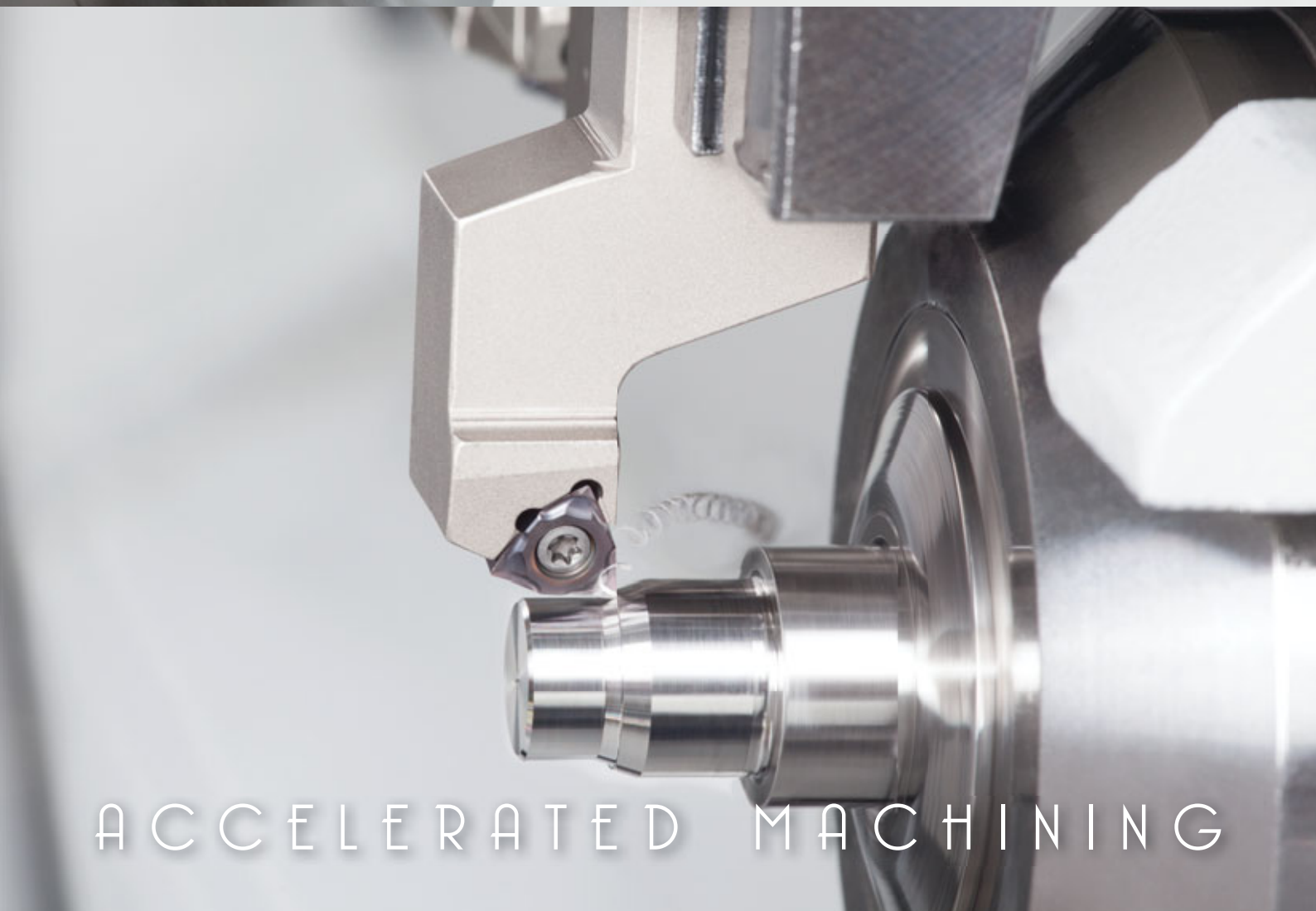
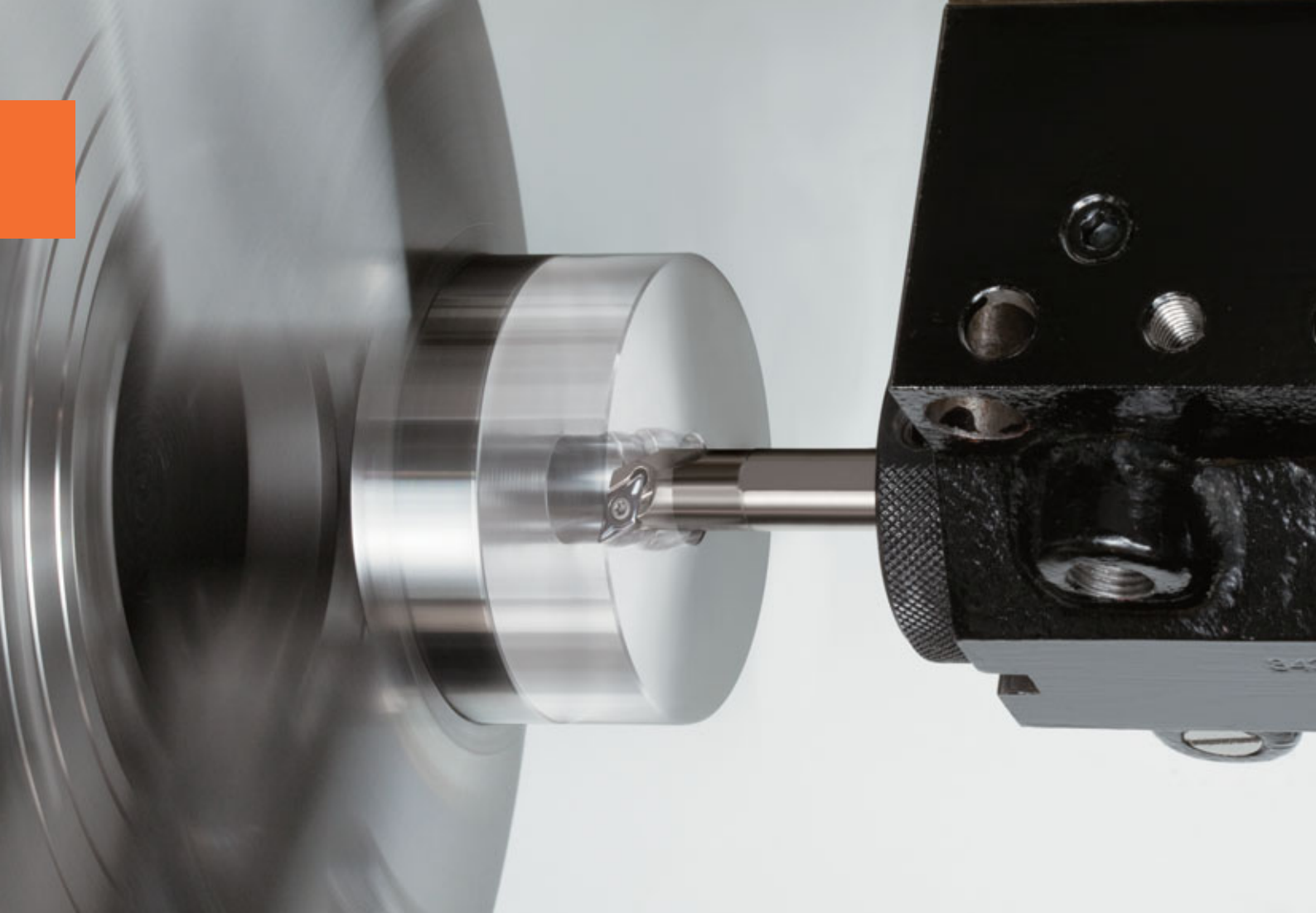


New addition of toolholders with offset to the series of inserts for low cutting force





ACCELERATED MACHINING



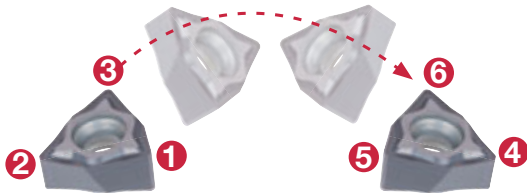
New addition to the line-up of general external turning tools: 20x20 and 25x25 toolholders with offset

Economical double sided inserts with positive cutting edge

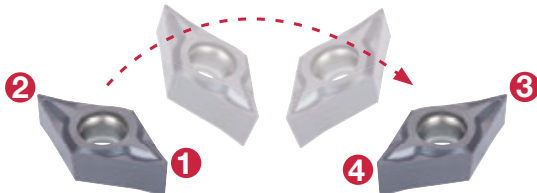
Innovative multi-cornered insert clamped into a unique pocket ensures insert stability resulting in superior machining performance.

