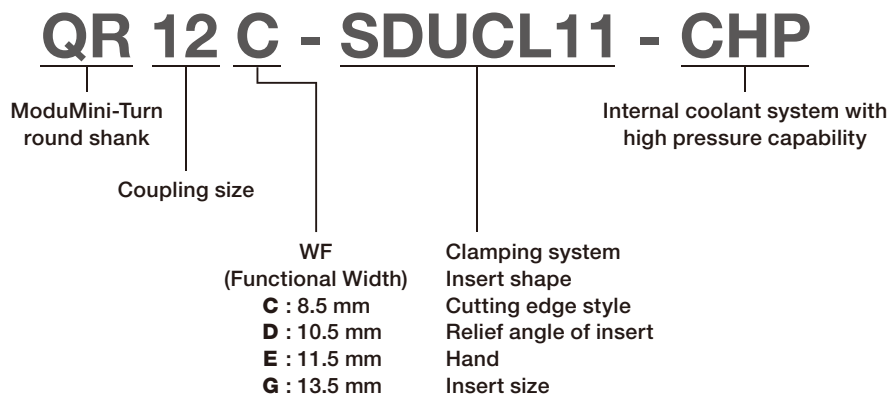
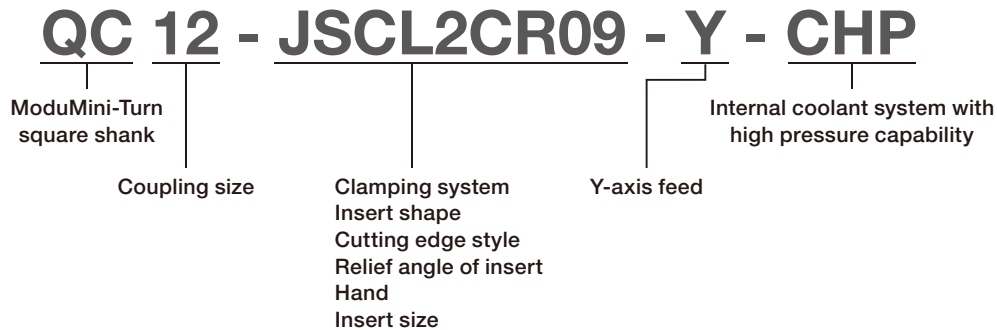
Designation	BD	LB	OAL	Shank
QC10-STOPPER	9.6	7.5	19.7	QC-10...
QC12-STOPPER	11.6	8	22.7	QC-12...
QC16-STOPPER	15.6	6	26.2	QC-16...

SPARE PARTS



Designation	O-ring
QC10-STOPPER	ORSS-0353.5X1.0NBR70
QC12-STOPPER	ORSS-0454.5X1.0NBR70
QC16-STOPPER	ORSS-0757.5X1.0NBR70

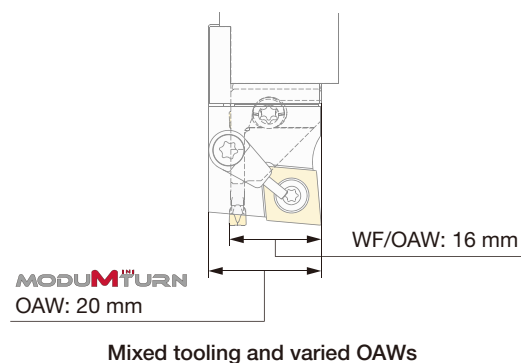
NOMENCLATURE FOR CUTTING HEADS



Caution when using with sub-spindle

● Possible tool collision with the sub-spindle during parting operation

ModuMini-Turn may collide with the sub-spindle when being used with a non **ModuMini-Turn** parting tool set in the adjacent position. This is due to variations in the overall widths (OAWs) of the cutting heads. In such case, please implement necessary compensations to the programming to offset the size difference and avoid collision.



