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General product information

View

Added products

CXMU, DXMU

Expansion of super economical M class with double-sided positive insert

View

Member IMC Group Tungaloy INDUSTRY 4.0

TurnLine

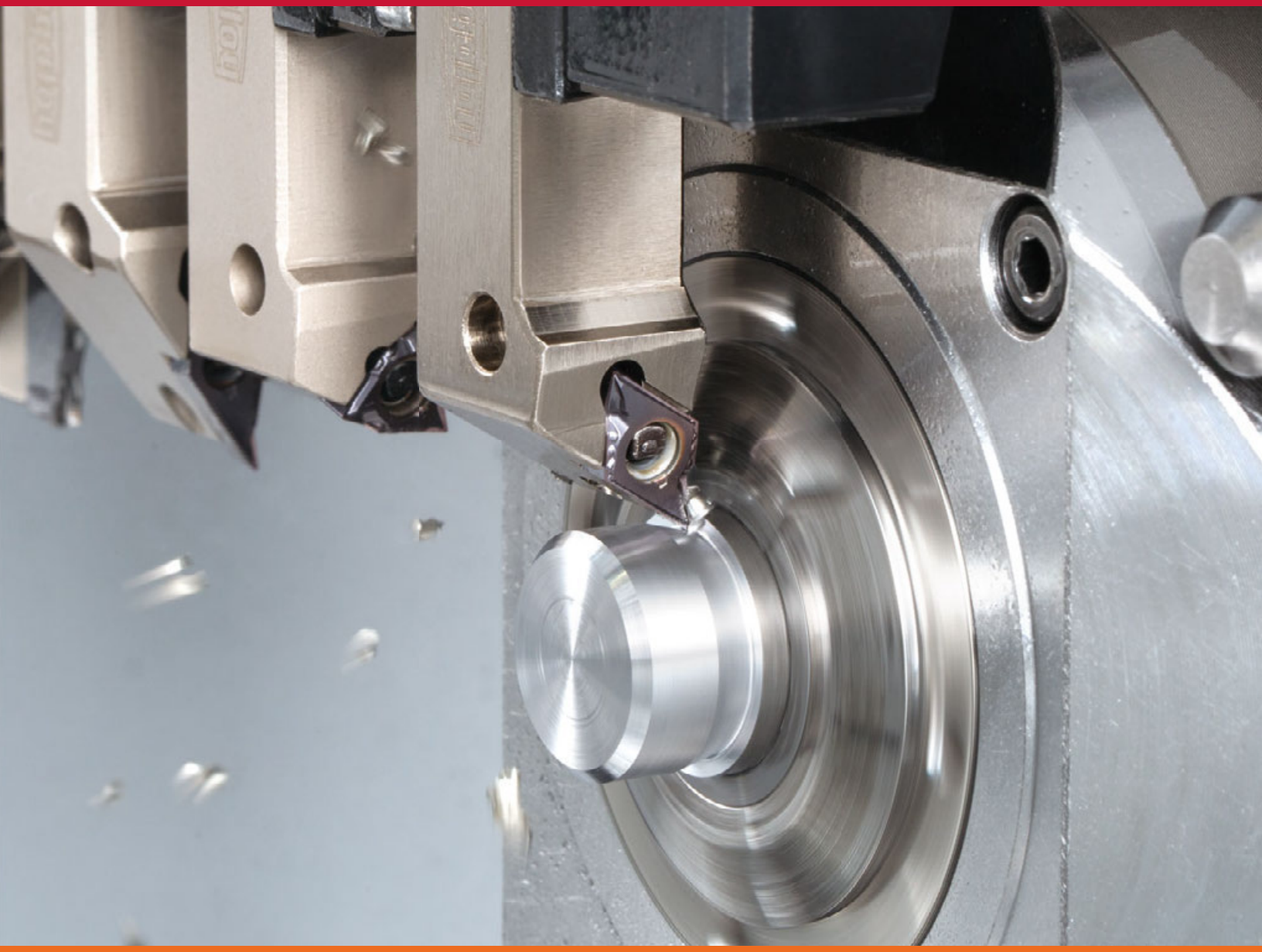
MINIFORCE TURN

www.tungaloy.com/us

Tungaloy Report No. 417-US

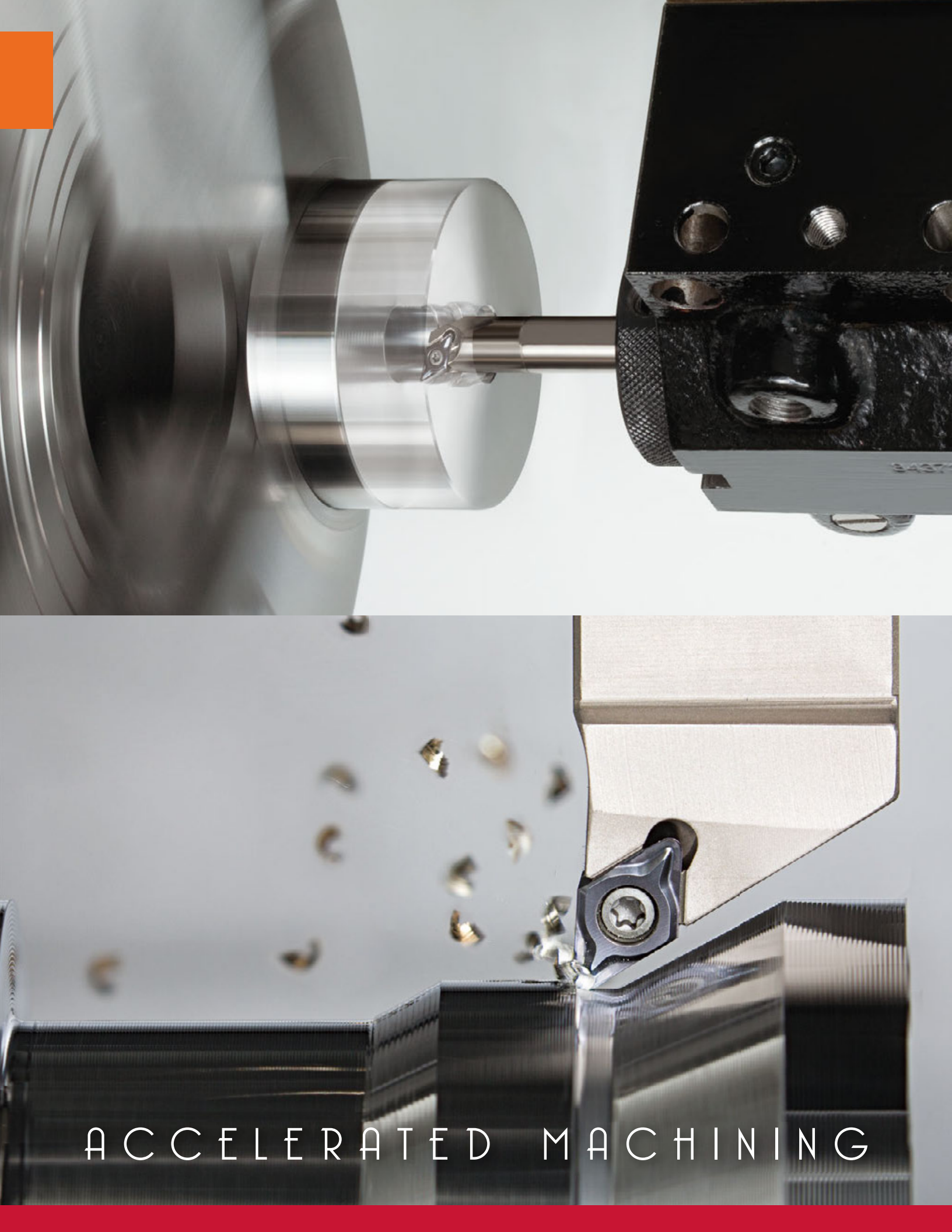
Member IMC Group Tungaloy

New chipbreaker for improved chip control in small part machining



INDUSTRY 4.0

FEED the SPEED!



ACCELERATED MACHINING

TurnLine

MINIFORCE TURN

TUNGALOY

TUNG FORCE TURN

ACCELERATED MACHINING

Improved chip control with new chipbreaker and AH8000 grade series

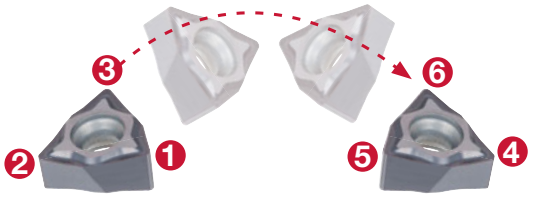
MINIFORCE TURN
TUNGALOY

Economical double-sided positive insert

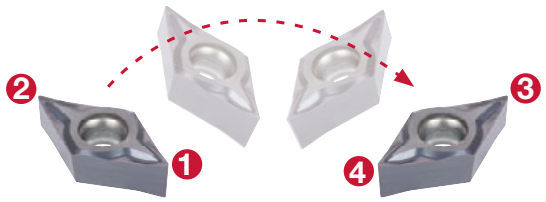
Innovative geometry and seat interface ensures stability and high performance

Inserts

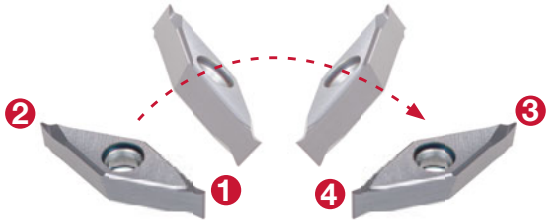
WXGU 22··· 6 positive cutting edges



DXGU 22··· 4 positive cutting edges

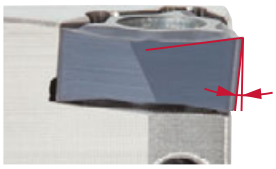


VXGU 73··· 4 positive cutting edges

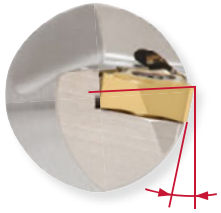


High rake angle

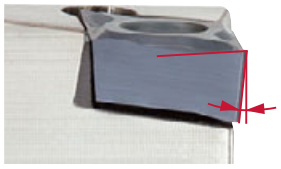
External turning



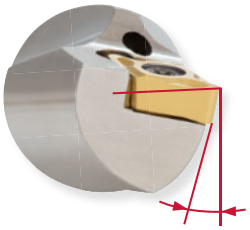
Internal turning



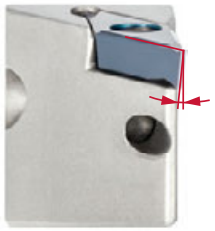
External turning



Internal turning

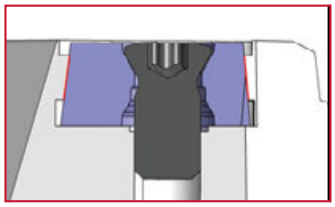


External turning



Toolholders

Dovetail clamping ensures secure insert retention



External turning

The JP holder screw is accessible from either side

Internal turning

Optimal design for smooth chip flow

Square shank holder lineup for general lathes

Square shank sizes 3/4 and 1" are available for OD turning

MINIFORCE TURN

TURNINGA

ISOECO TURN

Light cutting chipbreaker

New JS chipbreaker - features and benefits

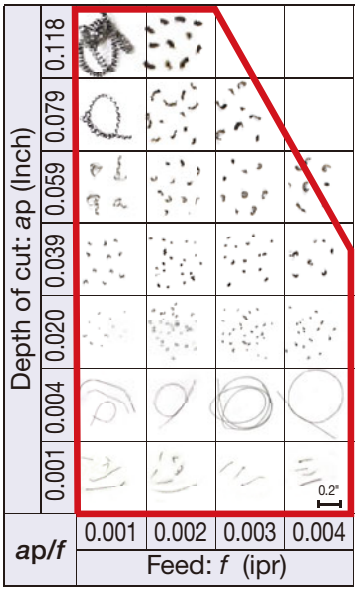
- Provides excellent chip control in a wide range of applications
- A large inclination angle on the cutting edge ensures free cutting
- Excellent cutting edge integrity for smooth surface finishing

Note: Due to chipbreaker profile, max *ap* for face turning is 0.039"

DXGU 22...-JS

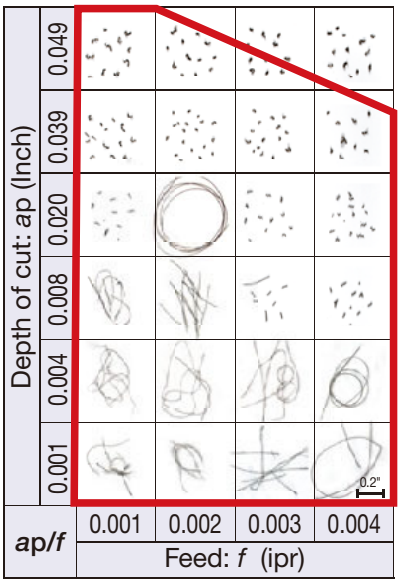
CHIP CONTROL

P



Workpiece : 1045
Insert : DXGU 220.5 MFL **JS** SH725
Toolholder : JSDJ2XR082X-CHP
Cutting speed : *Vc* = 328 sfm
Coolant : Wet