Inserts

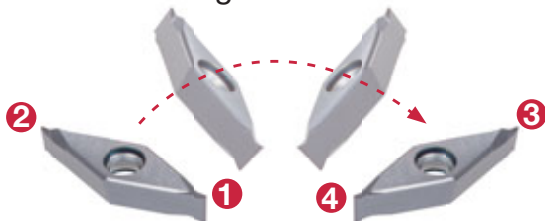
WXGU0403.. Inserts with 6 positive cutting edges



DXGU0703.. Inserts with 4 positive cutting edges



VXGU09T2.. Inserts with 4 positive cutting edges

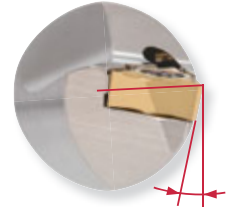


High rake angle

External turning



Internal turning



External turning



Internal turning

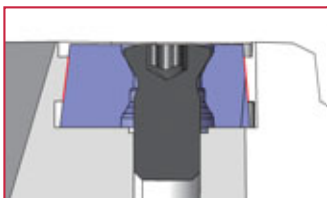


External turning



Toolholders

Dovetail structure ensures secure insert clamping.



External turning

JP-type screw accessible from both sides



Internal turning

Unique design for optimal chip evacuation



New**New addition of 20x20 and 25x25 toolholders with offset**

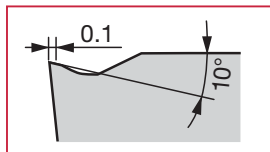
3 types of toolholders available for general external turning

MINI^{FACE}TURN**TURNINGA****ISO^ETURN****Uniquely designed chipbreakers****TS / JTS / TSW chipbreaker**

WXGU0403..



DXGU0703..

**P M K**

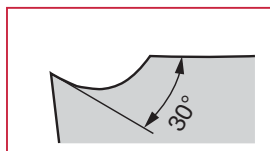
Excellent chip control, recommended for steel and stainless steel machining.

SS / JSS chipbreaker

WXGU0403..



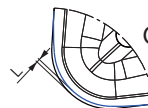
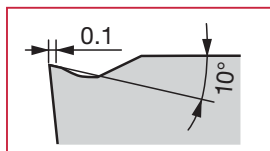
DXGU0703..

**M P**

Generates low cutting forces, recommended for steel and stainless steel machining.

TSW chipbreaker (Wiper)

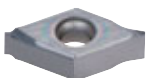
WXGU0403..



Off set: L = -0.05 mm

P M K

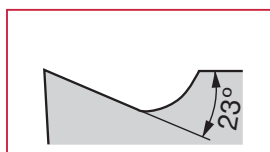
Excellent surface finishing and high efficiency for high feed machining.

JRP chipbreaker

DXGU0703..



VXGU09T2..



Sharp cutting edge and ground chipbreaker with excellent chip control.

Chipbreakers for general purposes

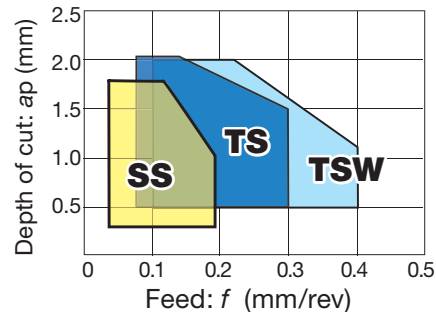
WXGU0403.. - TS / SS / TSW

DXGU0703.. - TS / SS

Reinforced cutting edge used at medium to low feeds in semi-finishing and finishing operations.

Application area

Corner radius $r_{\epsilon} = 0.2, 0.4, 0.8$



Chipbreakers for small parts machining

WXGU0403.. - JTS / JSS

DXGU0703.. - JTS / JSS

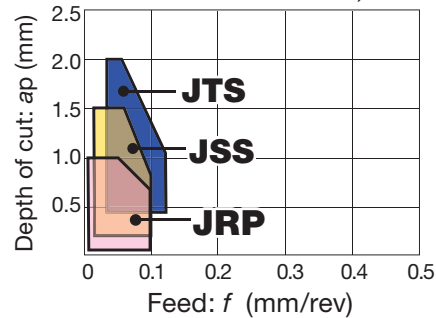
VXGU09T2.. - JRP

Extra sharp cutting edge used at low feeds for finishing operations.

An excellent solution to reduce vibration.

Application area

Corner radius $r_{\epsilon} = 0.1, 0.2$



TUNG T^{URN} JET

Thru-coolant holder system

Jets of coolant are supplied through the holder to facilitate
**smooth chip evacuation and reduce
 machine down-time**

**Eliminates chip re-cutting**

External coolant supply
 (at normal pressure)

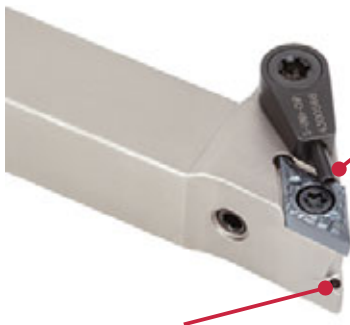


High pressure coolant
 (>7MPa)

**Coolant jets from two outlets ensure high cutting efficiency
 and extended tool life**

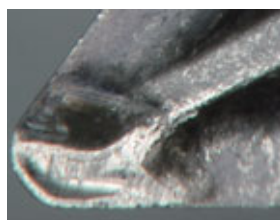
● I Directly to the cutting edge

Reliable chip control

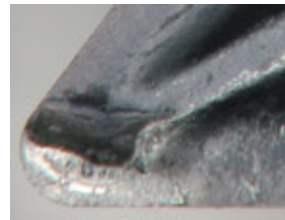


Top coolant jet to the optimal position on the insert
 rake close to the cutting edge

Reduces crater and notch wears



External coolant supply
 (at normal pressure)



High pressure coolant
 (>7MPa)

Bottom coolant jet to the insert
 clearance side



External coolant supply
 (at normal pressure)



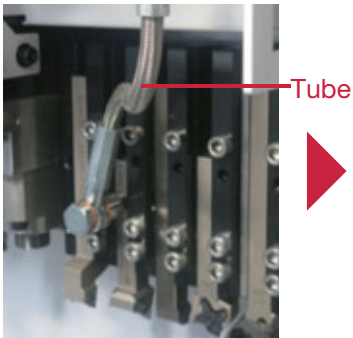
High pressure coolant
 (>7MPa)



**Nozzle extends to ensure
 optimal coolant delivery**

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

External coolant tube

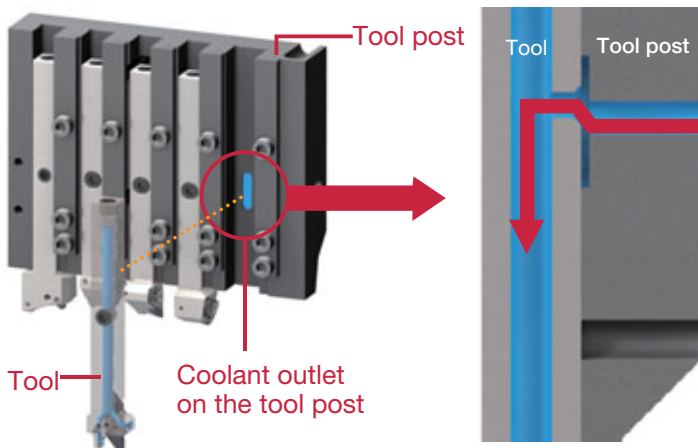


DirectTungJet system

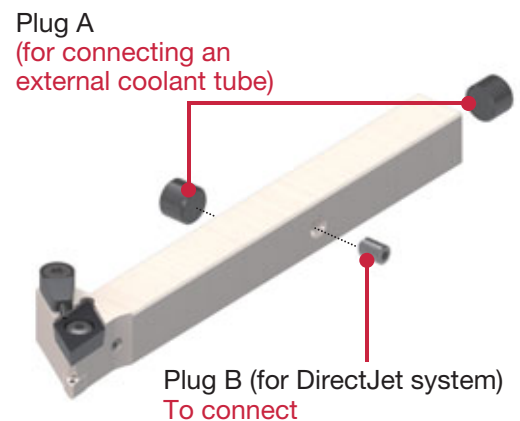


No need for coolant tube setups. Eliminates chip entanglement on tubes and streamlines tool replacements.

