



DOM^{IN}TURN
TUNGALLOY

TURNLINE

Tungaloy Report No. 417-E

www.tungaloy.com

Jinan Terry CNC Tool Co., Ltd.

Innovative insert
provides superior
economic advantages!

sales@jnterui.com

Jinan Terry CNC Tool Co., Ltd.





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Sharpness of positive inserts with twice the number of cutting edges

DOMTURN

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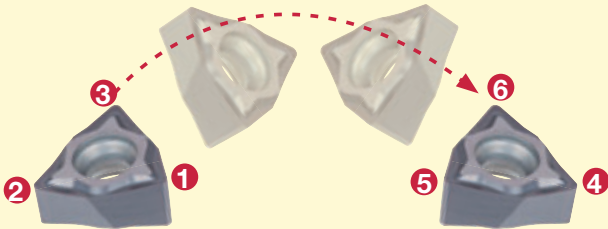
Economical double sided inserts with positive cutting edge

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

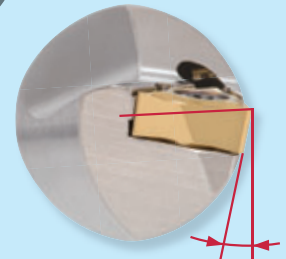


● High rake angle

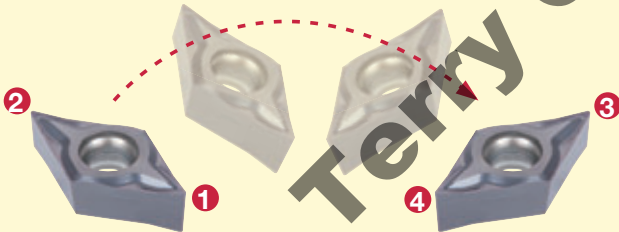
External turning



Internal turning



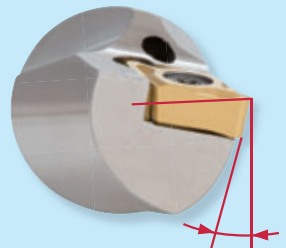
DXGU0703.. Inserts with 4 positive cutting edges



External turning

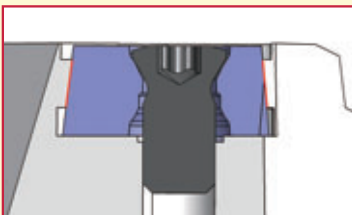


Internal turning



● Toolholders

Dovetail structure ensures secure insert clamping.



External turning

JP-type screw accessible from both sides



Internal turning

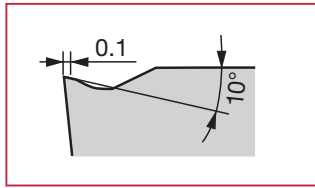
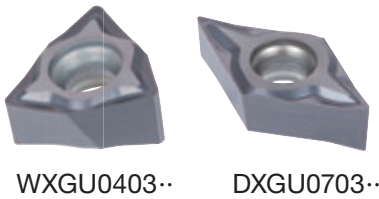
Unique design for optimal chip evacuation



Uniquely designed chipbreakers

TS / JTS / TSW chipbreaker

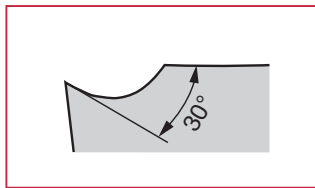
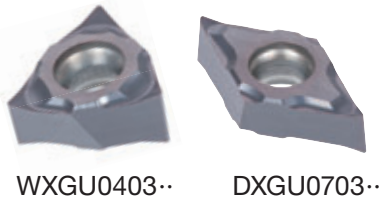
P M K



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

SS / JSS chipbreaker

M P



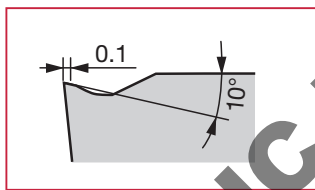
Generates low cutting forces, recommended for steel and stainless steel machining.

TSW chipbreaker (Wiper)

New

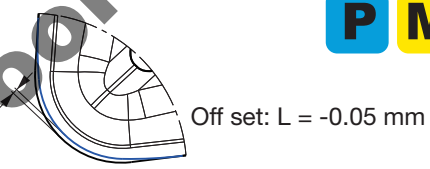


WXGU0403..



P M K

Excellent surface finishing and high efficiency for high feed machining.