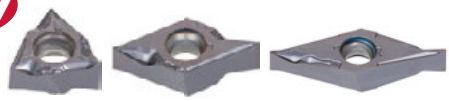
M



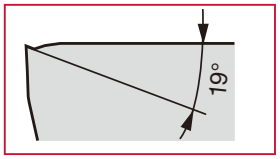
Workpiece : 316L
Insert : DXGU 220.5 MFL **JS** SH725
Toolholder : JSDJ2XR082X-CHP
Cutting speed : *Vc* = 164 sfm
Coolant : Wet

JS chipbreaker

New



WXGU 22··· DXGU 22··· VXGU 73···

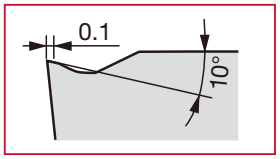


P M

- First choice chipbreaker for medium to finish cutting
- Excellent chip control
- High positive rake for light tool pressure

TS / JTS / TSW chipbreaker

WXGU 22··· DXGU 22···

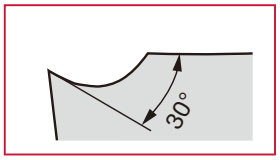


P M K

- First choice chipbreaker for medium to finish cutting
- Excellent chip control
- Ideal for small part machining

SS / JSS chipbreaker

WXGU 22··· DXGU 22···

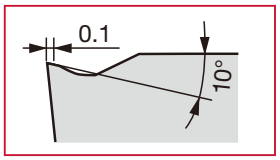


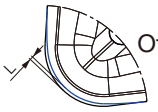
M P

- General purpose chipbreaker with excellent chip control
- Recommended for stainless steel machining

TSW chipbreaker (Wiper)

WXGU 22···



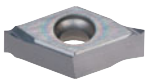


Offset: L = 0.002"

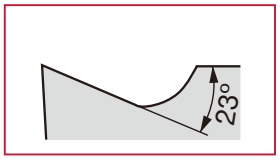
P M K

Built-in wiper for better surface finish at high feed rates

JRP chipbreaker



DXGU 22··· VXGU 73···



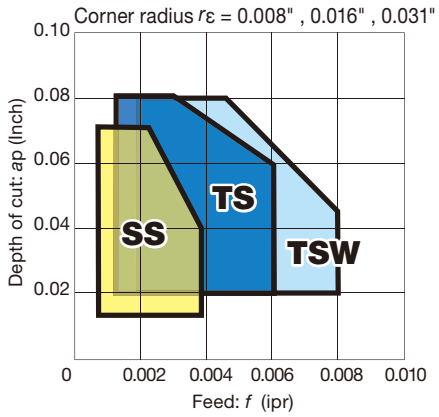
Sharp cutting edge and ground chipbreaker with excellent chip control

Chipbreakers for general purpose machining

WXGU 22··· - TS/SS/TSW
DXGU 22··· - TS/SS

Strong cutting edge for semi-finishing and finishing operations at medium to low feed rates

■ Application area

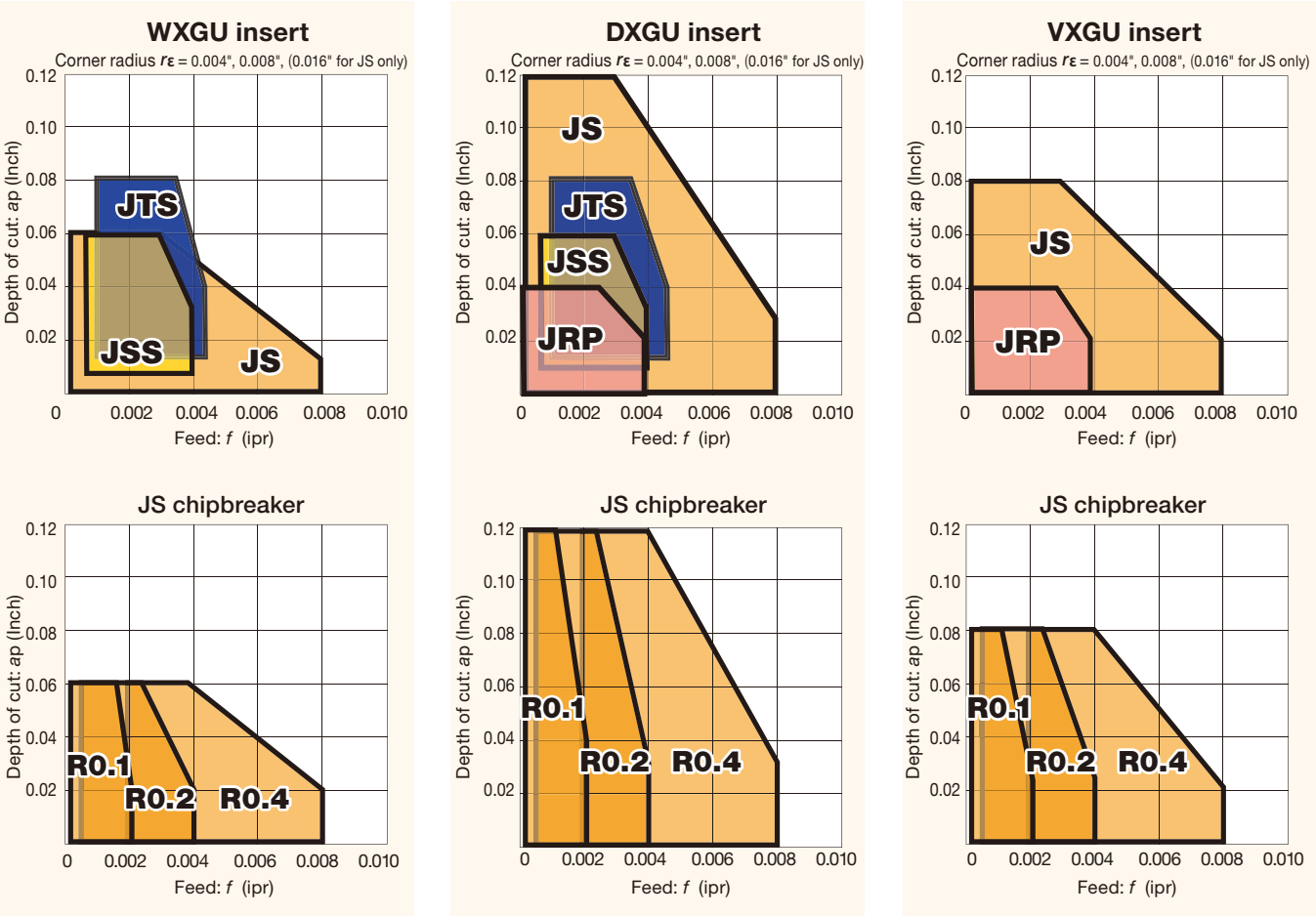


Chipbreakers for small part machining

WXGU 22··· - JTS/JSS/JS
DXGU 22··· - JRP/JTS/JSS/JS
VXGU 73··· - JRP/JS

Extra sharp cutting edge used at low feeds for finishing operations. An excellent solution to reduce vibration and improve chip control

■ Application areas



MINIFORCE TURN
TUNGALOY

TUNGTJET TURN

Thru-coolant holder system

Jets of coolant are supplied through the holder to facilitate

Improved chip control and reduced machine downtime

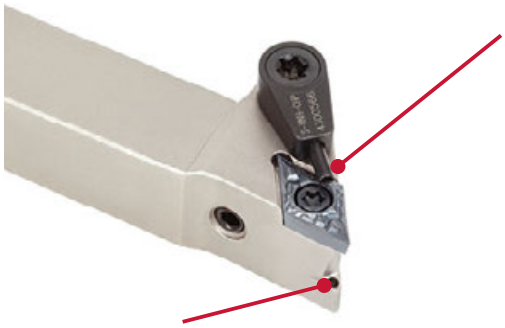
Eliminates chip re-cutting

External coolant supply
(at normal pressure)

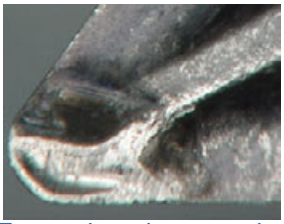
High pressure coolant
(>7MPa)

Coolant supply both over and under the insert improves tool life and efficiency

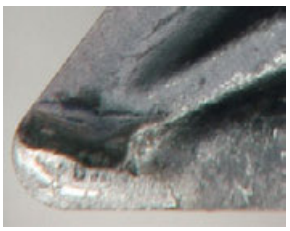
● **Coolant jet over the insert**
Ensures stable chip control



Coolant jet is directed close to the cutting point
Reduces crater and notch wear

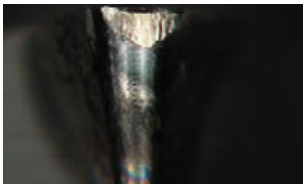


External coolant supply
(at normal pressure)

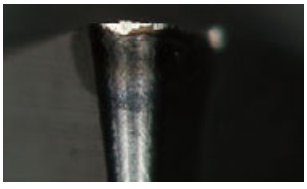


High pressure coolant
(>7MPa)

Coolant jet under the insert
Reduces flank wear



External coolant supply
(at normal pressure)



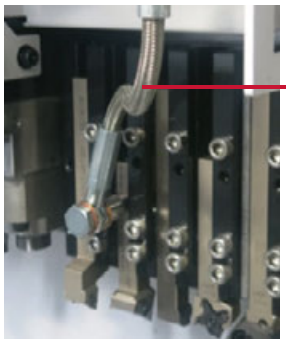
High pressure coolant
(>7MPa)

Nozzle extends to ensure optimal coolant delivery

DIRECT TUNGJET system

Tubeless design streamlines tool setup
Through-coolant supply enables high productivity

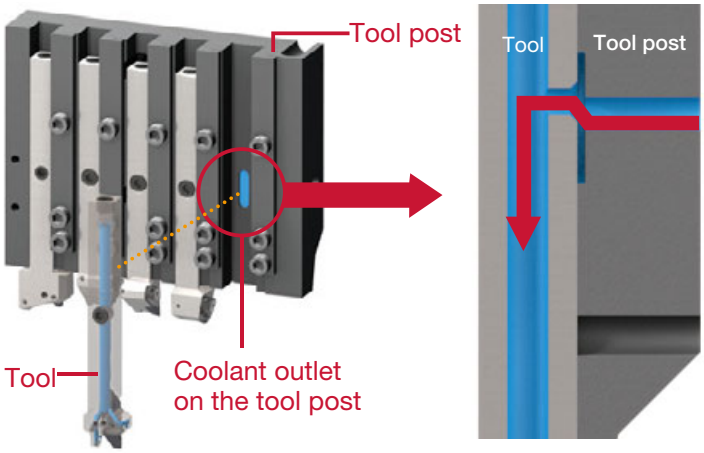
External coolant tube



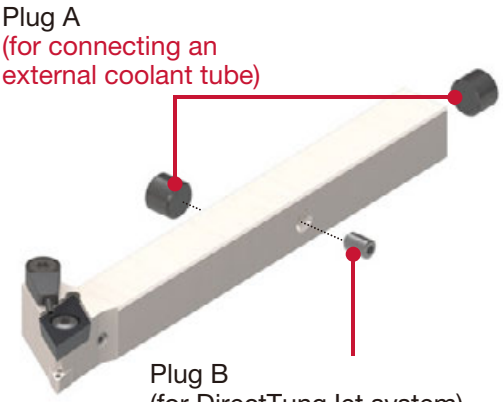
DirectTungJet system

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

Coolant is supplied from the tool post directly to the tools

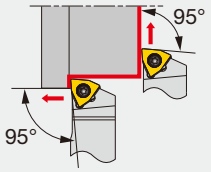


Use a non-coolant-through tool when coolant supply is not needed through the tool.

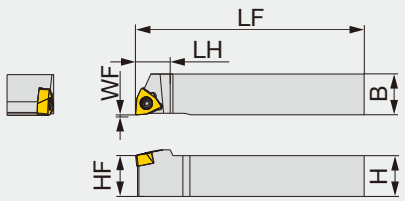


JSWL2XR/L

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



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSWL2XR/L062	0.375	0.375	4.750	0.500	0.375	0	0.008	WXGU0403**L/R...	0.66
JSWL2XR/L082	0.500	0.500	4.750	0.500	0.500	0	0.008	WXGU0403**L/R...	0.66
JSWL2XR/L102	0.625	0.625	4.750	0.500	0.625	0	0.008	WXGU0403**L/R...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

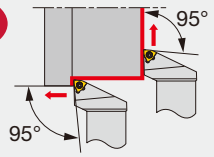
SPARE PARTS


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

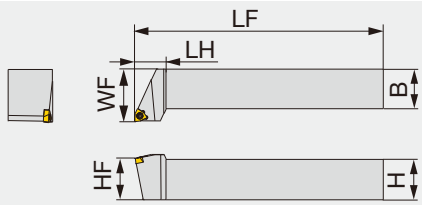
JSWLXR/L

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

New



Cutting edge style **L**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSWLXR/122	0.750	0.750	4.500	0.625	0.750	1.000	0.008	WXGU0403**L/R...	0.66
JSWLXR/162	1.000	1.000	6.000	0.750	1.000	1.250	0.008	WXGU0403**L/R...	0.66

Metric	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

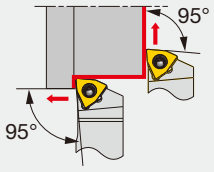
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

SPARE PARTS

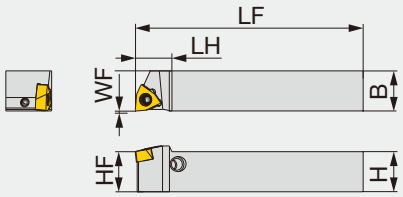

Designation	Clamping screw	Wrench
JSWLXR/L...	SR34-514	T-7F

JPWL2XR/L

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



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPWL2XR/L062	0.375	0.375	4.750	0.500	0.375	0	0.008	WXGU0403**L/R...	0.66
JPWL2XR/L082	0.500	0.500	4.750	0.500	0.500	0	0.008	WXGU0403**L/R...	0.66
JPWL2XR/L102	0.625	0.625	4.750	0.500	0.625	0	0.008	WXGU0403**L/R...	0.66

Metric	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

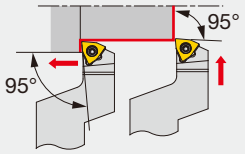
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

SPARE PARTS

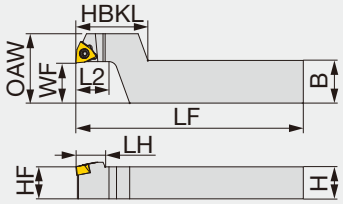
Designation	Lever	Pin	Clamping screw	Wrench
JPWL2XR/L...	SLLV-2	SL-PI-2	SR10400611	HW2.0/5RED

JSWLXR-F

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



Cutting edge style **L**



Right hand (R) shown.