Coolant is supplied from the tool post directly to the tools

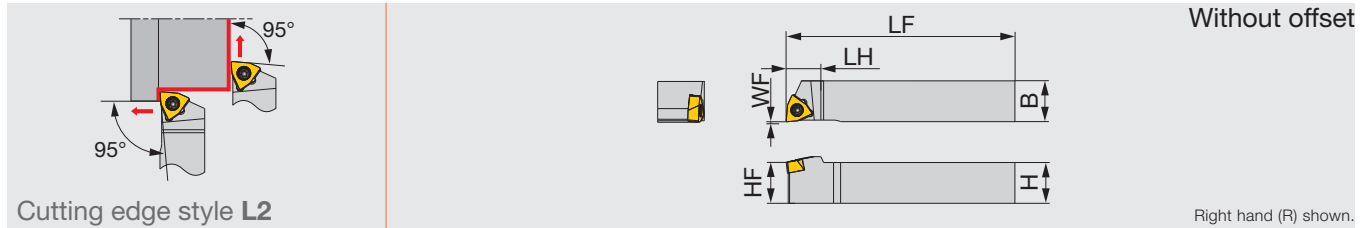


Use a non-coolant-through tool when a coolant supply is not needed through the tool.



JSWL2XR/L

Screw-on toolholder without offset with 95° approach angle, for WXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSWL2XR/L1010X04	10	10	120	11	10	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1212F04	12	12	85	11	12	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1212X04	12	12	120	11	12	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1616X04	16	16	120	13	16	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L2020H04	20	20	100	13	20	0	0.2	WXGU0403**L/R...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

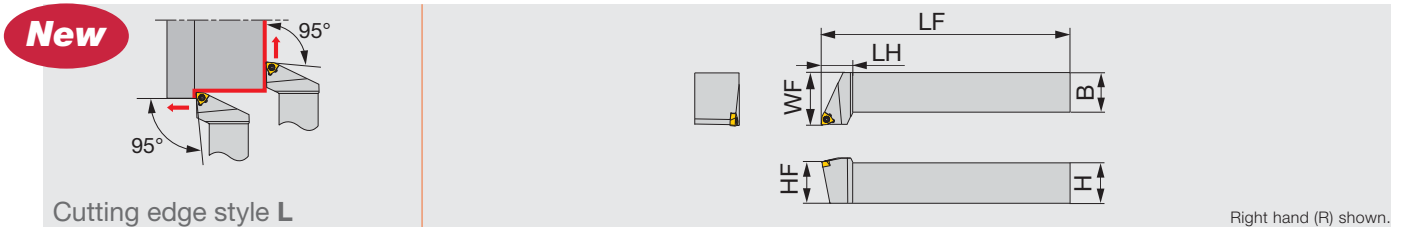
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
JSWL2XR/L...	SR34-514	T-7F

JSWLXR/L

Screw-on toolholder without offset with 95° approach angle, for WXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSWLXR/L2020K04	20	20	125	15	20	25	0.4	WXGU0403**L/R...	0.9
JSWLXR/L2525M04	25	25	150	19	25	32	0.4	WXGU0403**L/R...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

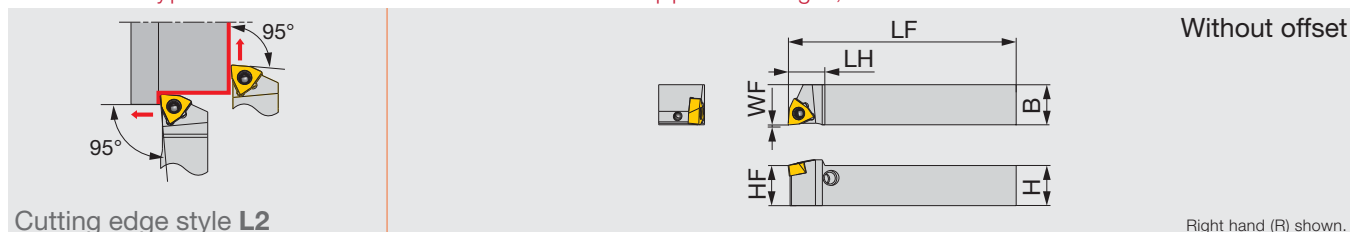
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
JSWLXR/L...	SR34-514	T-7F

JPWL2XR/L

Lever lock type toolholder without offset with 95° approach angle, for WXGU inserts



Cutting edge style L2

Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPWL2XR/L1010X04	10	10	120	11	10	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1212F04	12	12	85	11	12	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1212X04	12	12	120	11	12	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1616X04	16	16	120	13	16	0	0.2	WXGU0403**L/R...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

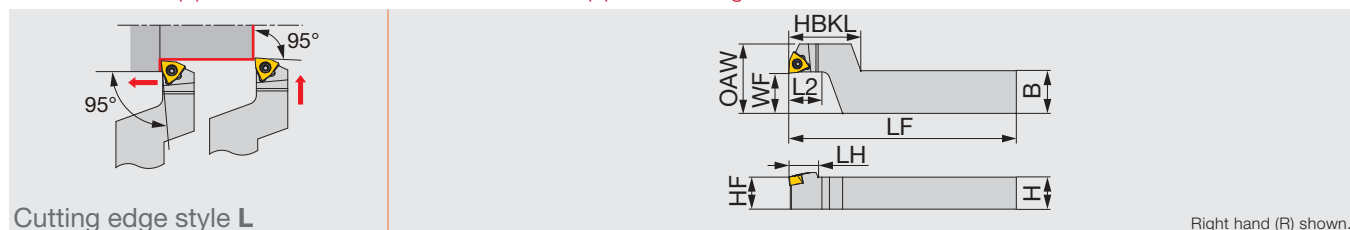
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Lever	Pin	Clamping screw	Wrench
JPWL2XR/L...	SLLV-2	SL-PI-2	SR10400611	HW2.0/5RED

JSWLXR-F

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



Cutting edge style L

Designation	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSWLXR1016X04-F15	10	16	120	12	27	11	10	15	26	0.2	WXGU0403**L...	0.9
JSWLXR1216F04-F15	12	16	85	12	27	11	12	15	26	0.2	WXGU0403**L...	0.9
JSWLXR1216X04-F15	12	16	120	12	27	11	12	15	26	0.2	WXGU0403**L...	0.9
JSWLXR1620X04-F15	16	20	120	12	27	11	16	15	26	0.2	WXGU0403**L...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

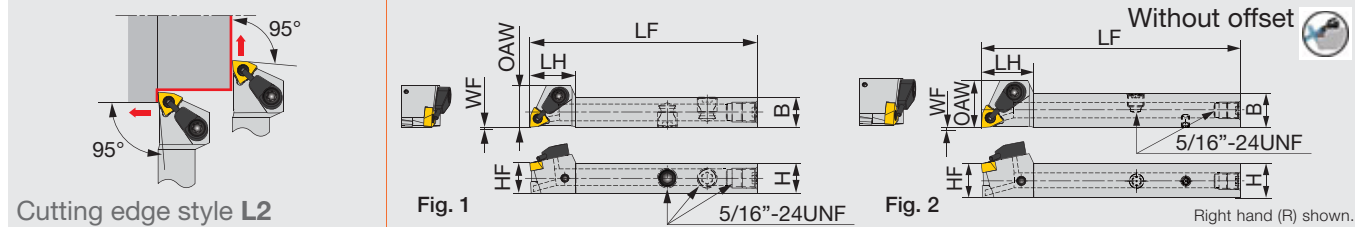
Note: Right-hand toolholders (R) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
JSWLXR**-F15	SR34-514	T-7F

JSWL2XR/L-CHP

Screw-on toolholder without offset with 95° approach angle, for WXGU inserts, with channels for high pressure coolant



Designation	H	B	LF	LH	HF	WF	OAW	RE**	Insert	Torque*	Fig.
JSWL2XR/L1212F04-CHP	12	12	85	18	12	0	16.5	0.2	WXGU0403**L/R...	0.9	1
JSWL2XR1212X04-CHP	12	12	120	18.5	12	0	16.5	0.2	WXGU0403**L	0.9	2
JSWL2XR1616X04-CHP	16	16	120	18.5	16	0	16.5	0.2	WXGU0403**L	0.9	2

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

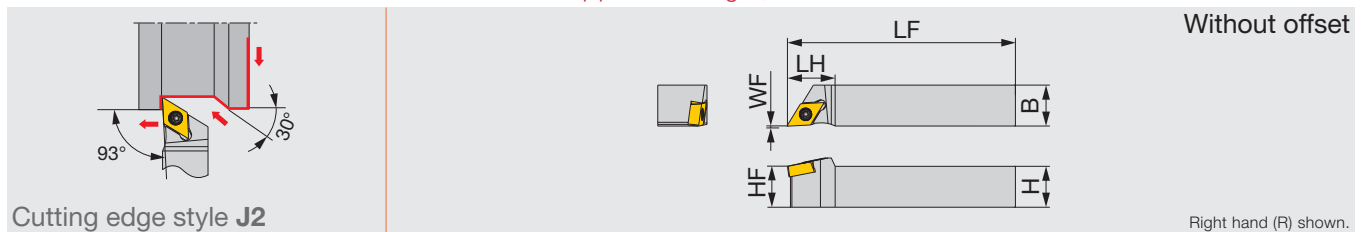
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSWL2XR**04-CHP	SR34-514	S-CU-CHP	T-7F