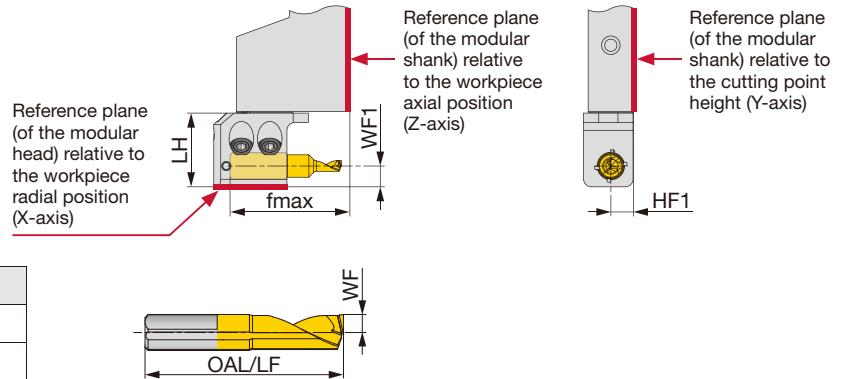
Setting the boring tool with a QC-JBBS-4N modular head

Use the following formulas to calculate the cutting point positions when setting a **TinyMini-Turn** boring bar held in a QC-JBBS-4N modular head.

Ex.)

Head	QC12-JBBS-7-4N
Shank	QC-1216X-F15-CHP
LH (mm)	19.5
fmax (mm)	31.5
WF1 (mm)	5.5
HF1 (mm)	6

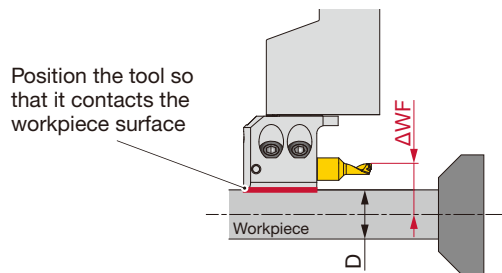
Solid carbide bar	TBMFR0706001-D030
WF (mm)	1.5
OAL/LF (mm)	29.5



● Calculation

The calculations shown below are based on the tool sizes provided above.

Radial position ΔWF : the distance from the workpiece center to the cutting point.



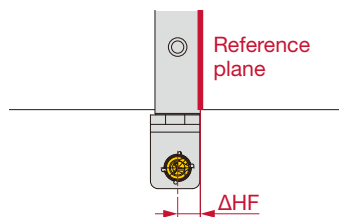
$$\Delta WF = WF + WF1 + D/2$$

D: workpiece diameter

Ex.) Given that D = 10 mm

$$\Delta WF = 1.5 + 5.5 + 10/2 = 12 \text{ mm}$$

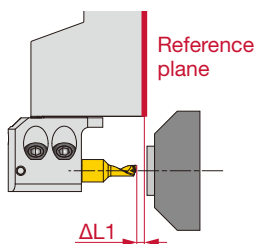
Cutting point height ΔHF : the distance from the height reference plane to the cutting point.



$$\Delta HF = HF1$$

Ex.) $\Delta HF = 6 \text{ mm}$

Axial position $\Delta L1$: the distance from the axial reference plane to the cutting point.



$$\Delta L1 = f_{\max} - OAL$$

Ex.) $\Delta L1 = 31.5 - 29.5 = 2 \text{ mm}$

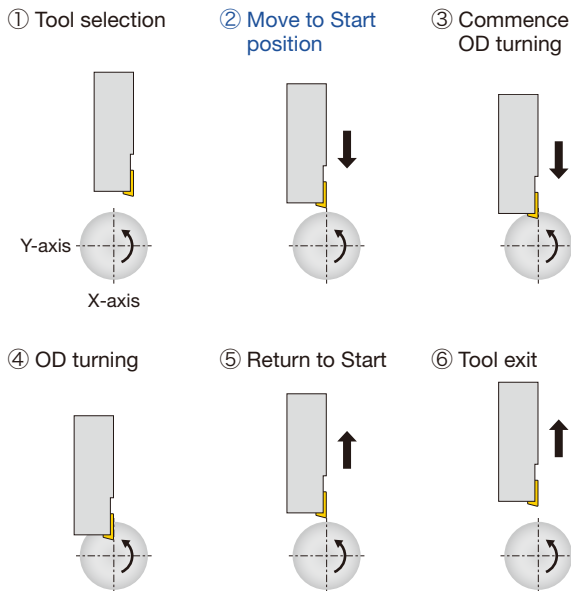
* The fmax value varies depending on the modular head used.