Inch	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSWLXR082-F10	0.500	0.625	4.750	0.500	1.125	0.750	0.500	0.625	1	0.008	WXGU0403**L...	0.66
JSWLXR102-F10	0.625	0.750	4.750	0.500	1.125	0.750	0.625	0.625	1	0.008	WXGU0403**L...	0.66

Metric	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

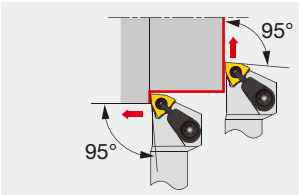
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L)

SPARE PARTS

Designation	Clamping screw	Wrench
JSWLXR**-F10	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



Cutting edge style **L2**

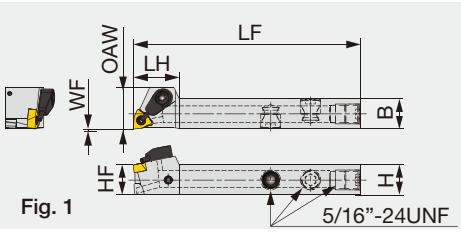


Fig. 1

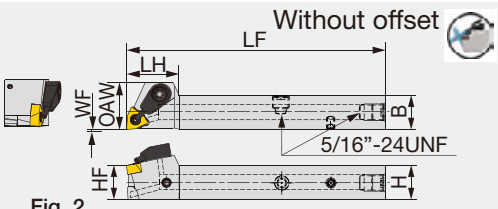


Fig. 2

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	OAW	RE**	Insert	Torque*	Fig.
JSWL2XR/L082-CHP	0.500	0.500	3.344	0.750	0.500	0	0.650	0.008	WXGU0403**L/R...	0.66	1
JSWL2XR082X-CHP	0.500	0.500	4.750	0.728	0.500	0	0.650	0.008	WXGU0403**L	0.66	2
JSWL2XR102X-CHP	0.625	0.625	4.750	0.728	0.625	0	0.650	0.008	WXGU0403**L	0.66	2

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

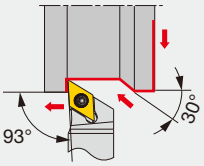
SPARE PARTS



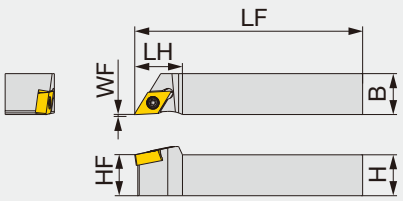
Designation	Clamping screw	Coolant unit	Wrench
JSWL2XR**-CHP	SR34-514	S-CU-CHP	T-7F

JSDJ2XR/L

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



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDJ2XR/L062	0.375	0.375	4.750	0.625	0.375	0	0.008	DXGU0703**L/R...	0.66
JSDJ2XR/L082	0.500	0.500	4.750	0.625	0.500	0	0.008	DXGU0703**L/R...	0.66
JSDJ2XR/L102	0.625	0.625	4.750	0.625	0.625	0	0.008	DXGU0703**L/R...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

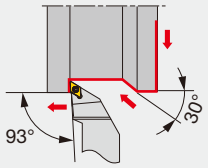
SPARE PARTS


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

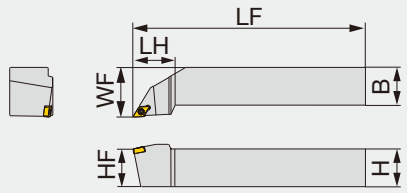
JSDJXR/L

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

New



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDJXR/122	0.750	0.750	4.500	1.125	0.750	1.000	0.008	DXGU0703**L/R...	0.66
JSDJXR/162	1.000	1.000	6.000	1.125	1.000	1.250	0.008	DXGU0703**L/R...	0.66

Metric	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

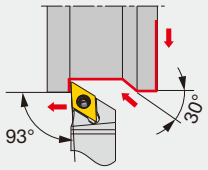
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

SPARE PARTS

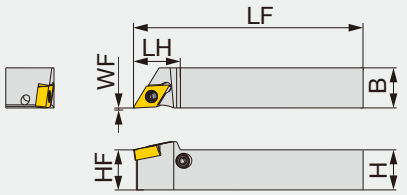

Designation	Clamping screw	Wrench
JSDJXR/L...	SR34-514	T-7F

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.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPDJ2XR/L062	0.375	0.375	4.750	0.625	0.375	0	0.008	DXGU0703**L/R...	0.66
JPDJ2XR/L082	0.500	0.500	4.750	0.625	0.500	0	0.008	DXGU0703**L/R...	0.66
JPDJ2XR/L102	0.625	0.625	4.750	0.625	0.625	0	0.008	DXGU0703**L/R...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

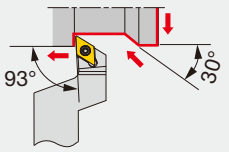
SPARE PARTS



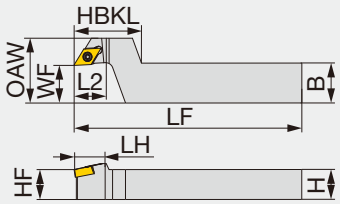

Designation	Lever	Pin	Clamping screw	Wrench
JPDJ2XR/L...	SLLV-2	SL-PI-2	SR10400611	HW2.0/5RED

JSDJXR-F

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



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSDJXR082-F10	0.500	0.625	4.750	0.500	1.125	0.625	0.500	0.625	1	0.008	DXGU0703**L...	0.66
JSDJXR102-F10	0.625	0.750	4.750	0.500	1.125	0.625	0.625	0.625	1	0.008	DXGU0703**L...	0.66

Metric	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

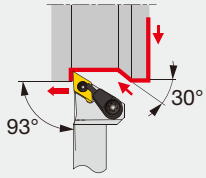
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L)

SPARE PARTS


Designation	Clamping screw	Wrench
JSDJXR**-F10	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



Cutting edge style **J2**

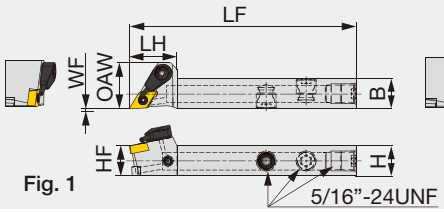


Fig. 1

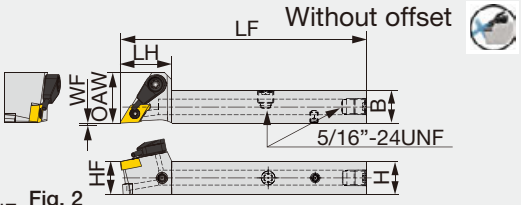


Fig. 2

Right hand (R) shown.

Inch	H	B	LF	LH	HF	W	OAW	RE**	Insert	Torque*	Fig.
JSDJ2XR/L082-CHP	0.500	0.500	3.344	0.750	0.500	0	0.730	0.008	DXGU0703**L/R...	0.66	1
JSDJ2XR082X-CHP	0.500	0.500	4.750	0.748	0.500	0	0.728	0.008	DXGU0703**L	0.66	2
JSDJ2XR102X-CHP	0.625	0.625	4.750	0.748	0.625	0	0.728	0.008	DXGU0703**L	0.66	2

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand tool holder (R) for the left-hand insert (L). Use the left-hand tool holder (L) for the right-hand insert (R).

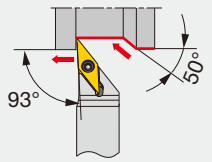
SPARE PARTS



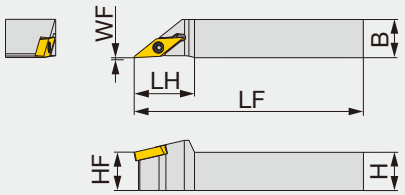
Designation	Clamping screw	Coolant unit	Wrench
JSDJ2XR**-CHP	SR34-514	S-CU-CHP	T-7F

JSVJ2XR/L

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



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJ2XR/L067	0.375	0.375	4.750	0.669	0.375	0	0.008	VXGU09T2**L/R...	0.66
JSVJ2XR/L087	0.500	0.500	4.750	0.748	0.500	0	0.008	VXGU09T2**L/R...	0.66
JSVJ2XR/L107	0.625	0.625	4.750	0.748	0.625	0	0.008	VXGU09T2**L/R...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

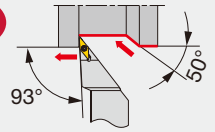
SPARE PARTS


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

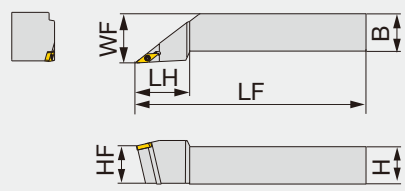
JSVJXR/L

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

New



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJXR/127	0.750	0.750	4.500	1.500	0.750	1.000	0.008	VXGU09T2**L/R...	0.66
JSVJXR/167	1.000	1.000	6.000	1.500	1.000	1.250	0.008	VXGU09T2**L/R...	0.66

Metric	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

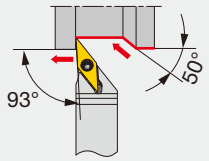
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

SPARE PARTS

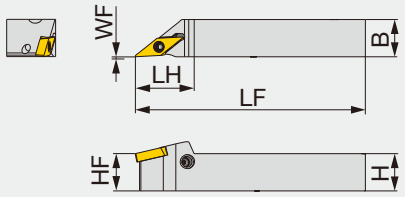

Designation	Clamping screw	Wrench
JSVJXR/L...	SR34-508	T-7F

JPVJ2XR/L

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



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPVJ2XR/L067	0.375	0.375	4.750	0.669	0.375	0	0.008	VXGU09T2**L/R...	0.66
JPVJ2XR/L087	0.500	0.500	4.750	0.748	0.500	0	0.008	VXGU09T2**L/R...	0.66
JPVJ2XR/L107	0.625	0.625	4.750	0.748	0.625	0	0.008	VXGU09T2**L/R...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

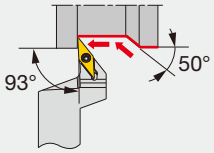
SPARE PARTS



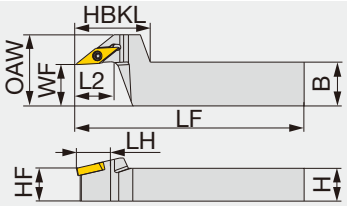

Designation	Lever	Pin	Clamping screw	Wrench
JPVJ2XR/L...	SLLV-1	SL-PI-2	SR10400611	HW2.0/5RED

JSVJXR-F

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



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSVJXR087-F10	0.500	0.625	4.750	0.500	1.125	0.750	0.500	0.625	1	0.008	VXGU09T2**L...	0.66
JSVJXR107-F10	0.625	0.750	4.750	0.500	1.125	0.750	0.500	0.625	1	0.008	VXGU09T2**L...	0.66

Metric	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

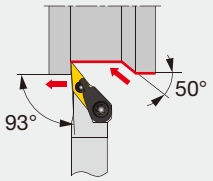
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L)

SPARE PARTS


Designation	Clamping screw	Wrench
JSVJXR**-F10	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



Cutting edge style **J2**

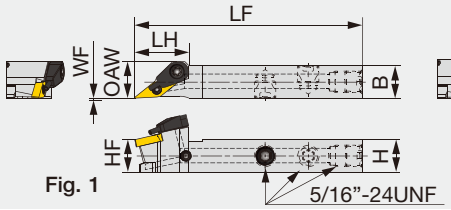


Fig. 1

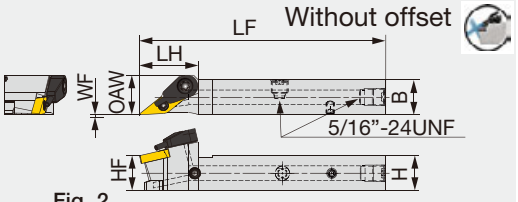


Fig. 2

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	OAW	RE**	Insert	Torque*	Fig.
JSVJ2XR/L087-CHP	0.500	0.500	4.750	0.748	0.500	0	0.020	0.008	VXGU09T2**L/R...	0.66	1
JSVJ2XR087X-CHP	0.500	0.500	4.750	0.768	0.500	0	0.528	0.008	VXGU09T2**L	0.66	2
JSVJ2XR107X-CHP	0.625	0.625	4.750	0.768	0.625	0	0.625	0.008	VXGU09T2**L	0.66	2

Metric	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

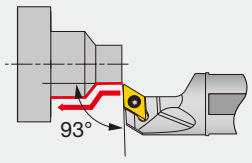
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right-hand toolholder (R) for the left-hand insert (L). Use the left-hand toolholder (L) for the right-hand insert (R)

SPARE PARTS

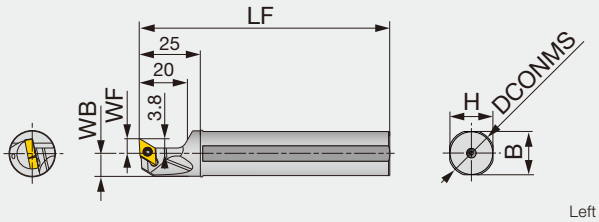
Designation	Clamping screw	Coolant unit	Wrench
JSVJ2XR**-CHP	SR34-508	S-CU-CHP	T-7F

JS-SDUXL

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



Cutting edge style **U**



Left hand (L) shown.