JSDJ2XR/L

Screw-on toolholder without offset with 93° approach angle, for DXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDJ2XR/L1010X07	10	10	120	14	10	0	0.2	DXGU0703**L/R...	0.9
JSDJ2XR/L1212F07	12	12	85	14	12	0	0.2	DXGU0703**L/R...	0.9
JSDJ2XR/L1212X07	12	12	120	14	12	0	0.2	DXGU0703**L/R...	0.9
JSDJ2XR/L1616X07	16	16	120	18	16	0	0.2	DXGU0703**L/R...	0.9
JSDJ2XR/L2020H07	20	20	100	18	20	0	0.2	DXGU0703**L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

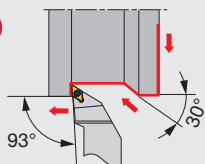
SPARE PARTS

Designation	Clamping screw	Wrench
JSDJ2XR/L...	SR34-514	T-7F

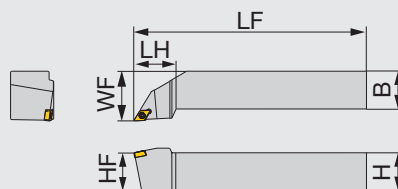
JSDJXR/L

Screw-on toolholder without offset with 93° approach angle, for DXGU inserts

New



Cutting edge style J



Right hand (R) shown.

Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDJXR/L2020K07	20	20	125	27	20	25	0.4	DXGU0703**L/R...	0.9
JSDJXR/L2525M07	25	25	150	27	25	32	0.4	DXGU0703**L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

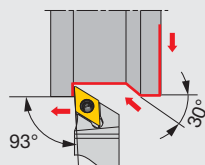
SPARE PARTS



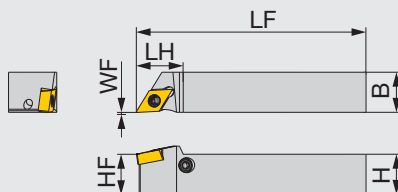
Designation	Clamping screw	Wrench
JSDJXR/L...	SR34-514	T-7F

JPDJ2XR/L

Lever lock type toolholder without offset with 93° approach angle, for DXGU inserts



Cutting edge style J2



Without offset

Right hand (R) shown.

Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPDJ2XR/L1010X07	10	10	120	14	10	0	0.2	DXGU0703**L/R...	0.9
JPDJ2XR/L1212F07	12	12	85	14	12	0	0.2	DXGU0703**L/R...	0.9
JPDJ2XR/L1212X07	12	12	120	14	12	0	0.2	DXGU0703**L/R...	0.9
JPDJ2XR/L1616X07	16	16	120	18	16	0	0.2	DXGU0703**L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

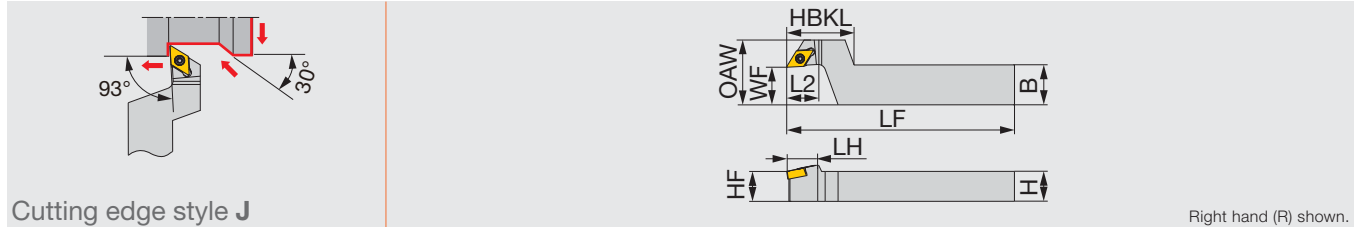
SPARE PARTS



Designation	Lever	Pin	Clamping screw	Wrench
JPDJ2XR/L...	SLLV-2	SL-PI-2	SR10400611	HW2.0/5RED

JSDJXR-F

Screw-on stepped-head toolholder with 93° approach angle, for DXGU inserts



Designation	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSDJXR1016X07-F15	10	16	120	12	27	14	10	15	26	0.2	DXGU0703**L...	0.9
JSDJXR1216F07-F15	12	16	85	12	27	14	12	15	26	0.2	DXGU0703**L...	0.9
JSDJXR1216X07-F15	12	16	120	12	27	14	12	15	26	0.2	DXGU0703**L...	0.9
JSDJXR1620X07-F15	16	20	120	12	27	14	16	15	26	0.2	DXGU0703**L...	0.9

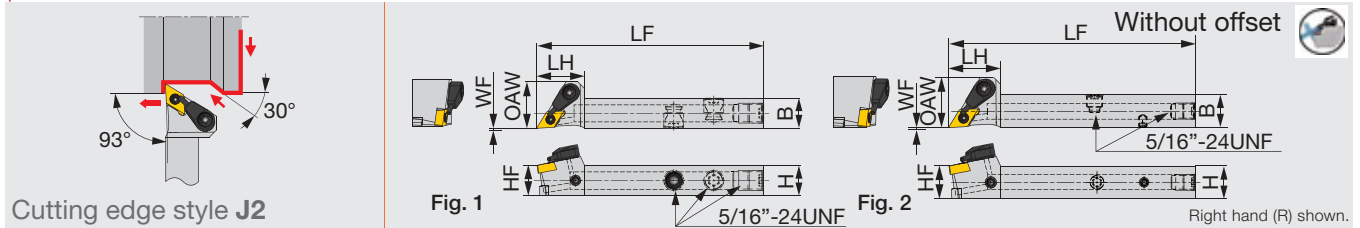
*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius
Note: Right-hand toolholders (R) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
JSDJXR**-F15	SR34-514	T-7F

JSDJ2XR/L-CHP

Screw-on toolholder without offset with 93° approach angle, for DXGU inserts, with channels for high pressure coolant



Designation	H	B	LF	LH	HF	W	OAW	RE**	Insert	Torque*	Fig.
JSDJ2XR/L1212F07-CHP	12	12	85	19	12	0	18.5	0.2	DXGU0703**L/R...	0.9	1
JSDJ2XR1212X07-CHP	12	12	120	19	12	0	18.5	0.2	DXGU0703**L	0.9	2
JSDJ2XR1616X07-CHP	16	16	120	19	16	0	18.5	0.2	DXGU0703**L	0.9	2

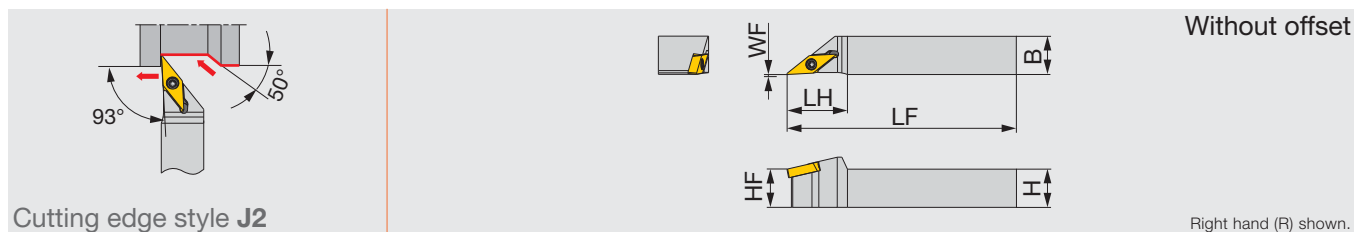
*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius
Note: Right-hand toolholders (R) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSDJ2XR**07-CHP	SR34-514	S-CU-CHP	T-7F

JSVJ2XR/L

Screw-on toolholder without offset with 93° approach angle, for VXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJ2XR/L1010X09	10	10	120	17	10	0	0.2	VXGU09T2**/L/R...	0.9
JSVJ2XR/L1212F09	12	12	85	19	12	0	0.2	VXGU09T2**/L/R...	0.9
JSVJ2XR/L1212X09	12	12	120	19	12	0	0.2	VXGU09T2**/L/R...	0.9
JSVJ2XR/L1616X09	16	16	120	19	16	0	0.2	VXGU09T2**/L/R...	0.9
JSVJ2XR/L2020H09	20	20	100	19	20	0	0.2	VXGU09T2**/L/R...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
JSVJ2XR/L...	SR34-508	T-7F