Modular head	fmax (mm)
QC12-JBBS...	31.5
QC16-JBBS...	35.5

Cautions when using Y-axis cutting heads

Machining procedures

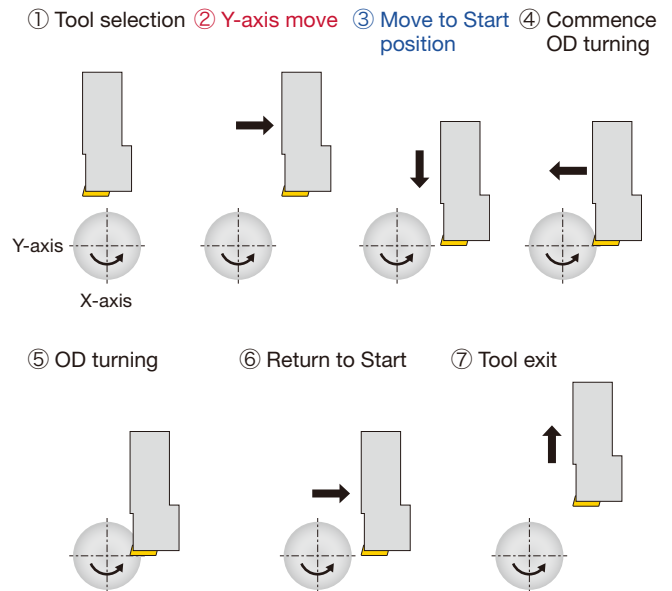
Conventional X-axis machining



Programming sample

- ① T0200 Tool selection
- ② G00 X13.0 Z0 T2 Move to start position
- ③ G01 X10.0 F0.1 Commence OD turning
- ④ Z5.0 F0.05 OD turning
- ⑤ X13.0 Return to start position
- ⑥ G00X20.0 Tool exit

Y-axis machining



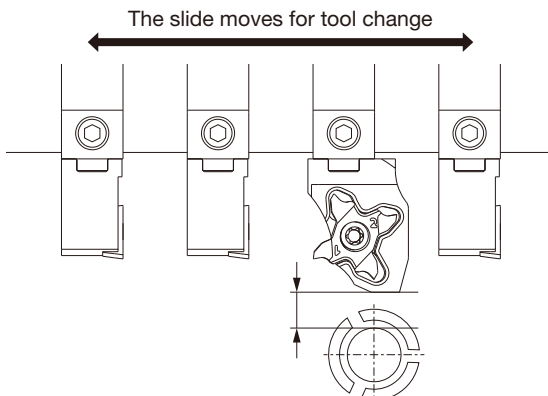
Programming sample

- ① T0200 Tool selection
- ② G00 Y13.0 Z0 T2 Move the Y-axis
- ③ X0 Move to start position
- ④ G01 Y10.0 F0.1 Commence OD turning
- ⑤ Z5.0 F0.05 OD turning
- ⑥ Y13.0 Return to start position
- ⑦ G00X20.0 Tool exit

Note) Ensure to first move ② Y-axis before ③ moving to the start position.

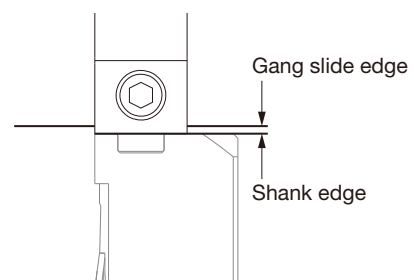
Difference in tool overhang

Due to the difference in overhang from conventional X-axis tools, Y-axis tool needs special attention to avoid collision with the workpiece during the slide movement. To ensure safety, program so that the cutting head stays clear from the workpiece.



Caution when installing the shank on the gang slide

To ensure secure tool coupling, install the shank on the gang slide so that the shank edge protrudes 0.5 mm or more from the edge of the slide unit. Make sure that the cutting head and the slide unit are NOT in contact.



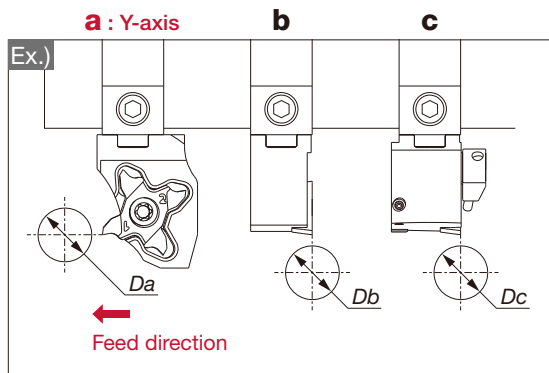
● Reduction of machinable barstock diameters

Depending on the Y-axis cutting tool's location and orientation on the gang tool slide, machinable barstock diameter may vary. To avoid tool collision and damage with the workpiece, check the machinable barstock size in the list below before using Y-axis cutting head.