Inch	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque*
JS159F-SDUXL07	0.625	0.236	3.346	0.591	0.591	0.303	0.008	DXGU0703**L...	0.66
JS19G-SDUXL07	0.750	0.236	3.543	0.709	0.709	0.366	0.008	DXGU0703**L...	0.66
JS19X-SDUXL07	0.750	0.236	4.724	0.709	0.709	0.366	0.008	DXGU0703**L...	0.66
JS254X-SDUXL07	1.000	0.394	4.724	0.945	0.945	0.492	0.008	DXGU0703**L...	0.66

Metric	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

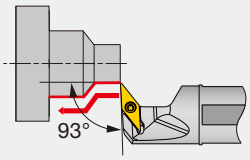
*Torque: Recommended torque lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the left-hand toolholder (L) for the left-hand insert (L)

SPARE PARTS

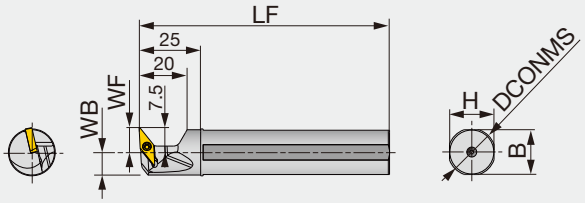
Designation	Clamping screw	Wrench
JS**-SDUXL07	SR34-514	T-7F

JS-SVUXL

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



Cutting edge style **U**



Left hand (L) shown.

Inch	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque*
JS159F-SVUXL09	0.625	0.394	3.346	0.591	0.591	0.303	0.008	VXGU09T2**L...	0.66
JS19G-SVUXL09	0.750	0.394	3.543	0.709	0.709	0.362	0.008	VXGU09T2**L...	0.66
JS19X-SVUXL09	0.750	0.394	4.724	0.709	0.709	0.362	0.008	VXGU09T2**L...	0.66
JS254X-SVUXL09	1.000	0.394	4.724	0.945	0.945	0.488	0.008	VXGU09T2**L...	0.66

Metric	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the left-hand toolholder (L) for the left-hand insert (L)

SPARE PARTS

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

CUTTING PERFORMANCE

● Excellent chatter stability

Workpiece : 1045
Insert : WXGU 221 L TS AH725
Toolholder : A06-SWLXR/L2-D08
Cutting speed : *Vc* = 492 sfm
Overhang length : 1.417" (L/D = 3)
Coolant : Wet (internal supply)

MINIFORCE TURN

Depth of cut: ap (Inch)	0.08	OK	OK	OK	OK
	0.06	OK	OK	OK	OK
	0.04	OK	OK	OK	OK
	0.02	OK	OK	OK	OK
ap/f		0.002	0.004	0.006	0.008
		Feed: *f* (ipr)			

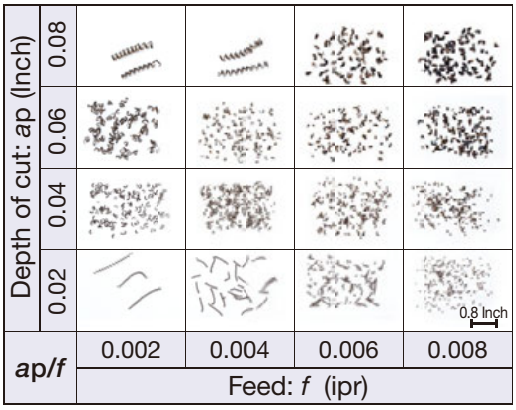
=

ISO positive insert

Depth of cut: ap (Inch)	0.08	OK	OK	OK	OK
	0.06	OK	OK	OK	OK
	0.04	OK	OK	OK	OK
	0.02	OK	OK	OK	OK
ap/f		0.002	0.004	0.006	0.008
		Feed: *f* (ipr)			

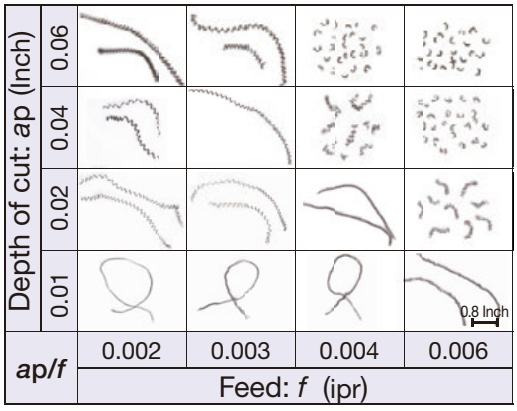
CHIP CONTROL

P



Workpiece : 1045
Insert : WXGU 221 L TS AH725
Toolholder : A06-SWLXR/L2-D08
Cutting speed : *Vc* = 492 sfm
Boring depth : H = 1.417" (L/D = 3)
Coolant : Wet (internal supply)

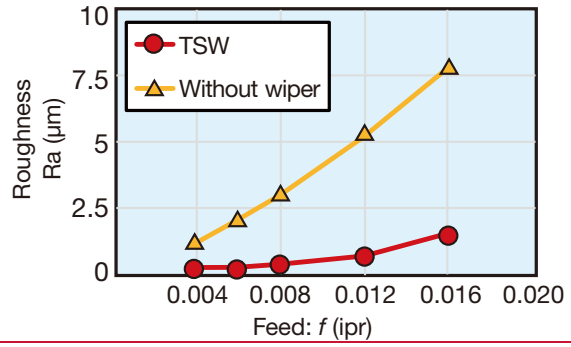
M



Workpiece : 304
Insert : WXGU 221 L SS AH725
Toolholder : E06-SWLXR/L2-D08
Cutting speed : *Vc* = 492 sfm
Boring depth : H = 2.362" (L/D = 5)
Coolant : Wet (internal supply)

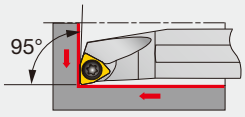
WIPER PERFORMANCE

Workpiece : 1045
Insert : WXGU 221 L TSW
CCMT 32.51-**(Without wiper)
Toolholder : E08-SWLXR/L2-D11
Cutting speed : *Vc* = 492 sfm
Depth of cut : *ap* = 0.020"
Hole depth : H = 1.890" (L/D = 3)
Coolant : Wet (internal supply)

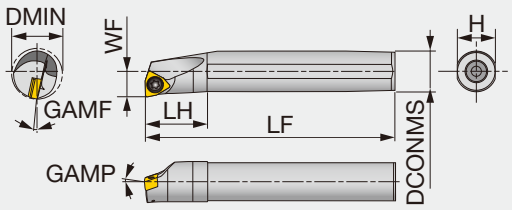


A/E-SWLXR/L

For trigon insert with 6 edges



Cutting edge style **L**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A06-SWLXR/L2-D08	STEEL	0.500	0.375	0.281	5.000	0.750	0.350	-10°	-14°	0.016	WXGU0403**L/R...	0.66
A08-SWLXR/L2-D11	STEEL	0.688	0.500	0.406	5.000	1.000	0.475	-10°	-10°	0.016	WXGU0403**L/R...	0.66
A10-SWLXR/L2-D14	STEEL	0.875	0.625	0.531	7.000	1.250	0.600	-10°	-8°	0.016	WXGU0403**L/R...	0.66
A12-SWLXR/L2-D16	STEEL	1.000	0.750	0.593	7.000	1.438	0.725	-10°	-7°	0.016	WXGU0403**L/R...	0.66
A16-SWLXR/L2-D20	STEEL	1.250	1.000	0.625	7.000	1.438	0.938	-10°	-7°	0.016	WXGU0403**L/R...	0.66
E06-SWLXR/L2-D08	CARBIDE	0.500	0.375	0.281	5.000	1.000	0.350	-10°	-14°	0.016	WXGU0403**L/R...	0.66
E08-SWLXR/L2-D11	CARBIDE	0.688	0.500	0.406	5.000	1.063	0.475	-10°	-10°	0.016	WXGU0403**L/R...	0.66
E10-SWLXR/L2-D14	CARBIDE	0.875	0.625	0.531	7.000	1.250	0.600	-10°	-8°	0.016	WXGU0403**L/R...	0.66
E12-SWLXR/L2-D16	CARBIDE	1.000	0.750	0.593	7.000	1.438	0.725	-10°	-7°	0.016	WXGU0403**L/R...	0.66
E16-SWLXR/L2-D20	CARBIDE	1.250	1.000	0.625	10.000	1.812	0.938	-10°	-7°	0.016	WXGU0403**L/R...	0.66

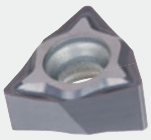
Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A10K-SWLXR/L04-D120	STEEL	12	10	6	125	20	9	-10°	-16°	0.4	WXGU0403**L/R...	0.9
A12M-SWLXR/L04-D140	STEEL	14	12	7	150	24	11	-10°	-14°	0.4	WXGU0403**L/R...	0.9
A16Q-SWLXR/L04-D180	STEEL	18	16	9	180	32	15	-10°	-11°	0.4	WXGU0403**L/R...	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: The holder measurements are true with this insert radius
Note: Use the right hand toolholder (R) for the left hand insert (L). Use the left hand toolholder (L) for the right hand insert (R)

SPARE PARTS

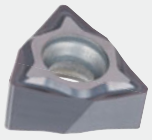

Designation	Clamping screw	Wrench
A/E**-SWLXR/L...	SR34-514	T-7F

❶ Use the right hand toolholder (R) for the left hand insert (L)
❷ Use the left hand toolholder (L) for the right hand insert (R)




WXGU 22··**L** SWLX**R**··

❶ Right hand toolholder with left hand insert shown

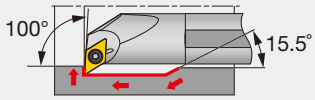



SWLX**L**·· WXGU 22··**R**

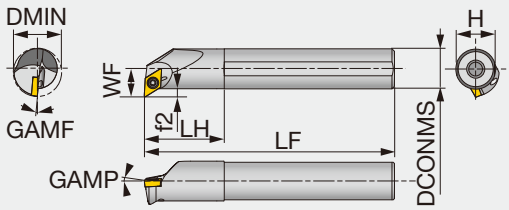
❷ Left hand toolholder with right hand insert shown

A/E-SDXXR/L

For 55° rhombic insert with 4 edges



Cutting edge style **X**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A06-SDXXR/L2-D10	STEEL	0.625	0.375	0.406	5.000	0.750	0.350	0.213	-14°	-12°	0.016	DXGU0703**L/R...	0.66
A08-SDXXR/L2-D11	STEEL	0.688	0.500	0.406	5.000	1.000	0.475	0.151	-13.5°	-11°	0.016	DXGU0703**L/R...	0.66
A10-SDXXR/L2-D14	STEEL	0.875	0.625	0.531	7.000	1.250	0.600	0.213	-13°	-9°	0.016	DXGU0703**L/R...	0.66
A12-SDXXR/L2-D16	STEEL	1.000	0.750	0.593	7.000	1.438	0.725	0.213	-13°	-8°	0.016	DXGU0703**L/R...	0.66
A16-SDXXR/L2-D20	STEEL	1.250	1.000	0.625	7.000	1.438	0.938	0.120	-13°	-8°	0.016	DXGU0703**L/R...	0.66
E06-SDXXR/L2-D10	CARBIDE	0.625	0.375	0.406	5.000	1.000	0.350	0.213	-14°	-12°	0.016	DXGU0703**L/R...	0.66
E08-SDXXR/L2-D11	CARBIDE	0.688	0.500	0.406	5.000	1.063	0.475	0.151	-13.5°	-11°	0.016	DXGU0703**L/R...	0.66
E10-SDXXR/L2-D14	CARBIDE	0.875	0.625	0.531	7.000	1.250	0.600	0.213	-13°	-9°	0.016	DXGU0703**L/R...	0.66
E12-SDXXR/L2-D16	CARBIDE	1.000	0.750	0.593	7.000	1.438	0.725	0.213	-13°	-8°	0.016	DXGU0703**L/R...	0.66
E16-SDXXR2-D20	CARBIDE	1.250	1.000	0.625	10.000	1.812	0.938	0.120	-13°	-8°	0.016	DXGU0703**L/R...	0.66