JSVJXR/L

Screw-on toolholder without offset with 93° approach angle, for VXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJXR/L2020K09	20	20	125	35	20	25	0.4	VXGU09T2**/L/R...	0.9
JSVJXR/L2525M09	25	25	150	35	25	32	0.4	VXGU09T2**/L/R...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

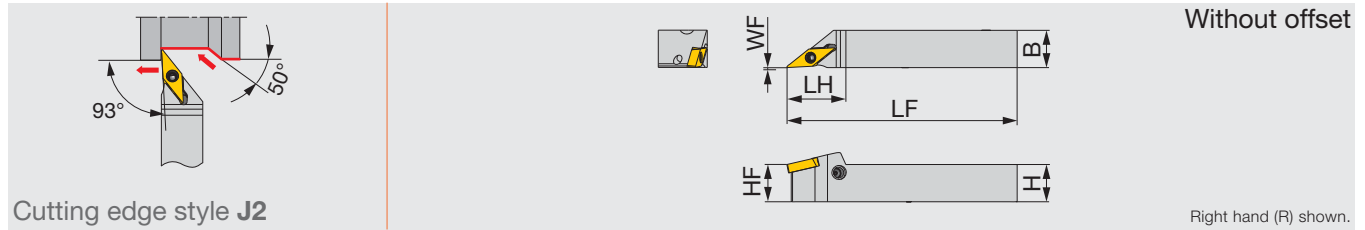
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
JSVJXR/L...	SR34-508	T-7F

JPVJ2XR/L

Lever lock type toolholder without offset with 93° approach angle, for VXGU inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPVJ2XR/L1010X09	10	10	120	19	10	0	0.2	VXGU09T2**/L/R...	0.9
JPVJ2XR/L1212F09	12	12	85	19	12	0	0.2	VXGU09T2**/L/R...	0.9
JPVJ2XR/L1212X09	12	12	120	19	12	0	0.2	VXGU09T2**/L/R...	0.9
JPVJ2XR/L1616X09	16	16	120	19	16	0	0.2	VXGU09T2**/L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

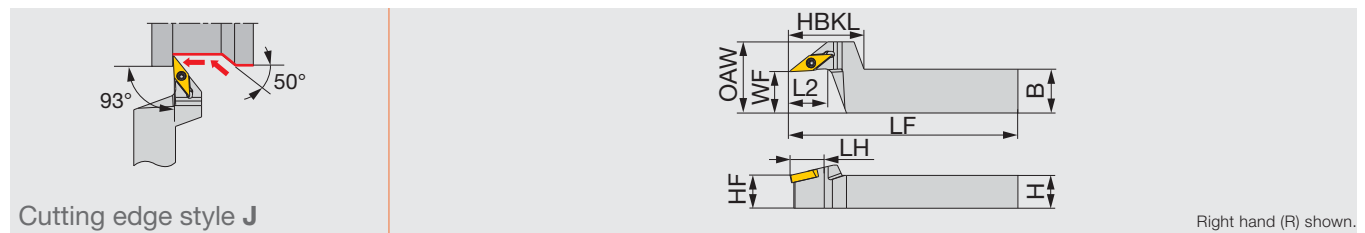
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Lever	Pin	Clamping screw	Wrench
JPVJ2XR/L...	SLLV-1	SL-PI-2	SR10400611	HW2.0/5RED

JSVJXR-F

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



Designation	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSVJXR1016X09-F15	10	16	120	12	27	19	10	15	26	0.2	VXGU09T2**/L...	0.9
JSVJXR1216F09-F15	12	16	85	12	27	19	12	15	26	0.2	VXGU09T2**/L...	0.9
JSVJXR1216X09-F15	12	16	120	12	27	19	12	15	26	0.2	VXGU09T2**/L...	0.9
JSVJXR1620X09-F15	16	20	120	12	27	19	16	15	26	0.2	VXGU09T2**/L...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

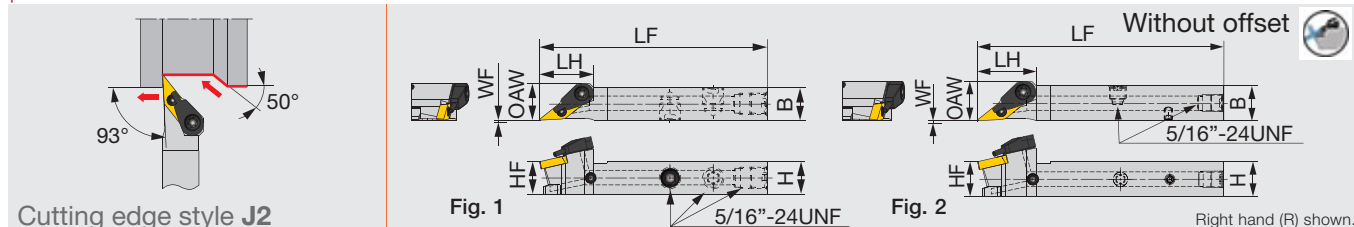
Note: Right-hand toolholders (R) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
JSVJXR**-F15	SR34-508	T-7F

JSVJ2XR/L-CHP

Screw-on toolholder without offset with 93° approach angle, for VXGU inserts, with coolant nozzle for high pressure



Designation	H	B	LF	LH	HF	WF	OAW	RE**	Insert	Torque*	Fig.
JSVJ2XR/L1212F09-CHP	12	12	85	20	12	0	13.5	0.2	VXGU09T2**L/R...	0.9	1
JSVJ2XR1212X09-CHP	12	12	120	19.5	12	0	13.4	0.2	VXGU09T2**L	0.9	2
JSVJ2XR1616X09-CHP	16	16	120	19.5	16	0	16	0.2	VXGU09T2**L	0.9	2

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

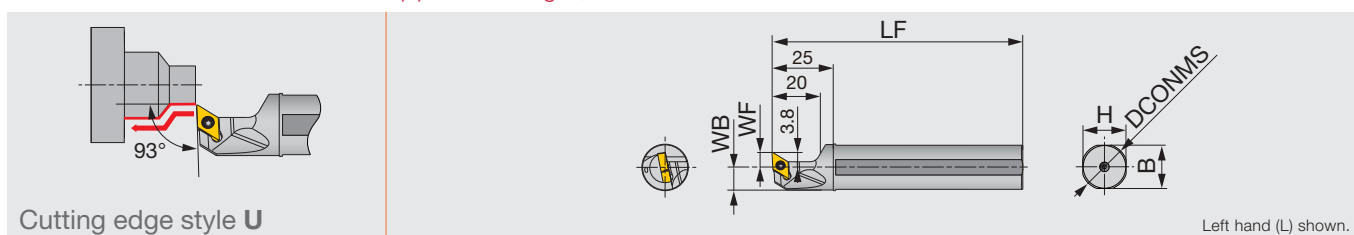
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSVJ2XR**F09-CHP	SR34-508	S-CU-CHP	T-7F

JS-SDUXL

Screw-on toolholder with 93° approach angle, for DXGU inserts



Designation	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque*
JS14H-SDUXL07	14	6	100	13	6.75	6.75	0.2	DXGU0703**L...	0.9
JS159F-SDUXL07	15.875	6	85	15	7.687	7.687	0.2	DXGU0703**L...	0.9
JS16F-SDUXL07	16	6	85	15	7.75	7.75	0.2	DXGU0703**L...	0.9
JS19G-SDUXL07	19.05	6	90	18	9.275	9.275	0.2	DXGU0703**L...	0.9
JS19X-SDUXL07	19.05	6	120	18	9.275	9.275	0.2	DXGU0703**L...	0.9
JS20G-SDUXL07	20	6	90	19	9.75	9.75	0.2	DXGU0703**L...	0.9
JS20X-SDUXL07	20	6	120	19	9.75	9.75	0.2	DXGU0703**L...	0.9
JS22X-SDUXL07	22	10	120	21	10.75	10.75	0.2	DXGU0703**L...	0.9
JS25H-SDUXL07	25	10	100	24	12.25	12.25	0.2	DXGU0703**L...	0.9
JS254X-SDUXL07	25.4	10	120	24	12.45	12.45	0.2	DXGU0703**L...	0.9

*Torque: Recommended torque (N-m) for clamping **RE: Standard corner radius

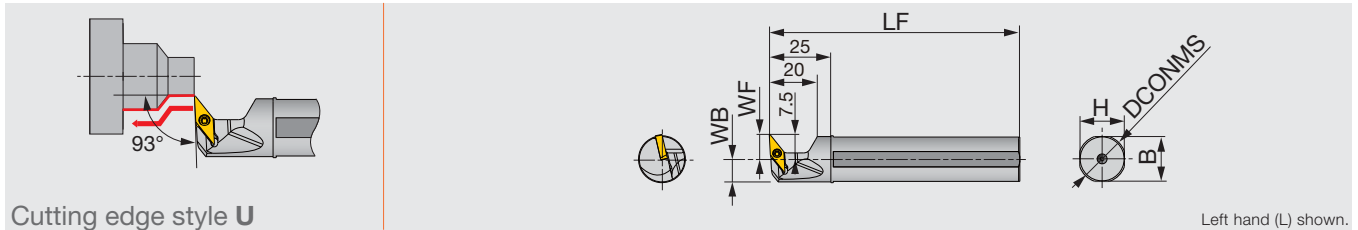
Note: Left-hand toolholders (L) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
JS**-SDUXL07	SR34-514	T-7F