Note: The values in the list are calculated, provided that the cutting tools on the slide are all accurately set to the equal tool length before operation.

A When there is no tool located in the feed direction of Y-axis tool

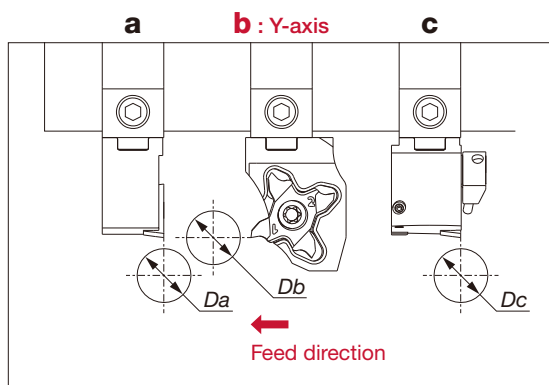
Ex.) Y-axis tool is located at the very end of the slide facing outward



Tool position	a	b	c
Cutting head type	Y-axis head	X-axis head	X-axis head
Machinable barstock dia.	No restriction for the D_a value	$D_b = \varnothing 70 \text{ mm}$	No restriction for the D_c value

B When there is a tool located in the feed direction of the Y-axis tool

B-1: When X-axis tool is in the Y-axis feed direction



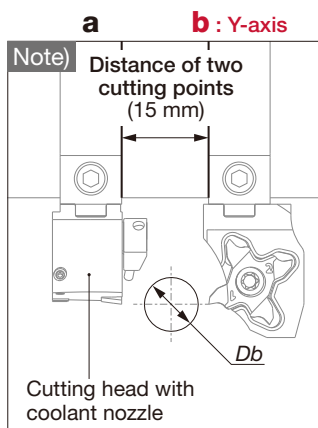
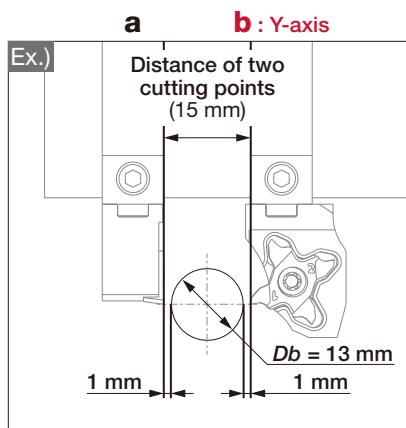
Tool position	a	b	c
Cutting head type	X-axis head	Y-axis head	X-axis head
Machinable barstock dia.	No restriction for the D_a value	See below for the D_b value	$D_c = \varnothing 70 \text{ mm}$

Calculation for D_b

$D_b = \text{Distance between the cutting points} - 2 \text{ mm (for the holder clearances)}$

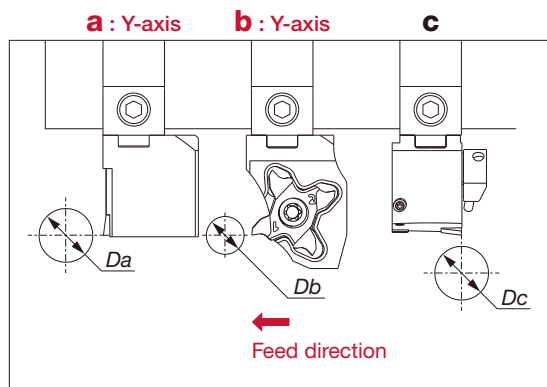
Ex.) Given that the two cutting points are 15 mm apart,

$$D_b = 15 - 2 = \varnothing 13 \text{ mm}$$



Note) When Y-axis tool is adjacent to a tool with coolant nozzle, a collision may occur even if a proper distance is maintained between the tools. For such tool setup, always use precautionary measures to avoid interference before starting the operation.

B-2: When another Y-axis tool is in the Y-axis feed direction



Tool position	a	b	c
Cutting head type	Y-axis head	Y-axis head	X-axis head
Machinable barstock dia.	No restriction for the D_a value	See below for the D_b value	$D_c = \varnothing 70 \text{ mm}$

Calculation for D_b

D_b = Distance between the two cutting points – Max head width – 2 mm (for the clearances)

Max head width = Head width (H2) – Shank width (B)

See the catalog for the tool's H2 and B sizes.