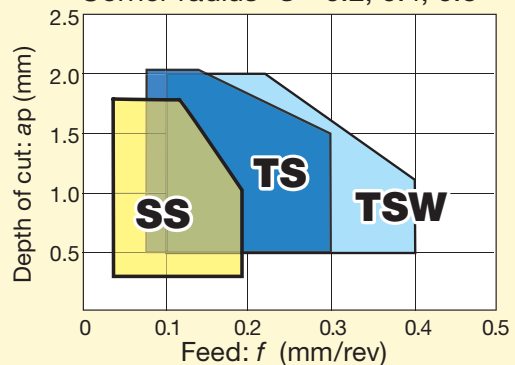
Chipbreakers for general purposes

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



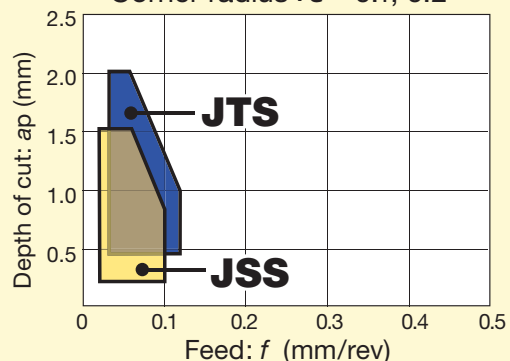
Chipbreakers for small parts machining

WXGU0403.. - **JTS / JSS**
DXGU0703.. - **JTS / JSS**

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

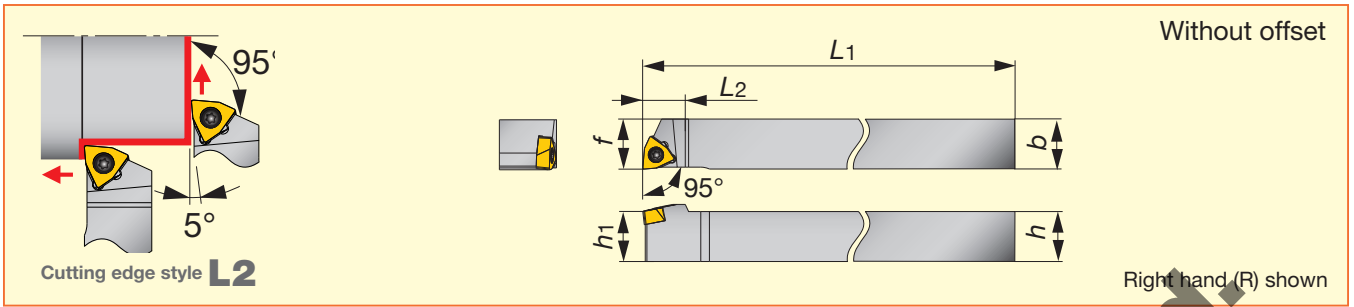
Application area

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



External toolholders

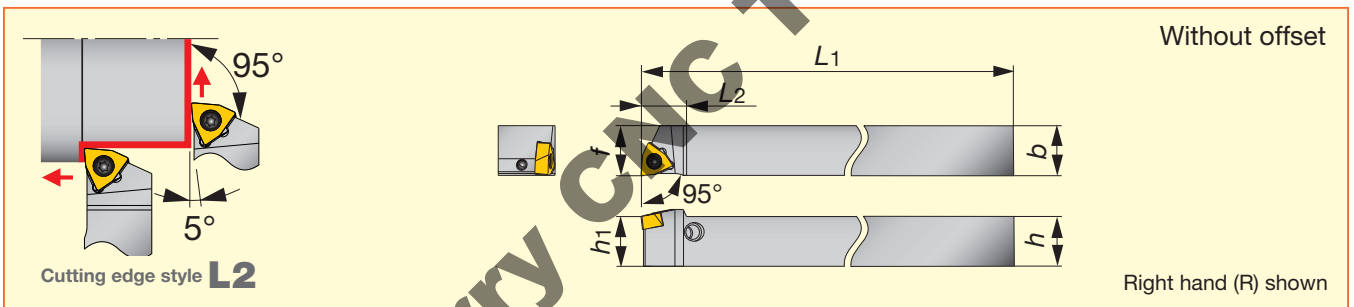
JSWL2XR/L Turning & facing J-type (PosJive rake, screw-on system)



Cat. No.	Stock		Dimensions (mm)						Std. corner radius r_{ϵ}	Insert	Parts	
	R	L	h	b	L_1	L_2	h_1	f			Clamping screw	Wrench
JSWL2XR/L1010X04	●	●	10	10	120	11	10	10	0.2	WXGU0403**L/R	SR34-514	T-7F
JSWL2XR/L1212F04	●	●	12	12	85	11	12	12	0.2	WXGU0403**L/R	SR34-514	T-7F
JSWL2XR/L1212X04	●	●	12	12	120	11	12	12	0.2	WXGU0403**L/R	SR34-514	T-7F
JSWL2XR/L1616X04	●	●	16	16	120	13	16	16	0.2	WXGU0403**L/R	SR34-514	T-7F

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

JPWL2XR/L Turning & facing J-type (Positive rake, side clamping system)