JS-SVUXL

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



Designation	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque*
JS159F-SVUXL09	15.875	10	85	15	7.7	7.7	0.2	VXGU09T2**L...	0.9
JS16F-SVUXL09	16	10	85	15	7.7	7.7	0.2	VXGU09T2**L...	0.9
JS19G-SVUXL09	19.05	10	90	18	9.2	9.2	0.2	VXGU09T2**L...	0.9
JS19X-SVUXL09	19.05	10	120	18	9.2	9.2	0.2	VXGU09T2**L...	0.9
JS20G-SVUXL09	20	10	90	19	9.7	9.7	0.2	VXGU09T2**L...	0.9
JS20X-SVUXL09	20	10	120	19	9.7	9.7	0.2	VXGU09T2**L...	0.9
JS22X-SVUXL09	22	10	120	21	10.7	10.7	0.2	VXGU09T2**L...	0.9
JS25H-SVUXL09	25	10	100	24	12.2	12.2	0.2	VXGU09T2**L...	0.9
JS254X-SVUXL09	25.4	10	120	24	12.4	12.4	0.2	VXGU09T2**L...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Left-hand toolholders (L) are used with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
JS**-SVUXL09	SR34-508	T-7F

CUTTING PERFORMANCE

● Unique design which prevents vibration

MINIFORCE
TUNGALOY

Depth of cut: ap (mm)	2.0	OK	OK	OK	OK
	1.5	OK	OK	OK	OK
	1.0	OK	OK	OK	OK
	0.5	OK	OK	OK	OK
ap/f		0.05	0.10	0.15	0.20
Feed: f (mm/rev)					

==

ISO positive insert

Depth of cut: ap (mm)	2.0	OK	OK	OK	OK
	1.5	OK	OK	OK	OK
	1.0	OK	OK	OK	OK
	0.5	OK	OK	OK	OK
ap/f		0.05	0.10	0.15	0.20
Feed: f (mm/rev)					

Workpiece : S45C / C45
 Insert : WXGU040304L-TS AH725
 Toolholder : A12M-SWLXR04-D140
 Cutting speed : $V_c = 150$ m/min
 Overhang length : 36 mm (L/D = 3)
 Coolant : Wet (internal supply)

CHIP CONTROL

P

Depth of cut: ap (mm)	2.0				
	1.5				
	1.0				
	0.5				
ap/f		0.05	0.10	0.15	0.20
Feed: f (mm/rev)					

Workpiece : S45C / C45
 Insert : WXGU040304L-TS AH725
 Toolholder : A12M-SWLXR04-D140
 Cutting speed : $V_c = 150$ m/min
 Boring depth : H = 36 mm (L/D = 3)
 Coolant : Wet (internal supply)

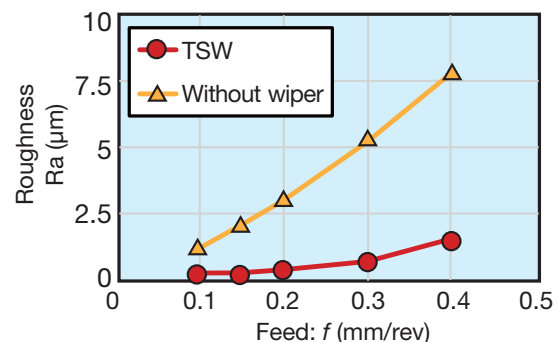
M

Depth of cut: ap (mm)	1.50				
	1.00				
	0.50				
	0.25				
ap/f		0.05	0.075	0.10	0.15
Feed: f (mm/rev)					

Workpiece : SUS304 / X5CrNi18-9
 Insert : WXGU040304L-SS AH725
 Toolholder : E12Q-SWLXR04-D140
 Cutting speed : $V_c = 150$ m/min
 Boring depth : H = 60 mm (L/D = 5)
 Coolant : Wet (internal supply)

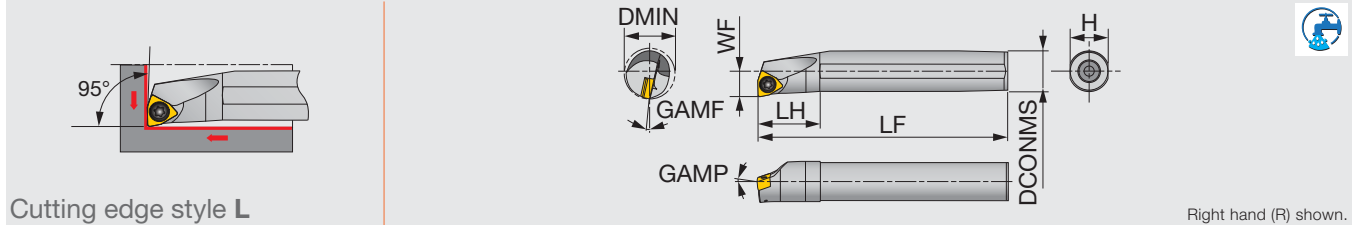
WIPER PERFORMANCE

Workpiece : S45C / C45
 Insert : WXGU040304L-TSW
 CCMT09T304-**(Without wiper)
 Toolholder : E16R-SWLXR04-D180
 Cutting speed : $V_c = 150$ m/min
 Depth of cut : ap = 0.5 mm
 Hole depth : H = 48 mm (L/D = 3)
 Coolant : Wet (internal supply)



A/E-SWLXR/L

For trigon insert with 6 edges



Cutting edge style L

Right hand (R) shown.

Designation	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A10K-SWLXR/L04-D120	STEEL	12	10	6	125	20	9	-10	-16	0.4	WXGU0403**L/R...	0.9
A12M-SWLXR/L04-D140	STEEL	14	12	7	150	24	11	-10	-14	0.4	WXGU0403**L/R...	0.9
A16Q-SWLXR/L04-D180	STEEL	18	16	9	180	32	15	-10	-11	0.4	WXGU0403**L/R...	0.9
A20R-SWLXR/L04-D220	STEEL	22	20	11	200	36	18	-10	-10	0.4	WXGU0403**L/R...	0.9
E10M-SWLXR/L04-D120	CARBIDE	12	10	6	150	25	9	-10	-16	0.4	WXGU0403**L/R...	0.9
E12Q-SWLXR/L04-D140	CARBIDE	14	12	7	180	27	11	-10	-14	0.4	WXGU0403**L/R...	0.9
E16R-SWLXR/L04-D180	CARBIDE	18	16	9	200	32	15	-10	-11	0.4	WXGU0403**L/R...	0.9
E20S-SWLXR/L04-D220	CARBIDE	22	20	11	250	36	18	-10	-10	0.4	WXGU0403**L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right hand toolholders (R) are used with left hand inserts (L) Left hand toolholders (L) are used with right hand inserts (R)

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SWLXR/L...	SR34-514	T-7F

- Right hand toolholders (R) are used with left hand inserts (L)
- Left hand toolholders (L) are used with right hand inserts (R)



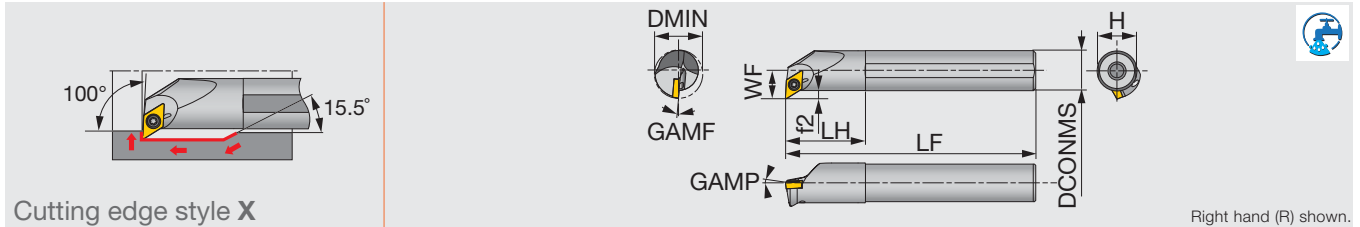
1 Right hand toolholder with left hand insert shown