Ex.) Given: the cutting point distance = 15 mm

Using QC12-JSCL2CR09-Y-CHP as the adjacent tool (H2 = 18.6 mm, B = 12 mm)

$$D_b = 15 - (18.6 - 12) - 2 = \varnothing 6.4 \text{ mm}$$

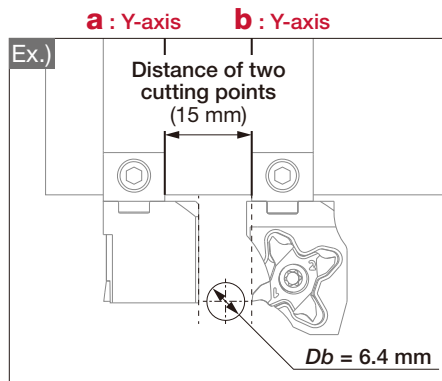


Chart sheet for the D_b values when using ModuMini-Turn Y-axis cutting head

Y-axis cutting head	Distance between the two tools (mm)	H2 (mm)	Shank width B (mm)	Machinable barstock dia. D_b (mm)
QC12-JSCL2CR09-Y (-CHP)	15	18.6	12	$\varnothing 6.4$
QC12-JSDJ2CR11-Y (-CHP)		18.7	12	$\varnothing 6.3$
QC12-JSWL2XR04-Y (-CHP)		12	12	$\varnothing 13$
QC12-JSDJ2XR07-Y (-CHP)		12.5	12	$\varnothing 12.5$
QC12-STCR/L18-Y (-CHP)		18.6	12	$\varnothing 6.4$
QC12-STOPPER		-	12	$\varnothing 21$
QC16-JSCL2CR09-Y-CHP	19	16	16	$\varnothing 17.9^*$
QC16-JSWL2XR04-Y-CHP		16	16	$\varnothing 18.5^*$
QC16-JSDJ2CR11-Y-CHP		18.7	16	$\varnothing 14.3$
QC16-JSDJ2XR07-Y-CHP		16	16	$\varnothing 17$
QC16-PTL2NR16-Y-CHP		18.7	16	$\varnothing 14.3$
QC16-STCR/L18-Y-CHP		18.6	16	$\varnothing 14.4$
QC16-STOPPER		-	16	$\varnothing 27.5$

* The theoretical maximum machinable diameter for these tools is 17.0 mm.

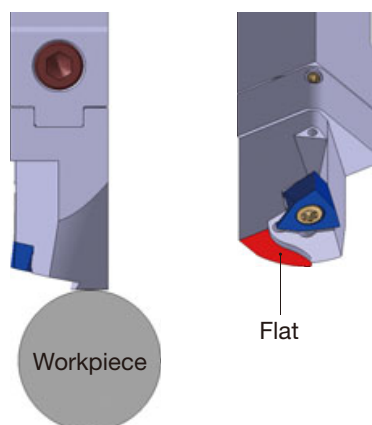
■ Cutting point offset in the radial (X-axis) direction

● Setting Method

To offset the cutting point position in the radial (X-axis) direction during the tool setup, lower the flat (the red-colored area) of the cutting head to contact the workpiece, then compensate the tool position by offsetting the program for the distance between the flat and the cutting point (see the list below for the offset values).

Presetting

- Bring the flat into contact with the workpiece and preset the value for the radial (X-axis) direction.

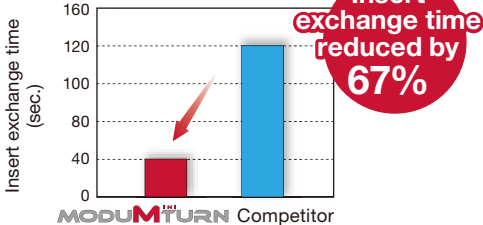
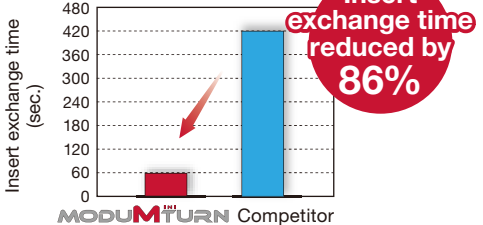
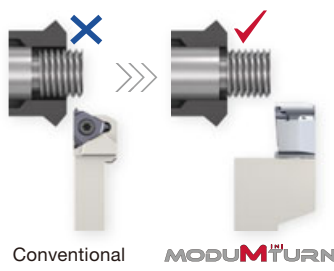
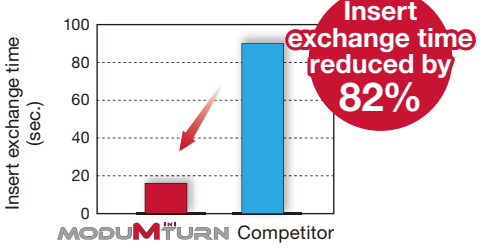