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right hand toolholder (R) for the left hand insert (L). Use the left hand toolholder (L) for the right hand insert (R)

SPARE PARTS

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

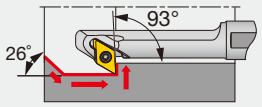
❶ Use the right hand toolholder (R) for the left hand insert (L)
❷ Use the left hand toolholder (L) for the right hand insert (R)

❶Right hand toolholder with left hand insert shown

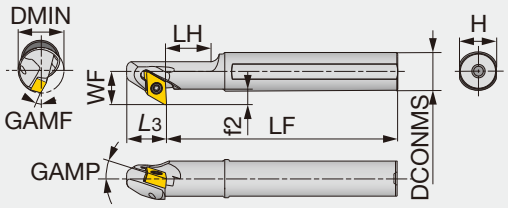
❷Left hand toolholder with right hand insert shown

A/E-SDZXR/L

For 55° rhombic insert with 4 edges



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCOONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A08-SDZXR/L2-D10	STEEL	0.625	0.500	0.438	5.000	1.125	0.500	0.475	0.188	-10°	-14°	0.016	DXGU0703**R/L...	0.9
A10-SDZXR/L2-D11	STEEL	0.688	0.625	0.500	7.000	1.250	0.500	0.600	0.188	-10°	-12.5°	0.016	DXGU0703**R/L...	0.9
A12-SDZXR/L2-D14	STEEL	0.875	0.750	0.563	7.000	1.375	0.500	0.725	0.188	-10°	-10.5°	0.016	DXGU0703**R/L...	0.9

Metric	Material	DMIN	DCOONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	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 lbs·ft (N·m) for clamping **RE: The holder measurements are true with this insert radius
Note: Use the right hand toolholder (R) for the right hand insert (R). Use the left hand toolholder (L) for the left hand insert (L)

SPARE PARTS

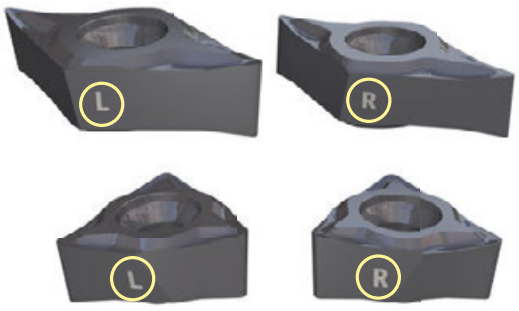
Designation	Clamping screw	Wrench
A/E**-SDZXR/L...	SR34-514	T-7F

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

❶Right hand toolholder with right hand insert shown

❷Left hand toolholder with left hand insert shown

MARKING



Insert hand is identified on the flank side

● : Continuous cutting
◐ : Light interrupted cutting
✽ : Heavy interrupted cutting

TurnLine - Insert

POSITIVE TYPE DOUBLE-SIDED

Trigon, 80° with hole

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

Application	Chipbreaker	Designation Inch	Designation Metric	Corner radius	Coated AH725	Coated SH725	Coated cermet GT9530	Cermet NS9530	Carbide KS05F
Finishing to medium cutting (Sharp edge)	JS	WXGU 220 MFR JS	WXGU040301MFR-JS	<0.004"*		●			
		WXGU 220 MFL JS	WXGU040301MFL-JS	<0.004"*		●			
		WXGU 220.5 MFR JS	WXGU040302MFR-JS	<0.008"*		●			
		WXGU 220.5 MFL JS	WXGU040302MFL-JS	<0.008"*		●			
		WXGU 221 MFR JS	WXGU040304MFR-JS	<0.016"*		●			
		WXGU 221 MFL JS	WXGU040304MFL-JS	<0.016"*		●			
Finishing to medium cutting (Sharp edge)	JTS	WXGU 220 MFR JTS	WXGU040301MFR-JTS	<0.004"*		●			
		WXGU 220 MFL JTS	WXGU040301MFL-JTS	<0.004"*		●			
		WXGU 220.5 MFR JTS	WXGU040302MFR-JTS	<0.008"*		●			
		WXGU 220.5 MFL JTS	WXGU040302MFL-JTS	<0.008"*		●			
Finishing to medium cutting	JTS	WXGU 220 MR JTS	WXGU040301MR-JTS	<0.004"*	●				
		WXGU 220 ML JTS	WXGU040301ML-JTS	<0.004"*	●				
		WXGU 220.5 MR JTS	WXGU040302MR-JTS	<0.008"*	●				
		WXGU 220.5 ML JTS	WXGU040302ML-JTS	<0.008"*	●				
Finishing (Low cutting force) (Sharp edge)	JSS	WXGU 220 MFR JSS	WXGU040301MFR-JSS	<0.004"*		●			
		WXGU 220 MFL JSS	WXGU040301MFL-JSS	<0.004"*		●			
		WXGU 220.5 MFR JSS	WXGU040302MFR-JSS	<0.008"*		●			
		WXGU 220.5 MFL JSS	WXGU040302MFL-JSS	<0.008"*		●			
Finishing (Low cutting force)	JSS	WXGU 220 MR JSS	WXGU040301MR-JSS	<0.004"*	●				
		WXGU 220 ML JSS	WXGU040301ML-JSS	<0.004"*	●				
		WXGU 220.5 MR JSS	WXGU040302MR-JSS	<0.008"*	●				
		WXGU 220.5 ML JSS	WXGU040302ML-JSS	<0.008"*	●				

New

* Corner radius has minus tolerance.

● : Line up
● : New

● : Continuous cutting
ɔ : Light interrupted cutting
ɔɔ : Heavy interrupted cutting

TurnLine - Insert

POSITIVE TYPE DOUBLE-SIDED

Trigon, 80° with hole

		AH725	AH8015 (New)	SH725	GT9530	NS9530	KS05F
		Coated			Coated cermet	Cermet	Carbide
P	Steel	ɔ	ɔɔ		ɔɔ	ɔɔ	
M	Stainless	ɔ	ɔɔ				
K	Cast iron	ɔ			ɔɔ	ɔɔ	●
N	Non-ferrous						●
S	Superalloys	●					●
H	Hard materials						

Application	Chipbreaker	Designation Inch	Designation Metric	Corner radius	AH725	AH8015 (New)	SH725	GT9530	NS9530	KS05F
Finishing to medium cutting	TS	WXGU 220.5 R TS	WXGU040302R-TS	<0.008"*	●	●		●	●	●
		WXGU 220.5 L TS	WXGU040302L-TS	<0.008"*	●	●		●	●	●
		WXGU 221 R TS	WXGU040304R-TS	0.016"*	●	●		●	●	●
		WXGU 221 L TS	WXGU040304L-TS	0.016"*	●	●		●	●	●
		WXGU 222 R TS	WXGU040308R-TS	0.032"*	●	●		●	●	●
		WXGU 222 L TS	WXGU040308L-TS	0.032"*	●	●		●	●	●
Finishing (Wiper)	TSW	WXGU 221 R TSW	WXGU040304R-TSW	0.016"*	●	●		●	●	
		WXGU 221 L TSW	WXGU040304L-TSW	0.016"*	●	●		●	●	
		WXGU 222 R TSW	WXGU040308R-TSW	0.032"*	●	●		●	●	
		WXGU 222 L TSW	WXGU040308L-TSW	0.032"*	●	●		●	●	
Finishing (Low cutting force)	SS	WXGU 220.5 R SS	WXGU040302R-SS	0.008"*	●	●		●	●	●
		WXGU 220.5 L SS	WXGU040302L-SS	0.008"*	●	●		●	●	●
		WXGU 221 R SS	WXGU040304R-SS	0.016"*	●	●		●	●	●
		WXGU 221 L SS	WXGU040304L-SS	0.016"*	●	●		●	●	●

* Corner radius has minus tolerance.

● : Line up
● : New

TurnLine - Insert

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

POSITIVE TYPE DOUBLE-SIDED

Rhombic, 55° with hole

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

Application	Chipbreaker	Designation Inch	Designation Metric	Corner radius	Coated AH725	Coated SH725
Finishing (Sharp edge)	JRP	DXGU 220 MFRE JRP	DXGU070301MFRE-JRP	<0.004"*		●
		DXGU 220 MFLE JRP	DXGU070301MFLE-JRP	<0.004"*		●
		DXGU 220.5 MFRE JRP	DXGU070302MFRE-JRP	<0.008"*		●
		DXGU 220.5 MFLE JRP	DXGU070302MFLE-JRP	<0.008"*		●
Finishing to medium cutting (Sharp edge)	JS	DXGU 220 MFR JS	DXGU070301MFR-JS	<0.004"*		●
		DXGU 220 MFL JS	DXGU070301MFL-JS	<0.004"*		●
		DXGU 220.5 MFR JS	DXGU070302MFR-JS	<0.008"*		●
		DXGU 220.5 MFL JS	DXGU070302MFL-JS	<0.008"*		●
		DXGU 221 MFR JS	DXGU070304MFR-JS	<0.016"*		●
		DXGU 221 MFL JS	DXGU070304MFL-JS	<0.016"*		●
Finishing to medium cutting (Sharp edge)	JTS	DXGU 220 MFR JTS	DXGU070301MFR-JTS	<0.004"*		●
		DXGU 220 MFL JTS	DXGU070301MFL-JTS	<0.004"*		●
		DXGU 220.5 MFR JTS	DXGU070302MFR-JTS	<0.008"*		●
		DXGU 220.5 MFL JTS	DXGU070302MFL-JTS	<0.008"*		●
Finishing to medium cutting	JTS	DXGU 220 MR JTS	DXGU070301MR-JTS	<0.004"*	●	
		DXGU 220 ML JTS	DXGU070301ML-JTS	<0.004"*	●	
		DXGU 220.5 MR JTS	DXGU070302MR-JTS	<0.008"*	●	
		DXGU 220.5 ML JTS	DXGU070302ML-JTS	<0.008"*	●	
Finishing (Low cutting force) (Sharp edge)	JSS	DXGU 220 MFR JSS	DXGU070301MFR-JSS	<0.004"*		●
		DXGU 220 MFL JSS	DXGU070301MFL-JSS	<0.004"*		●
		DXGU 220.5 MFR JSS	DXGU070302MFR-JSS	<0.008"*		●
		DXGU 220.5 MFL JSS	DXGU070302MFL-JSS	<0.008"*		●

New

* Corner radius has minus tolerance.

● : Line up
● : New

TurnLine - Insert

● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

POSITIVE TYPE

Rhombic, 55° with hole

		Coated				Coated cermet				Cermet				Carbide			
		AH725	New AH8015			GT9530				NS9530				KS05F			
P	Steel	ɔ				●ɔ				●ɔ							
M	Stainless	ɔ															
K	Cast iron	ɔ				●ɔ				●ɔ				●			
N	Non-ferrous													●			
S	Superalloys	●												●			
H	Hard materials																

Application	Chipbreaker	Designation Inch	Designation Metric	Corner radius	AH725	AH8015	GT9530	NS9530	KS05F
Finishing (Low cutting force)	JSS	DXGU 220 MR JSS	DXGU070301MR-JSS	<0.004"*	●				
		DXGU 220 ML JSS	DXGU070301ML-JSS	<0.004"*	●				
		DXGU 220.5 MR JSS	DXGU070302MR-JSS	<0.008"*	●				
		DXGU 220.5 ML JSS	DXGU070302ML-JSS	<0.008"*	●				
Finishing to medium cutting	TS	DXGU 220.5 R TS	DXGU070302R-TS	0.008"*	●	●	●	●	●
		DXGU 220.5 L TS	DXGU070302L-TS	0.008"*	●	●	●	●	●
		DXGU 221 R TS	DXGU070304R-TS	0.016"*	●	●	●	●	●
		DXGU 221 L TS	DXGU070304L-TS	0.016"*	●	●	●	●	●
		DXGU 222 R TS	DXGU070308R-TS	0.032"*	●	●	●	●	●
		DXGU 222 L TS	DXGU070308L-TS	0.032"*	●	●	●	●	●
Finishing (Low cutting force)	SS	DXGU 220.5 R SS	DXGU070302R-SS	0.008"*	●	●	●	●	●
		DXGU 220.5 L SS	DXGU070302L-SS	0.008"*	●	●	●	●	●
		DXGU 221 R SS	DXGU070304R-SS	0.016"*	●	●	●	●	●
		DXGU 221 L SS	DXGU070304L-SS	0.016"*	●	●	●	●	●

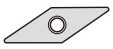
* Corner radius has minus tolerance.