2 Left hand toolholder with right hand insert shown

A/E-SDXXR/L

For 55° rhombic insert with 4 edges



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMF	GAMF	RE**	Insert	Torque*
A10K-SDXXR/L07-D130	STEEL	13	10	7.6	125	20	9	2.6	-14	-16	0.4	DXGU0703**L/R...	0.9
A12M-SDXXR/L07-D160	STEEL	16	12	8.6	150	24	11	2.6	-14	-14	0.4	DXGU0703**L/R...	0.9
A16Q-SDXXR/L07-D200	STEEL	20	16	10.6	180	32	15	2.6	-13	-13	0.4	DXGU0703**L/R...	0.9
A20R-SDXXR/L07-D240	STEEL	24	20	12.6	200	36	18	2.6	-13	-12	0.4	DXGU0703**L/R...	0.9
E10M-SDXXR/L07-D130	CARBIDE	13	10	7.6	150	25	9	2.6	-14	-16	0.4	DXGU0703**L/R...	0.9
E12Q-SDXXR/L07-D160	CARBIDE	16	12	8.6	180	27	11	2.6	-14	-14	0.4	DXGU0703**L/R...	0.9
E16R-SDXXR/L07-D200	CARBIDE	20	16	10.6	200	32	15	2.6	-13	-13	0.4	DXGU0703**L/R...	0.9
E20S-SDXXR/L07-D240	CARBIDE	24	20	12.6	250	36	18	2.6	-13	-12	0.4	DXGU0703**L/R...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right hand toolholders (R) are used with left hand inserts (L) Left hand toolholders (L) are used with right hand inserts (R)

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SDXXR/L...	SR34-514	T-7F

- Right hand toolholders (R) are used with left hand inserts (L)
- Left hand toolholders (L) are used with right hand inserts (R)



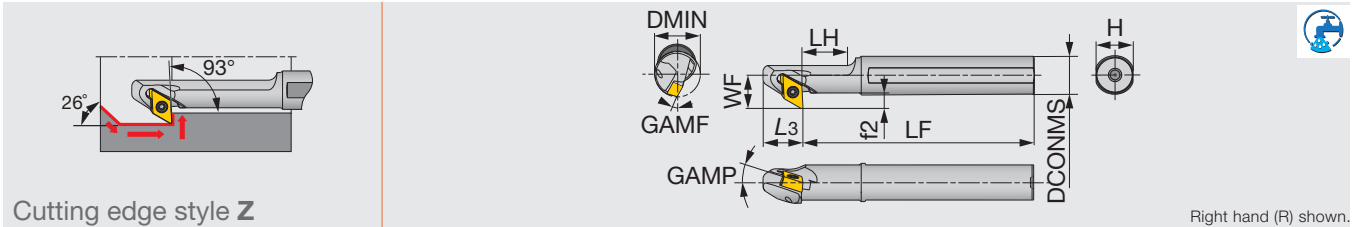
① Right hand toolholder with left hand insert shown



② Left hand toolholder with right hand insert shown

A/E-SDZXR/L

For 55° rhombic insert with 4 edges



Designation	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMPF	RE**	Insert	Torque*
A12M-SDZXR/L07-D140	STEEL	14	12	10.5	150	30	13	11	4.5	-10	-14	0.4	DXGU0703**R/L...	0.9
A16Q-SDZXR/L07-D160	STEEL	16	16	12.5	180	35	13	15	4.5	-10	-12.5	0.4	DXGU0703**R/L...	0.9
A20R-SDZXR/L07-D200	STEEL	20	20	14.5	200	40	13	18	4.5	-10	-10.5	0.4	DXGU0703**R/L...	0.9
E12Q-SDZXR/L07-D180	CARBIDE	18	12	10.5	180	-	13	11	4.5	-11	-11	0.4	DXGU0703**R/L...	0.9
E16R-SDZXR/L07-D220	CARBIDE	22	16	12.5	200	-	13	15	4.5	-11	-9	0.4	DXGU0703**R/L...	0.9

*Torque: Recommended torque (N·m) for clamping **RE: Standard corner radius

Note: Right hand toolholders (R) are used with right hand inserts (R) Left hand toolholders (L) are used with left hand inserts (L)

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SDZXR/L...	SR34-514	T-7F

- 1 Right hand toolholders (R) are used with right hand inserts (R)
- 2 Left hand toolholders (L) are used with left hand inserts (L)

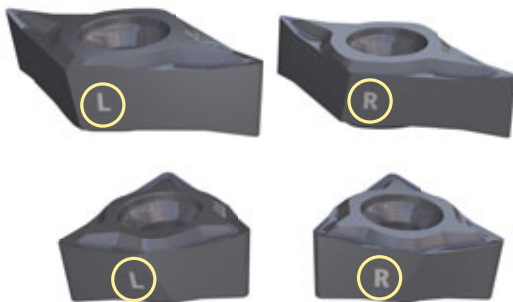


1 Right hand toolholder with right hand insert shown



2 Left hand toolholder with left hand insert shown

MARKING



Insert hand is marked by "R" or "L"

[illegible]

* Corner radius has minus tolerance.

100

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⌘ : Heavy interrupted cutting

POSITIVE TYPE
DOUBLE-SIDED

[illegible][illegible]

* Corner radius has minus tolerance.

● : Line up

**Rhombic, 55°
with hole**

[illegible][illegible]

● : Line up

100

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊛ : Heavy interrupted cutting

**Rhombic, 55°
with hole**

[illegible][illegible]

* Corner radius has minus tolerance.

● : Line up

[illegible]

* Corner radius has minus tolerance. ● : Line up

FOR EXTERNAL TURNING

26

STANDARD CUTTING CONDITIONS

FOR INTERNAL TURNING

ISO	Workpiece material	Grade			Cutting speed Vc (m/min)	Depth of cut ap (mm)	Feed f (mm/rev)
		First Choice	For surface finish	For wear resistance (High speed)			
P	Low carbon steel SS400, S25C, etc. E275A, C25, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2	0.08 - 0.3
	Carbon steel S45C, S55C, etc. C45, C55, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2	0.08 - 0.3
	Low alloy steel SCM415, etc. 18CrMo4, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2	0.08 - 0.3
	Alloy steel SCM440, SCr420, etc. 42CrMo4, 20Cr4, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2	0.08 - 0.3
M	Stainless steel (Austenitic) SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.	AH725	-	-	50 - 150	0.3 - 2	0.08 - 0.3
	Stainless steel (Martensitic and ferritic) SUS430, SUS416, etc. X6Cr17, X20Cr13, etc.	AH725	-	-	50 - 150	0.3 - 2	0.08 - 0.3
	Stainless steel (Precipitation hardening) SUS630, etc. X5CrNiCuNb16-4, etc.	AH725	-	-	50 - 150	0.3 - 2	0.08 - 0.3
K	Grey cast iron FC250, etc. 250, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2	0.08 - 0.3
	Ductile cast iron FCD700, etc. 600-3, etc.	AH725	-	-	50 - 120	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 150	0.3 - 2	0.08 - 0.3
		-	-	GT9530	80 - 180	0.3 - 2	0.08 - 0.3
N	Non ferrous Metal Aluminum alloy, etc.	KS05F	-	-	100 - 300	0.3 - 2	0.08 - 0.3
	Non ferrous Metal Copper Alloy, etc.	KS05F	-	-	100 - 300	0.3 - 2	0.08 - 0.3

GRADES

AH725



- Versatile PVD coated grade suitable for a wide range of work materials.
- Demonstrates excellent balance of wear and fracture resistance.

SH725



- Ideal PVD coated grade for sharp cutting edge.
- Suitable for machining of small and precise parts.

GT9530



- Coated cermet grade with premium coating demonstrates exceptional wear resistance.
- Provides remarkable performance in finishing of steels during high speed machining.

NS9530



- Versatile cermet grade with incredible fracture and wear resistance.
- Provides long tool life and excellent surface finish in steel finishing applications.