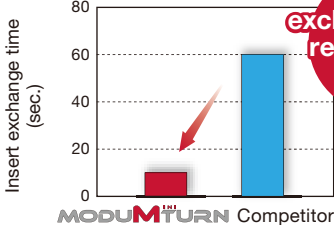
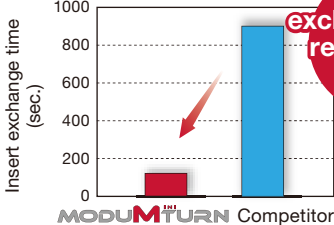
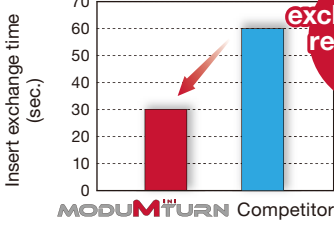
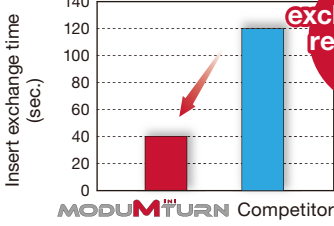
Programming

- The offset values for the cutting point are shown in the list below.
- Set the offset value in the machining program to compensate the cutting point position.

	Offset values for Y-axis cutting head types		
	J-SERIES	MINI ^{INI} TURN	TETRAM ^{INI} CUT
DISTX : Offset value for the cutting point			
Y-axis cutting head	QC12-JSCL2CR09-Y (-CHP) QC12-JSDJ2CR11-Y (-CHP) QC16-JSCL2CR09-Y-CHP QC16-JSDJ2CR11-Y-CHP	QC12-JSDJ2XR07-Y (-CHP) QC12-JSWL2XR04-Y (-CHP) QC16-JSWL2XR04-Y-CHP QC16-JSDJ2XR07-Y-CHP QC16-PTL2NR16-Y-CHP	QC12-STCR/L18-Y (-CHP) QC16-STCR/L18-Y-CHP
DISTX Offset value for the cutting point	0.3 mm (Ref.)	2.8 mm (Ref.)	6.5 mm (Ref.)

PRACTICAL EXAMPLES

Workpiece type		Pin	Torsion bar
Shank		QC-1012H-CHP	QC-1012H-CHP
Head		QC10-JSDJ2CR07-CHP	QC10-JTTER1.4D16-CHP
Insert		DCGT070201FN-JP	DGS1.4-016
Grade		SH725	AH7025
Workpiece material		SUS316L / X2CrNiMo17-12-2	Alloy steel
		 M	 P
Cutting conditions	Cutting speed : V_c (m/min)	30	85
	Feed : f (mm/rev)	0.04	0.08
	Machining	External turning	Parting
	Coolant	Wet	Wet
Results		 Insert exchange time (sec.) Using ModuMini-Turn modular tooling enabled 67% shorter tool change time.	 Insert exchange time (sec.) Insert exchange time reduced by 86% Using ModuMini-Turn modular tooling system eliminated time-consuming external coolant subassembly and provided 86% shorter insert change time.
Workpiece type		Ball screw shaft	Part for camera
Shank		QC-1216X-F15-CHP	QC-1212X-CHP
Head		QC12-STCR18-CHP	QC12-JTTEL1.2D20-CHP
Insert		TCT18FR-60A-005	DGS1.2-003
Grade		SH725	AH725
Workpiece material		S55C / C55	SUS303 / X10CrNiS18-9
		 P	 M
Cutting conditions	Cutting speed : V_c (m/min)	60	45
	Feed : f (mm/rev)	1 (pitch)	0.03
	Machining	Threading (M12 x 1)	Parting-off (CW = 1.2 mm)
	Coolant	Wet	Wet
Results		 Conventional MODUMINI-TURN Fewer scraps! The use of stepped-head shank prevented chips from entering the inside of the guide bushing, eliminating the generation of part scraps.	 Insert exchange time (sec.) Insert exchange time reduced by 82% Thanks to ModuMini-Turn quick change system, insert change time was reduced by 82%.