● : Line up
● : New

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

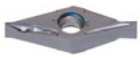
TurnLine - Insert

DOUBLE-SIDED



Rhombic, 35° with hole

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

Application	Chipbreaker	Designation Inch	Designation Metric	Corner radius	Coated SH725
Finishing (Sharp edge)	JRP	VXGU 73.50 MFRE JRP	VXGU09T201MFRE-JRP	<0.004"*	●
		VXGU 73.50 MFLE JRP	VXGU09T201MFLE-JRP	<0.004"*	●
		VXGU 73.50.5 MFRE JRP	VXGU09T202MFRE-JRP	<0.008"*	●
		VXGU 73.50.5 MFLE JRP	VXGU09T202MFLE-JRP	<0.008"*	●
New	JS	VXGU 73.50 MFR JS	VXGU09T201MFR-JS	<0.004"*	●
Finishing to medium cutting (Sharp edge)		VXGU 73.50 MFL JS	VXGU09T201MFL-JS	<0.004"*	●
		VXGU 73.50.5 MFR JS	VXGU09T202MFR-JS	<0.008"*	●
		VXGU 73.50.5 MFL JS	VXGU09T202MFL-JS	<0.008"*	●
		VXGU 73.51 MFR JS	VXGU09T204MFR-JS	<0.016"*	●
		VXGU 73.51 MFL JS	VXGU09T204MFL-JS	<0.016"*	●

* Corner radius has minus tolerance.

● : Line up
● : New

STANDARD CUTTING CONDITIONS

FOR EXTERNAL TURNING

Applications	ISO	Workpiece material	Priority	Chip-breaker	Grade	Cutting speed *Vc* (sfm)	Depth of cut *ap* (Inch)	Feed *f* (ipr)
For swiss type automatic lathes	P	Low carbon steels Carbon steels (1045, etc.) Low alloy steels Alloy steels (4140, etc.)	First choice	JS	SH725	164 - 590	0.004 - 0.118	0.001 - 0.004
			With high sharpness	JSS	SH725	164 - 590	0.004 - 0.059	0.001 - 0.004
	M	Stainless steels (Austenitic) (304, etc.) Stainless steels (Martensitic and ferritic) (430, etc.) Stainless steels (Precipitation hardened) (174, etc.)	First choice	JS	SH725	164 - 590	0.004 - 0.049	0.001 - 0.004
			With high sharpness	JSS	SH725	164 - 590	0.004 - 0.059	0.001 - 0.004
For small size CNC lathes	P	Low carbon steels Carbon steels (1045, etc.) Low alloy steels Alloy steels (4140, etc.)	First choice	SS	AH725	164 - 590	0.006 - 0.059	0.002 - 0.008
				TS	AH725	164 - 590	0.012 - 0.079	0.003 - 0.012
			For improved surface finish	SS	NS9530	164 - 656	0.006 - 0.059	0.002 - 0.008
				TS	NS9530	164 - 656	0.012 - 0.079	0.003 - 0.012
			For wear resistance	SS	GT9530	164 - 820	0.006 - 0.059	0.002 - 0.008
				TS	GT9530	164 - 820	0.012 - 0.079	0.003 - 0.012
	M	Stainless steels (Austenitic) (304, etc.) Stainless steels (Martensitic and ferritic) (430, etc.) Stainless steels (Precipitation hardened) (174, etc.)	First choice	SS	AH725	164 - 492	0.006 - 0.059	0.002 - 0.008
			For impact resistance	TS	AH725	164 - 492	0.012 - 0.079	0.003 - 0.012

STANDARD CUTTING CONDITIONS

FOR INTERNAL TURNING

ISO	Workpiece material	Grade			Cutting speed *Vc* (sfm)	Depth of cut *ap* (Inch)	Feed *f* (ipr)
		First choice	For surface finish	For wear resistance (High speed)			
P	Low carbon steel (1025, etc.)	AH725	-	-	164 - 180	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
	Carbon steel (1045, 1055, etc.)	AH725	-	-	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
	Low alloy steel (4140, etc.)	AH725	-	-	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
	Alloy steel (5120, etc.)	AH725	-	-	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
M	Stainless steel (Austenitic) (304, etc.)	AH8015	-	-	164 - 492	0.012 - 0.079	0.003 - 0.012
	Stainless steel (Martensitic and ferritic) (430, etc.)	AH8015	-	-	164 - 492	0.012 - 0.079	0.003 - 0.012
	Stainless steel (Precipitation hardening) (174, etc.)	AH8015	-	-	164 - 492	0.012 - 0.079	0.003 - 0.012
K	Grey cast iron (No.250B, etc.)	AH725	-	-	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
	Ductile cast iron (80-55-60, etc.)	AH725	-	-	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	NS9530	-	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	-	262 - 984	0.012 - 0.079	0.003 - 0.012
N	Non ferrous Metal (Aluminum alloy, etc.)	KS05F	-	-	328 - 984	0.012 - 0.079	0.003 - 0.012
	Non ferrous Metal (Cu Alloy, etc.)	KS05F	-	-	328 - 984	0.012 - 0.079	0.003 - 0.012
S	Heat-resistant alloys Titanium alloys, etc.	AH8015	-	-	66 -262	0.012 - 0.079	0.003 - 0.012
	Heat-resistant alloys (Nickel-base alloys)	AH8015	-	-	66 - 262	0.012 - 0.079	0.003 - 0.012

GRADES

AH725

P M K

PREMIUMTEC TUNGALOY

- Versatile PVD coated grade suitable for a wide range of work materials
- Demonstrates a balanced resistance to wear and fracture

New

AH8015

P M K S

PREMIUMTEC TUNGALOY

- PVD coated grade with a balanced resistance to wear and fracture
- First choice for stainless steel and heat-resistant superalloys

SH725

P M K

- PVD coated grade most suited for sharp cutting edges
- Suitable for machining of small and precision parts

GT9530

P K

PREMIUMTEC TUNGALOY

- Coated cermet grade with PremiumTec treatment for exceptional wear resistance
- Provides remarkable performance in high-speed finishing of steel

NS9530

P K

PREMIUMTEC TUNGALOY

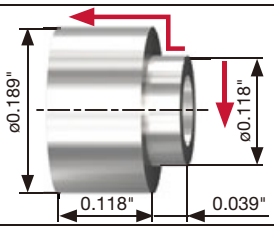
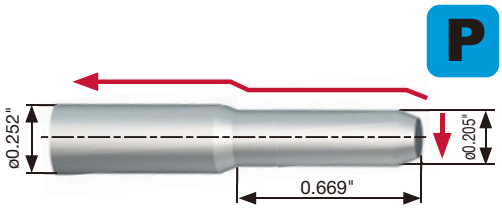
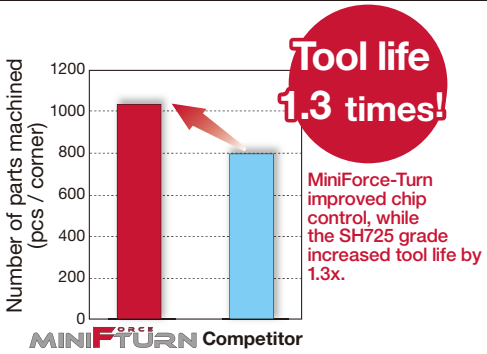
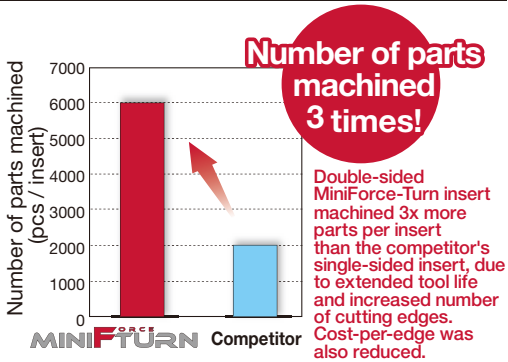
- General-purpose cermet grade with incredible fracture and wear resistance
- Ensures long tool life and excellent surface finishing of steel

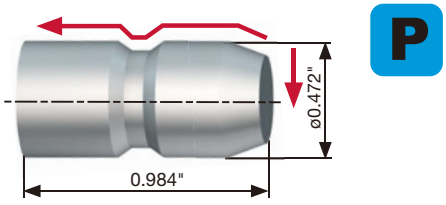
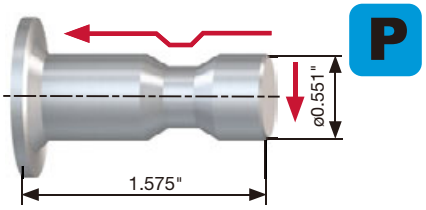
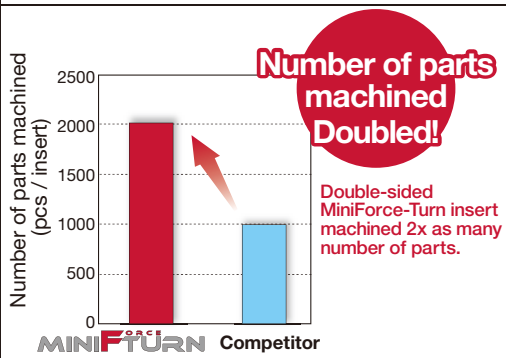
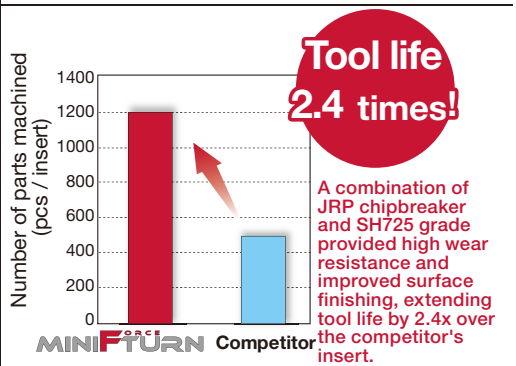
KS05F

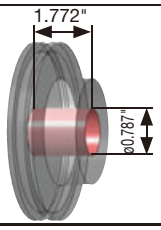
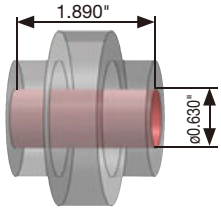
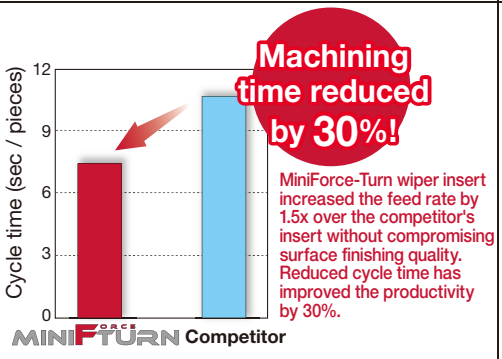
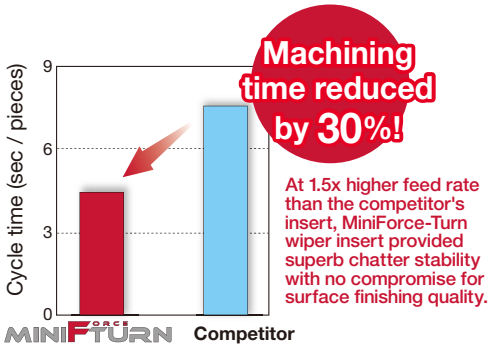
N

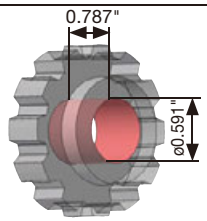
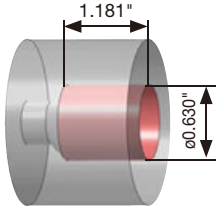
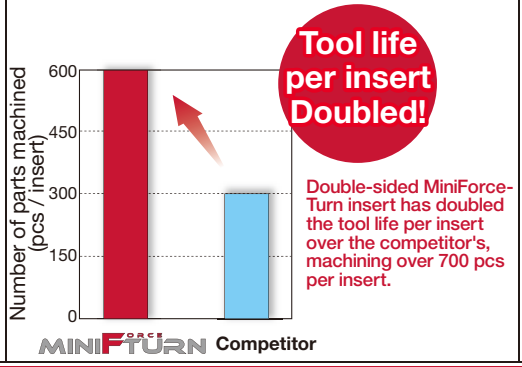
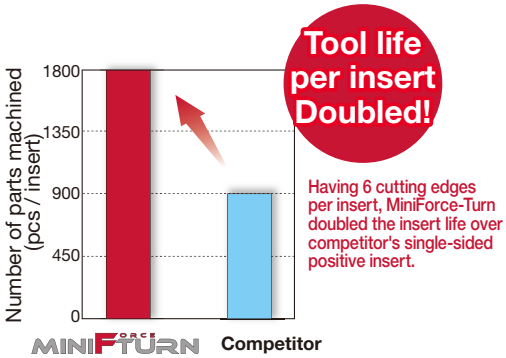
- Sub-micron grain cemented carbide with balanced wear and impact resistance
- Homogeneous fine-grained structure provides excellent resistance to wear, fracture, and built-up edge

External turning

Workpiece		Shaft	Shaft
Toolholder		JSDJ2XR082	JSWL2XR1212X04
Insert		DXGU 220 MFL JS	WXGU 220.5 L TS
Grade		SH725	AH725
Workpiece material		**316** 	**1045** 
Cutting conditions	Cutting speed : *Vc* (sfm)	200	217 - 262
	Feed : *f* (ipt)	0.001	0.006
	Depth of cut : *ap* (Inch)	0.005	0.024
	Machining	External	External
	Coolant	Wet	Wet
Results			

Workpiece		Shaft	Shaft
Toolholder		JSDJ2XR082	JSVJ2XR087X-CHP
Insert		DXGU 220 ML JSS	VXGU 73.50.5 MFLE JRP
Grade		AH725	SH725
Workpiece material		**Alloy steels** 	**Low carbon steel (cold drawn)** 
Cutting conditions	Cutting speed : *Vc* (sfm)	217 - 262	558
	Feed : *f* (ipt)	0.006	0.001
	Depth of cut : *ap* (Inch)	0.024	0.008
	Machining	External	External
	Coolant	Wet	Wet
Results			

Workpiece	Machine Parts	Machine Parts
Toolholder	A08-SWLXR2-D11	E06-SWLXR2-D08
Insert	WXGU 221 L TSW	WXGU 221 L TSW
Grade	AH725	GT9530
Workpiece material	**1045**  P	**4137**  P
Cutting conditions: Cutting speed : *Vc* (sfm)	525	656
Cutting conditions: Feed : *f* (ipt)	0.004 → 0.006	0.004 → 0.006
Cutting conditions: Depth of cut : *ap* (Inch)	0.020	0.008
Cutting conditions: Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
Cutting conditions: Coolant	Wet	Wet
Results	 MiniForce-Turn wiper insert increased the feed rate by 1.5x over the competitor's insert without compromising surface finishing quality. Reduced cycle time has improved the productivity by 30%.	 At 1.5x higher feed rate than the competitor's insert, MiniForce-Turn wiper insert provided superb chatter stability with no compromise for surface finishing quality.