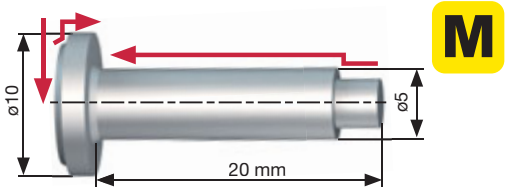
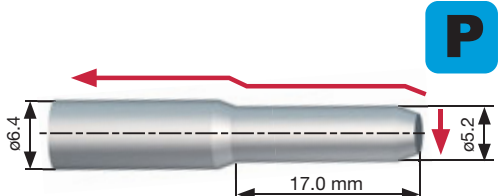
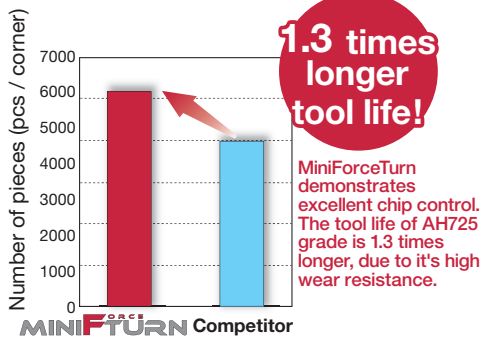
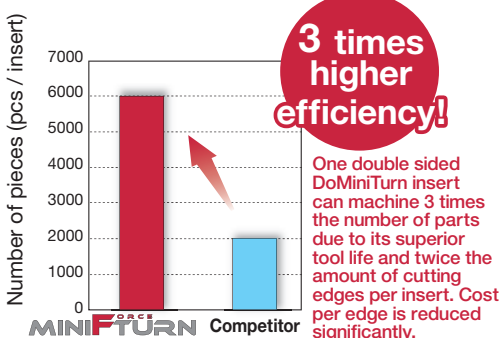
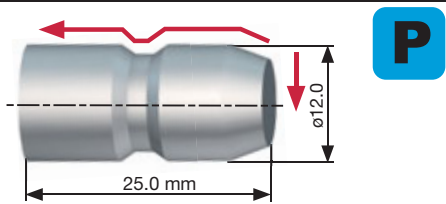
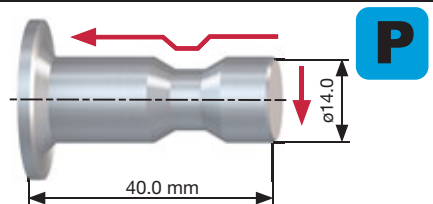
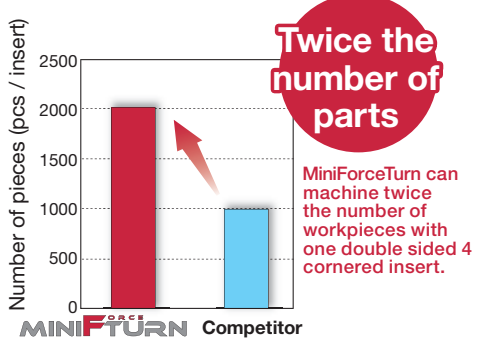
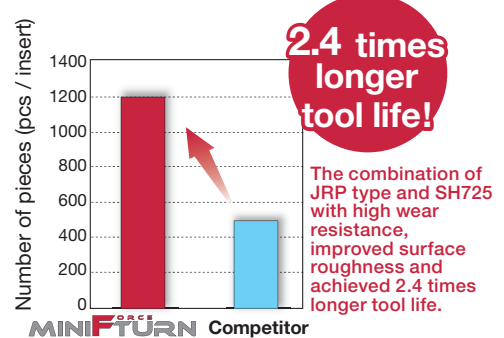
KS05F



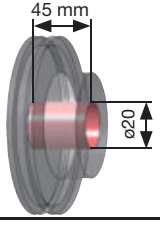
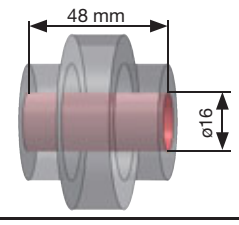
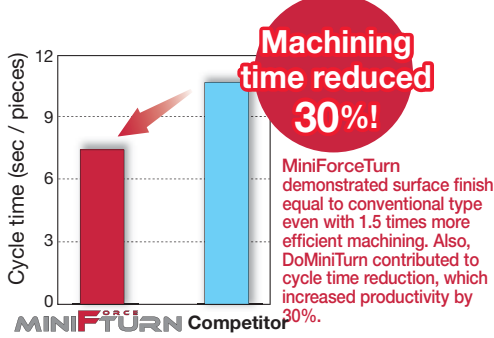
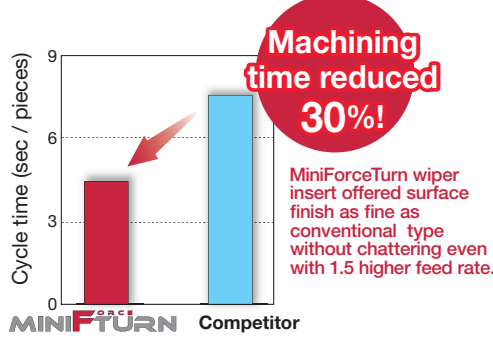
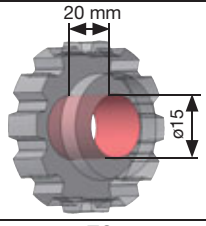
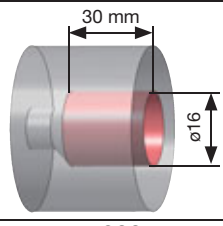
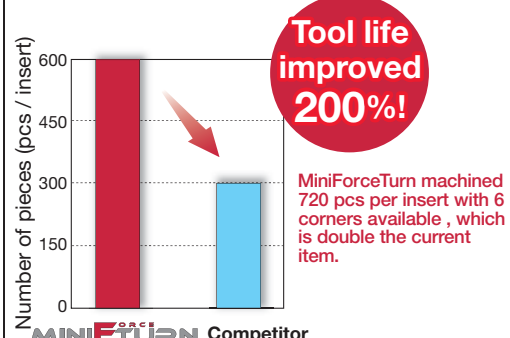
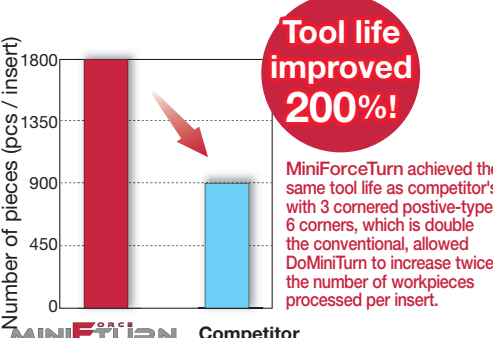
- Micro-grain cemented carbide in which wear resistance and impact resistance are balanced.
- The homogeneous fine-grained structure contribute to the excellent resistance of wear, fracture, and chip welding!

PRACTICAL EXAMPLES

External turning

Workpiece type		Shaft	Shaft
Toolholder		JSDJ2XR1212X07	JSWL2XR1212X04
Insert		DXGU070301ML-JSS	WXGU040302ML-TS
Grade		AH725	AH725
Workpiece material		SUS304 / X5CrNi18-9	S45C / C45
			
Cutting conditions	Cutting speed: V_c (m/min)	110 - 150 (External), 10 - 100 (Facing)	66 - 80
	Feed : f (mm/rev)	0.04 (External), 0.05 (Facing)	0.15
	Depth of cut : a_p (mm)	0.4 (External, facing)	0.6
	Machining	External • Facing	External
	Coolant	Wet	Wet
Results			
		Number of pieces (pcs / corner)	Number of pieces (pcs / insert)
Workpiece type		Shaft	Shaft
Toolholder		JSDJ2XR1212X07	JSVJ2XR1212X09
Insert		DXGU070301ML-JSS	VXGU090202MFLE-JRP
Grade		AH725	SH725
Workpiece material		Alloy steels	Low carbon steel (cold drawn)
			
Cutting conditions	Cutting speed: V_c (m/min)	66 - 80	170
	Feed : f (mm/rev)	0.15	0.03
	Depth of cut : a_p (mm)	0.6	0.2
	Machining	External	External
	Coolant	Wet	Wet
Results			
		Number of pieces (pcs / insert)	Number of pieces (pcs / insert)

Internal turning

Workpiece type		Machine Parts	Machine Parts
Toolholder		A16Q-SWLXR04-D180	E12Q-SWLXR04-D140
Insert		WXGU040304L-TSW	WXGU040304L-TSW
Grade		AH725	GT9530
Workpiece material		S45C / C45	SCM435 / 34CrMo4
			
Cutting conditions	Cutting speed: V_c (m/min)	160	200
	Feed : f (mm/rev)	0.10 → 0.15	0.10 → 0.15
	Depth of cut : ap (mm)	0.5	0.2
	Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
	Coolant	Wet	Wet
Results			
		MINIFORCE Competitor	MINIFORCE Competitor
Workpiece type		Machine Parts	Machine Parts
Toolholder		A10K-SWLXR04-D120	A12M-SDXXR04-D140
Insert		WXGU040302L-SS	DXGU070304L-TS
Grade		KS05F	KS05F
Workpiece material		CAC406 / Bronze casting	A5056 (Al - Mg)
			
Cutting conditions	Cutting speed: V_c (m/min)	70	200
	Feed : f (mm/rev)	0.1	0.1
	Depth of cut : ap (mm)	1.0	1.0
	Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
	Coolant	Wet	Wet
Results			
		MINIFORCE Competitor	MINIFORCE Competitor



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