Workpiece type		Screw	Drive shaft
Shank		QC-1616X-CHP	QC-1616X-CHP
Head		QC16-JSDJ2CR11-CHP	QC16-PTL2NR16-CHP
Insert		DCGT11T302N-JS	TNMG160404-TSF
Grade		AH725	T9225
Workpiece material		SUS304 / X5CrNi18-9	Alloy steel
		 M	 P
Cutting conditions	Cutting speed : V_c (m/min)	80	150
	Feed : f (mm/rev)	0.05	0.15
	Machining	External turning	External turning
	Coolant	Wet	Wet
Results		 Insert exchange time (sec.) Insert exchange time reduced by 83% Using ModuMini-Turn modular tooling enabled 83% shorter tool change time.	 Insert exchange time (sec.) Insert exchange time reduced by 87% Using ModuMini-Turn modular tooling system eliminated time-consuming external coolant subassembly and provided 87% shorter insert change time.
Workpiece type		Drive shaft	Nut
Shank		A20X-QR12	A19X-QR12
Head		QR12D-SDUCL11-CHP	QR12G-STCL18-CHP
Insert		DCGT11T302FN-JS	TCP18R125-010
Grade		SH7025	AH725
Workpiece material		S45C / C45	SCM435 / 34CrMo4
		 P	 P
Cutting conditions	Cutting speed : V_c (m/min)	100	65
	Feed : f (mm/rev)	0.04	0.05
	Machining	External turning	External grooving
	Coolant	Wet	Wet
Results		 Insert exchange time (sec.) Insert exchange time reduced by 50% Using ModuMini-Turn modular tooling enabled 50% shorter tool change time.	 Insert exchange time (sec.) Insert exchange time reduced by 67% Using ModuMini-Turn modular tooling enabled 67% shorter tool change time.

Tungaloy Corporation (Head office)

11-1 Yoshima-Kogyodanchi
Iwaki-city, Fukushima 970-1144 Japan
Phone: +81-246-36-8501
Fax: +81-246-36-8542
www.tungaloy.co.jp

Tungaloy-NTK America Inc.

3726 N Ventura Drive
Arlington Heights, IL 60004, U.S.A.
Phone: +1-888-554-8394
Fax: +1-888-554-8392
www.tungaloy.com/us

Tungaloy Canada

432 Elgin St. Unit 3
Brantford, Ontario N3S 7P7, Canada
Phone: +1-519-758-5779
Fax: +1-519-758-5791
www.tungaloy.com/ca

Tungaloy-NTK De Mexico S.A.

C. Los Arellano 113,
Parque Industrial Siglo XXI
Aguascalientes, AGS, Mexico 20290
Phone: +52-449-929-5410
Fax: +52-449-929-5411
www.tungaloy.com/mx

Tungaloy-NTK do Brasil Ltda.

Avd. Independencia N4158 Residencial Flora
13280-000 Vinhedo, São Paulo, Brasil
Phone: +55-19-38262757
Fax: +55-19-38262757
www.tungaloy.com/br

Tungaloy-NTK Germany GmbH.

Katzbergstr. 3a
D-40764 Langenfeld, Germany
Phone: +49-2173-90420-0
Fax: +49-2173-90420-19
www.tungaloy.com/de

Tungaloy France s.a.s

Les Fjords
19 avenue de Norvège
91140 Villebon Sur Yvette, France
Phone: +33-1-6486-4300
Fax: +33-1-6907-7817
www.tungaloy.com/fr

Tungaloy Italia S.r.l.

Viale Sarca 336/Edificio 13
20126 Milano, Italy
Phone: +39-02-252012-1
Fax: +39-02-252012-65
www.tungaloy.com/it

Tungaloy Czech s.r.o.

Turanka 1583/115g,
627 00 Brno, Czech Republic
Phone: +420-532 123 391
www.tungaloy.com/cz

Tungaloy Ibérica S.L.

C/Miquel Servet, 43B, Nau 7
Pol. Ind. Bufalvent
ES-08243 Manresa (BCN), Spain
Phone: +34 93 113 1360
www.tungaloy.com/es

Tungaloy Scandinavia AB

Bultgatan 38
442 40 Kungälv, Sweden
Phone: +46-462119200
Fax: +46-462119207
www.tungaloy.com/se

Tungaloy Rus, LLC

Andropova avenue, h.18/7,
11 floor, office 3, 115432,
Moscow, Russia
Phone: +7-499-683-01-80
Fax: +7-499-683-01-81
www.tungaloy.com/ru

Tungaloy Polska Sp. z o.o.