Workpiece	Machine Parts	Machine Parts
Toolholder	A06-SWLXR2-D08	A06-SDXXR2-D10
Insert	WXGU 220.5 L SS	DXGU 221 L TS
Grade	KS05F	KS05F
Workpiece material	**C83600 / Bronze casting**  N	**5056 (Al - Mg)**  N
Cutting conditions: Cutting speed : *Vc* (sfm)	230	656
Cutting conditions: Feed : *f* (ipt)	0.004	0.004
Cutting conditions: Depth of cut : *ap* (Inch)	0.039	0.039
Cutting conditions: Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
Cutting conditions: Coolant	Wet	Wet
Results	 Double-sided MiniForce-Turn insert has doubled the tool life per insert over the competitor's, machining over 700 pcs per insert.	 Having 6 cutting edges per insert, MiniForce-Turn doubled the insert life over competitor's single-sided positive insert.

Tungaloy America, Inc.

3726 N Ventura Drive, Arlington Heights, IL 60004, U.S.A.
Inside Sales: +1-888-554-8394
Technical Support: +1-888-554-8391
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 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

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Jul. 2019 (TJ)

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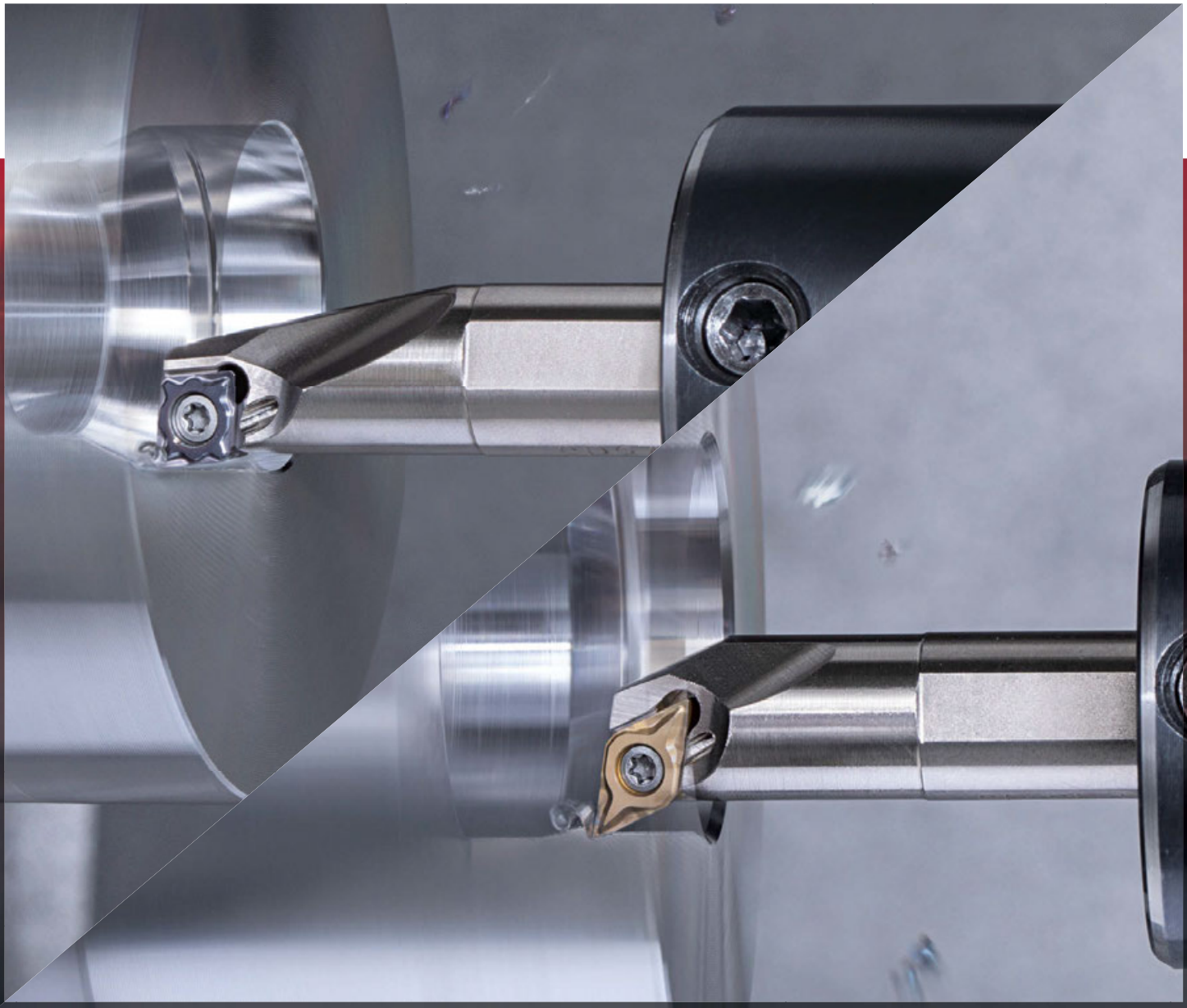
TurnLine
Expansion 1

MINIFORCE TURN

Tungaloy Report No. 417S1-US

Expansion of super economical **M class with double-sided positive insert**



TUNGALOY ADDFORCE ACCELERATED LINES

MINIFORCE TURN

For more information

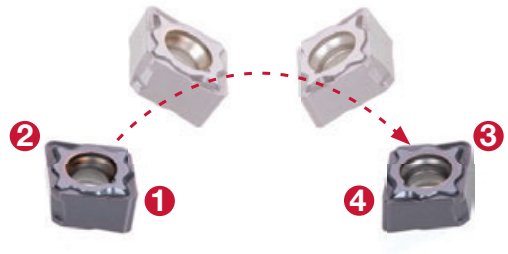
New geometry of CXMU insert and expansion of DXMU inserts

Super economical M class double-sided positive insert

New

CXMU insert

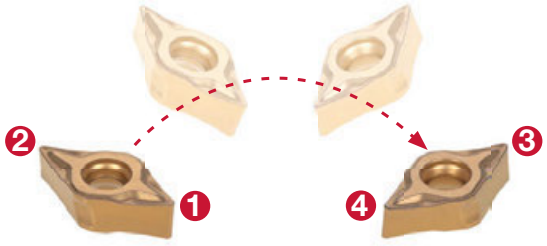
- 4 edges, rhombic 80°
- Chipbreaker: TS



New

DXMU insert

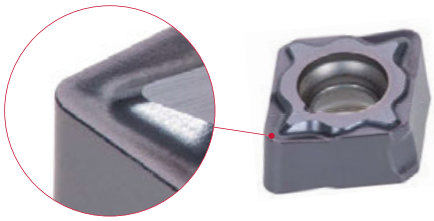
- 4 edges, rhombic 55°
- Chipbreaker: TS

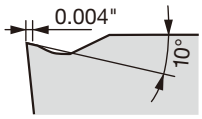


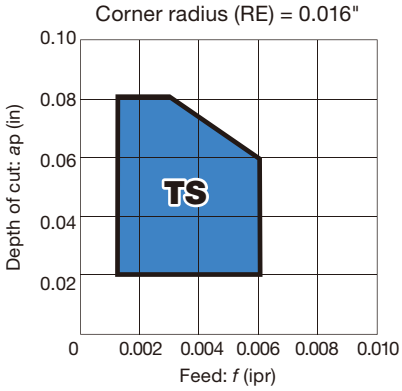
APPLICATION AREA

TS chipbreaker

- First choice chipbreaker for medium to finish cutting
- Excellent chip control
- Ideal for small part machining

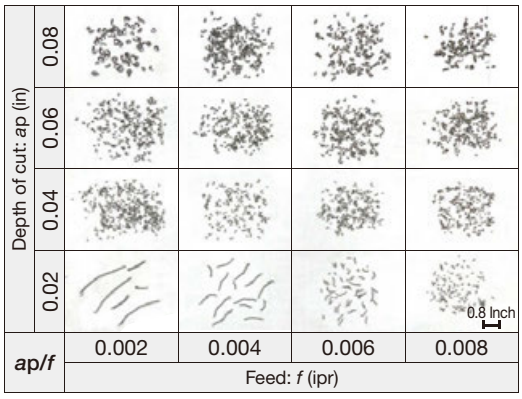






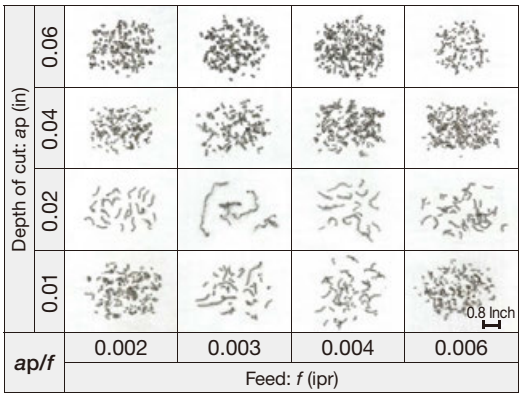
CHIP CONTROL

P



Workpiece : 1045
Insert : CXMU 221L TS T9215
Toolholder : A12M-SCLXR06-D140
Cutting speed : *Vc* = 492 sfm
Boring depth : H = 1.417" (L/D = 3)
Coolant : Wet (internal supply)

M

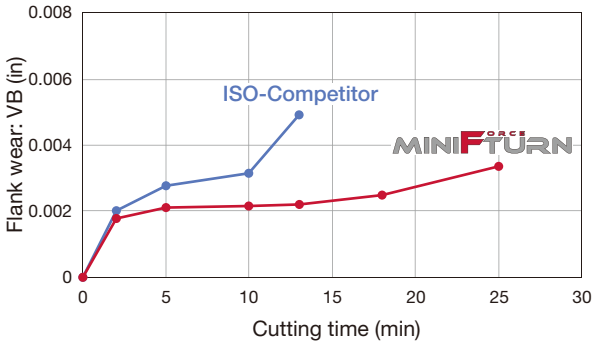


Workpiece : 304
Insert : CXMU 221L TS AH8015
Toolholder : A12M-SCLXR06-D140
Cutting speed : *Vc* = 230 sfm
Boring depth : H = 1.417" (L/D = 3)
Coolant : Wet (internal supply)

GRADES

Grade	Recommended workpiece material	Feature
PREMIUMTEC New T9215	P M K	- Well-balanced between wear and chipping resistance - First choice for steel - High versatility for a wide range of applications
PREMIUMTEC New T9225	P	- First choice for roughing to medium cutting - High fracture resistance
PREMIUMTEC AH8015	P M K S	- PVD coated grade with a balanced resistance to wear and fracture - First choice for stainless steel and heat-resistant superalloys
PREMIUMTEC AH725	P M K	- Versatile PVD coated grade suitable for a wide range of work materials - Demonstrates a balanced resistance to wear and fracture

TOOL LIFE

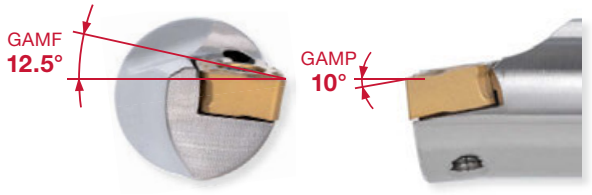


P

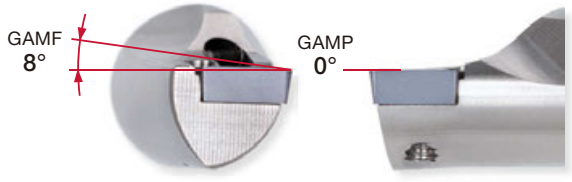
Insert : DXMU 221L TS T9215 (**MiniForce-Turn**)
DCMT 21.51 type Competitor's PVD-P15 grade (ISO)
Toolholder : A12-SDXXR2-D16 (**MiniForce-Turn**)
A12-SDUCR3-D16 (ISO)
Workpiece material : 4140
Cutting speed : *Vc* = 820 sfm
Feed : *f* = 0.004 ipr
Depth of cut : *ap* = 0.004"
Coolant : Wet

New M class MiniForce-Turn and latest CVD grade T9215 provides high productivity and high wear resistance compared to competitor's ISO positive PVD grade insert.