Ul. Irysowa 1, 55-040 Bielany
Wroclawskie, Poland
Phone: +48 607 907 237
www.tungaloy.com/pl

Tungaloy-NTK UK Ltd.

Suite 3, Pioneer House, Mill Street,
Cannock, WS11 0EF, UK
Phone: +44 121 4000 231
Fax: +44 121 270 9694
www.tungaloy.com/uk

Tungaloy Hungary Kft

Erzsébet királyné útja 125
H-1142 Budapest, Hungary
Phone: +36 1 781-6846
Fax: +36 1 781-6866
www.tungaloy.com/hu

Tungaloy Turkey

Serifali Mah.bayraktar Bulvari Kule Sk. No:26
34775 Umraniye / Istanbul / Turkey
Phone: +90 216 540 04 67
Fax: +90 216 540 04 87
www.tungaloy.com/tr

Tungaloy Benelux b.v.

Tjalk 70
NL-2411 NZ Bodegraven, Netherlands
Phone: +31 172 630 420
Fax: +31 172 630 429
www.tungaloy.com/nl

Tungaloy Croatia

Ulica bana Josipa Jelačića 87,
10430, Samobor, Croatia
Phone: +385 1 3326 604
Fax: +385 1 3327 683
www.tungaloy.com/hr

Tungaloy Cutting Tool (Shanghai) Co. Ltd.

Rm No 401 No.88 Zhabei
Jiangchang No.3 Rd
Shanghai 200436, China
Phone: +86-21-3632-1880
Fax: +86-21-3621-1918
www.tungaloy.com/cn

Tungaloy Cutting Tools Taiwan Co. Ltd.

9F, No.293, Zhongyang Rd,
Xinzhuan Dist, New Taipei City,
24251 Taiwan
Phone: +886-2-8521-9986
Fax: +886-2-8521-8935
www.tungaloy.com/tw

Tungaloy-NTK Cutting Tool (Thailand) Co.,Ltd.

Interlink tower 4th Fl.
1858/5-7 Bangna-Trad Road
km.5 Bangna, Bangna, Bangkok 10260
Thailand
Phone: +66-2-751-5711
Fax: +66-2-751-5715
www.tungaloy.com/th

Tungaloy Singapore (Pte.), Ltd.

62 Ubi Road 1, #08-09 Oxley BizHub 2
Singapore 408734
Phone: +65-6391-1833
Fax: +65-6299-4557
www.tungaloy.com/singapore

Tungaloy-NTK Vietnam LLC

3rd Floor, Licogi 13 Tower, 164 Khuat Duy
Tien, Nhan Chinh, Thanh Xuan District,
Hanoi, Vietnam
Phone: +84 24 63282086
www.tungaloy.com/vn

Tungaloy India Pvt. Ltd.

One International Center,
Unit # 902-A, 9th Floor,
Tower 1, Senapati Bapat Marg,
Elphinstone Road (West),
Mumbai 400013, India
Phone: +91-22-6124-8803
Fax: +91-22-6124-8899
www.tungaloy.com/in

Tungaloy Korea Co., Ltd

#1312, Byucksan Digital Valley 5-cha
Beotkkot-ro 244, Geumcheon-gu
153-788 Seoul, Korea
Phone: +82-2-2621-6161
Fax: +82-2-6393-8952
www.tungaloy.com/kr

Tungaloy Malaysia Sdn Bhd

50 K-2, Kelana Mall, Jalan SS6/14
Kelana Jaya, 47301
Petaling Jaya, Selangor Darul Ehsan
Malaysia
Phone: +603-7805-3222
Fax: +603-7804-8563
www.tungaloy.com/my

Tungaloy Australia Pty Ltd

Unit 68 1470 Ferntree Gully Road
Knoxfield 3180 Victoria, Australia
Phone: +61-3-9755-8147
Fax: +61-3-9755-6070
www.tungaloy.com/au

PT. Tungaloy Indonesia

Ruko Blok AA.10 No3&5, Grand Wisata,
Lembangjaya, Tambun Selatan, Bekasi,
17510 Indonesia
Phone: +62-21-8261-5808
Fax: +62-21-8261-5809
www.tungaloy.com/id



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