Low cutting force machining with high rake angle



MINIFORCE TURN
A12M-SCLXR06-D140



Conventional
A12M-SCLCR06-D140

CUTTING PERFORMANCE

Excellent chatter stability

Workpiece : S1045
Insert : CXMU 221L TS AH725
Toolholder : A12M-SCLXR06-D140
Cutting speed : *Vc* = 492 sfm
Overhang length : 1.417" (L/D = 3)
Coolant : Wet (internal supply)

MINIFORCE TURN

Depth of cut ap (in)	0.002	0.004	0.006	0.008
0.08	OK	OK	OK	OK
0.06	OK	OK	OK	OK
0.04	OK	OK	OK	OK
0.02	OK	OK	OK	OK
ap/f	Feed: *f* (ipr)			

=

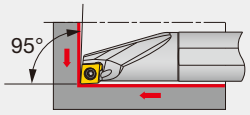
ISO positive insert, M class

Depth of cut ap (in)	0.002	0.004	0.006	0.008
0.08	OK	OK	OK	OK
0.06	OK	OK	OK	OK
0.04	OK	OK	OK	OK
0.02	OK	OK	OK	OK
ap/f	Feed: *f* (ipr)			

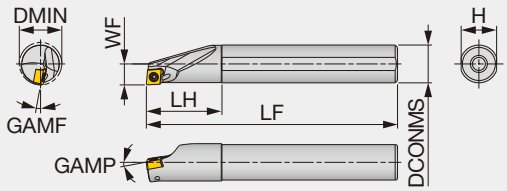
New

A/E-SCLXR/L

Screw-on boring bar, for CXMU inserts



Cutting edge style **L**



Right hand (R) shown.

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A10K-SCLXR/L06-D120	Steel	12	10	6	125	20	9	-10°	-14.5°	0.4	CXMU0603**L/R...	0.9
A12M-SCLXR/L06-D140	Steel	14	12	7	150	24	11	-10°	-12.5°	0.4	CXMU0603**L/R...	0.9
A16Q-SCLXR/L06-D180	Steel	18	16	9	180	32	15	-10°	-9.5°	0.4	CXMU0603**L/R...	0.9
A20R-SCLXR/L06-D220	Steel	22	20	11	200	36	18	-10°	-8°	0.4	CXMU0603**L/R...	0.9
E10M-SCLXR/L06-D120	Carbide	12	10	6	150	25	9	-10°	-14.5°	0.4	CXMU0603**L/R...	0.9
E12Q-SCLXR/L06-D140	Carbide	14	12	7	180	27	11	-10°	-12.5°	0.4	CXMU0603**L/R...	0.9
E16R-SCLXR/L06-D180	Carbide	18	16	9	200	32	15	-10°	-9.5°	0.4	CXMU0603**L/R...	0.9
E20S-SCLXR/L06-D220	Carbide	22	20	11	250	36	18	-10°	-8°	0.4	CXMU0603**L/R...	0.9

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

SPARE PARTS

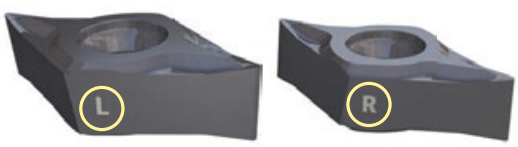
Designation	Clamping screw	Wrench
A/E**-SCLXR/L...	SR34-514	T-7F

❶ Use the right hand toolholder (R) for the left hand insert (L)
❷ Use the left hand toolholder (L) for the right hand insert (R)

❶ Right hand toolholder with left hand insert shown

❷ Left hand toolholder with right hand insert shown

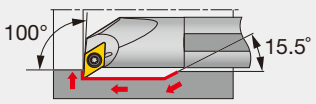
MARKING



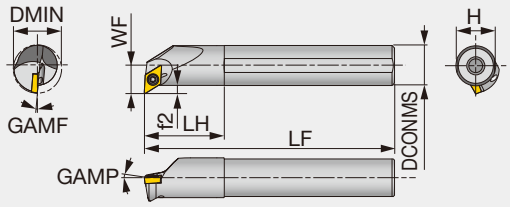
Insert hand is identified on the flank side

A/E-SDXXR/L

Screw-on boring bar, for DXMU/DXGU inserts



Cutting edge style **X**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A06-SDXXR/L2-D10	Steel	0.625	0.375	0.406	5.000	0.750	0.350	0.218	-14°	-16°	0.016	DXMU/DXGU22*L/R...	0.66
A08-SDXXR/L2-D11	Steel	0.688	0.500	0.406	5.000	1.000	0.475	0.156	-14°	-14°	0.016	DXMU/DXGU22*L/R...	0.66
A10-SDXXR/L2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	0.218	-13°	-13°	0.016	DXMU/DXGU22*L/R...	0.66
A12-SDXXR/L2-D16	Steel	1.000	0.750	0.593	7.000	1.438	0.725	0.218	-13°	-12°	0.016	DXMU/DXGU22*L/R...	0.66
E06-SDXXR/L2-D10	Carbide	0.625	0.375	0.406	5.000	1.000	0.350	-	-14°	-16°	0.016	DXMU/DXGU22*L/R...	0.66
E08-SDXXR/L2-D11	Carbide	0.688	0.500	0.406	5.000	1.063	0.475	-	-14°	-14°	0.016	DXMU/DXGU22*L/R...	0.66
E10-SDXXR/L2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	-	-13°	-13°	0.016	DXMU/DXGU22*L/R...	0.66
E12-SDXXR/L2-D16	Carbide	1.000	0.750	0.593	7.000	1.438	0.725	-	-13°	-12°	0.016	DXMU/DXGU22*L/R...	0.66

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

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

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

SPARE PARTS

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

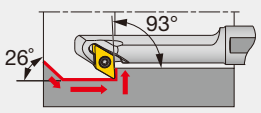
❶ Use the right hand toolholder (R) for the left hand insert (L)
❷ Use the left hand toolholder (L) for the right hand insert (R)

❶ Right hand toolholder with left hand insert shown

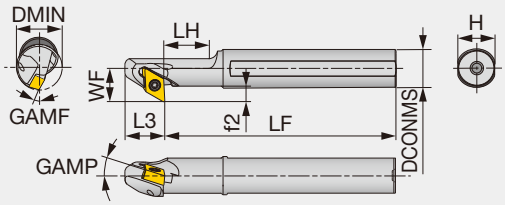
❷ Left hand toolholder with right hand insert shown

A/E-SDZXR/L

Screw-on boring bar, for DXMU/DXGU inserts



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	**RE	Insert	Torque*
A08-SDZXR/L2-D10	Steel	0.625	0.500	0.438	5.000	1.125	0.500	0.475	0.188	-10°	-14°	0.016	DXMU/DXGU22*L/R...	0.66
A10-SDZXR/L2-D11	Steel	0.688	0.625	0.500	7.000	1.250	0.500	0.600	0.188	-10°	-12.5°	0.016	DXMU/DXGU22*L/R...	0.66
A12-SDZXR/L2-D14	Steel	0.875	0.750	0.563	7.000	1.375	0.500	0.725	0.188	-10°	-10.5°	0.016	DXMU/DXGU22*L/R...	0.66

Metric	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SDZXR/L07-D140	Steel	14	12	10.5	150	30	13	11	4.5	-10°	-14°	0.4	DXMU/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	DXMU/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	DXMU/DXGU0703**R/L...	0.9
E12Q-SDZXR/L07-D180	Carbide	18	12	10.5	180	-	13	11	4.5	-11°	-11°	0.4	DXMU/DXGU0703**R/L...	0.9
E16R-SDZXR/L07-D220	Carbide	22	16	12.5	200	-	13	15	4.5	-11°	-9°	0.4	DXMU/DXGU0703**R/L...	0.9

*Torque: Recommended clamping torque lbs·ft (*N·m) **RE : Standard corner radius
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

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

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

❶ Right hand toolholder with right hand insert shown

❷ Left hand toolholder with left hand insert shown

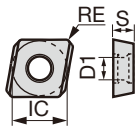
Insert POSITIVE TYPE / DOUBLE SIDED

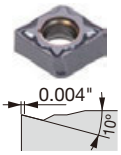
● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

CX

Rhombic, 80° with hole

P	Steel	●ᑕ	●ᑕ✣	ᑕ
M	Stainless	●ᑕ	ᑕ	ᑕ
K	Cast iron	●ᑕ		ᑕ
N	Non-ferrous			
S	Superalloy		ᑕ	●
H	Hard material			

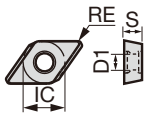


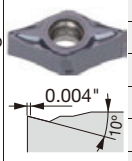
Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated AH8015	Coated AH725	Dimension (in) RE	IC	S	D1
Finishing to medium cutting	TS	CXMU 220.5R TS	CXMU060302R-TS	●	●	●	●	0.008	0.250	0.125	0.106
		CXMU 220.5L TS	CXMU060302L-TS	●	●	●	●	0.008	0.250	0.125	0.106
		CXMU 221R TS	CXMU060304R-TS	●	●	●	●	0.016	0.250	0.125	0.106
		CXMU 221L TS	CXMU060304L-TS	●	●	●	●	0.016	0.250	0.125	0.106
		CXMU 222R TS	CXMU060308R-TS	●	●	●	●	0.032	0.250	0.125	0.106
		CXMU 222L TS	CXMU060308L-TS	●	●	●	●	0.032	0.250	0.125	0.106

DX

Rhombic, 55° with hole

P	Steel	●ᑕ	●ᑕ✣	ᑕ
M	Stainless	●ᑕ	ᑕ	ᑕ
K	Cast iron	●ᑕ		ᑕ
N	Non-ferrous			
S	Superalloy		ᑕ	●
H	Hard material			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated AH8015	Coated AH725	Dimension (in) RE	IC	S	D1
Finishing to medium cutting	TS	DXMU 220.5R TS	DXMU070302R-TS	●	●	●	●	0.008	0.250	0.125	0.106
		DXMU 220.5L TS	DXMU070302L-TS	●	●	●	●	0.008	0.250	0.125	0.106
		DXMU 221R TS	DXMU070304R-TS	●	●	●	●	0.016	0.250	0.125	0.106
		DXMU 221L TS	DXMU070304L-TS	●	●	●	●	0.016	0.250	0.125	0.106
		DXMU 222R TS	DXMU070308R-TS	●	●	●	●	0.032	0.250	0.125	0.106
		DXMU 222L TS	DXMU070308L-TS	●	●	●	●	0.032	0.250	0.125	0.106

● : New product

STANDARD CUTTING CONDITIONS
FOR INTERNAL TURNING

ISO	Workpiece material	Grade		Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
		First choice	Second choice			
P	Low carbon steel / Low alloy steel	T9215	-	394 - 1148	0.012 - 0.079	0.003 - 0.012
		T9225	-	328 - 984	0.012 - 0.079	0.003 - 0.012
		AH8015	-	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	NS9530	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	262 - 984	0.012 - 0.079	0.003 - 0.012
	Carbon steel / Alloy steel	T9215	-	262 - 1148	0.012 - 0.079	0.003 - 0.012
		T9225	-	262 - 984	0.012 - 0.079	0.003 - 0.012
		AH8015	-	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	NS9530	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	262 - 984	0.012 - 0.079	0.003 - 0.012
M	Stainless steel (Austenitic)	AH8015	-	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	T9215	164 - 656	0.012 - 0.079	0.003 - 0.012
	Stainless steel (Martensitic and ferritic)	AH8015	-	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	T9215	164 - 656	0.012 - 0.079	0.003 - 0.012
	Stainless steel (Precipitation hardening)	AH8015	-	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 492	0.012 - 0.079	0.003 - 0.012
		-	T9215	164 - 656	0.012 - 0.079	0.003 - 0.012
K	Gray cast iron	T9215	-	328 - 1148	0.012 - 0.079	0.003 - 0.012
		T9225	-	328 - 1148	0.012 - 0.079	0.003 - 0.012
		-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	NS9530	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	262 - 984	0.012 - 0.079	0.003 - 0.012
	Ductile cast iron	T9215	-	328 - 1148	0.012 - 0.079	0.003 - 0.012
		T9225	-	328 - 1148	0.012 - 0.079	0.003 - 0.012
		-	AH8015	164 - 656	0.012 - 0.079	0.003 - 0.012
		-	AH725	164 - 591	0.012 - 0.079	0.003 - 0.012
		-	NS9530	262 - 820	0.012 - 0.079	0.003 - 0.012
		-	GT9530	262 - 984	0.012 - 0.079	0.003 - 0.012
N	Aluminum alloys	KS05F	-	328 - 984	0.012 - 0.079	0.003 - 0.012
	Copper alloys	KS05F	-	328 - 984	0.012 - 0.079	0.003 - 0.012
S	Titanium alloys	AH8015	-	66 - 262	0.012 - 0.079	0.003 - 0.012
	Nickel-based alloys	AH8015	-	66 - 262	0.012 - 0.079	0.003 - 0.012
H	Hardened steel	BXA20	-	164 - 722	0.005 - 0.031	0.004 - 0.012
		-	BXA10	164 - 722	0.005 - 0.031	0.004 - 0.012

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