Cat. No.	Stock		Dimensions (mm)						Std. corner radius r_{ϵ}	Insert	Parts			
	R	L	h	b	L_1	L_2	h_1	f			Lever	Pin	Clamping screw	Wrench
JPWL2XR/L1010X04	●	●	10	10	120	11	10	10	0.2	WXGU0403**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPWL2XR/L1212F04	●	●	12	12	85	11	12	12	0.2	WXGU0403**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPWL2XR/L1212X04	●	●	12	12	120	11	12	12	0.2	WXGU0403**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPWL2XR/L1616X04	●	●	16	16	120	13	16	16	0.2	WXGU0403**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F

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



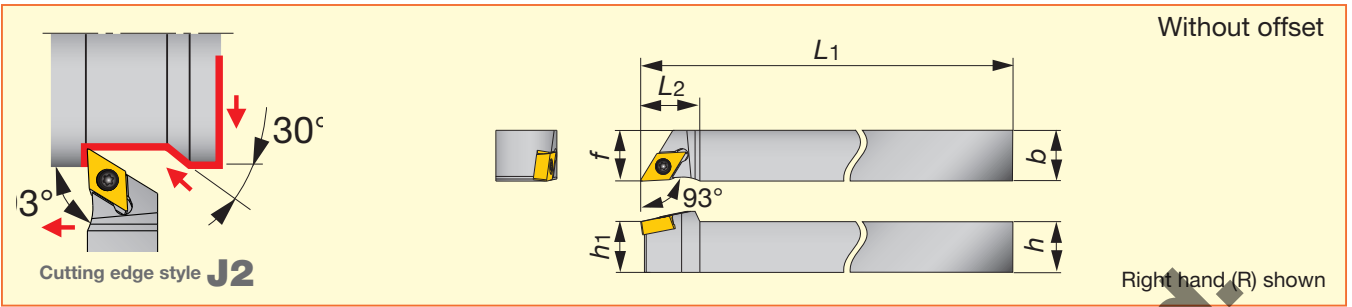
1 Right hand toolholder with left hand insert shown



2 Left hand toolholder with right hand insert shown

● : Stocked items

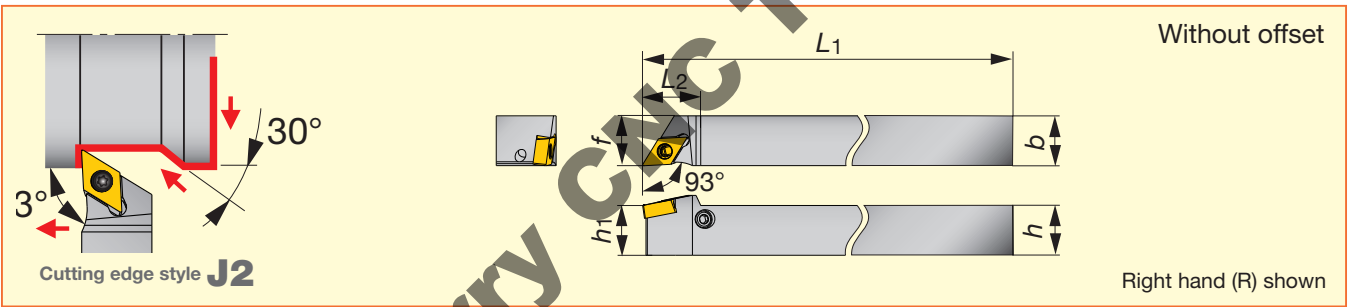
JSDJ2XR/L Turning & profiling J-type (Positive rake, screw-on system)



Cat. No.	Stock		Dimensions (mm)						Std. corner radius r_ϵ	Insert	Parts	
	R	L	h	b	L_1	L_2	h_1	f			Clamping screw	Wrench
JSDJ2XR/L1010X07	●	●	10	10	120	14	10	10	0.2	DXGU0703**L/R	SR34-514	T-7F
JSDJ2XR/L1212F07	●	●	12	12	85	14	12	12	0.2	DXGU0703**L/R	SR34-514	T-7F
JSDJ2XR/L1212X07	●	●	12	12	120	14	12	12	0.2	DXGU0703**L/R	SR34-514	T-7F
JSDJ2XR/L1616X07	●	●	16	16	120	18	16	16	0.2	DXGU0703**L/R	SR34-514	T-7F

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

JPDJ2XR/L Turning & profiling J-type (Positive rake, side clamping system)



Cat. No.	Stock		Dimensions (mm)						Std. corner radius r_ϵ	Insert	Parts			
	R	L	h	b	L_1	L_2	h_1	f			Lever	Pin	Clamping screw	Wrench
JPDJ2XR/L1010X07	●	●	10	10	120	14	10	10	0.2	DXGU0703**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPDJ2XR/L1212F07	●	●	12	12	85	14	12	12	0.2	DXGU0703**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPDJ2XR/L1212X07	●	●	12	12	120	14	12	12	0.2	DXGU0703**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F
JPDJ2XR/L1616X07	●	●	16	16	120	18	16	16	0.2	DXGU0703**L/R	SLLV-2	SL-PI-2	SR10400611	P-2F

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



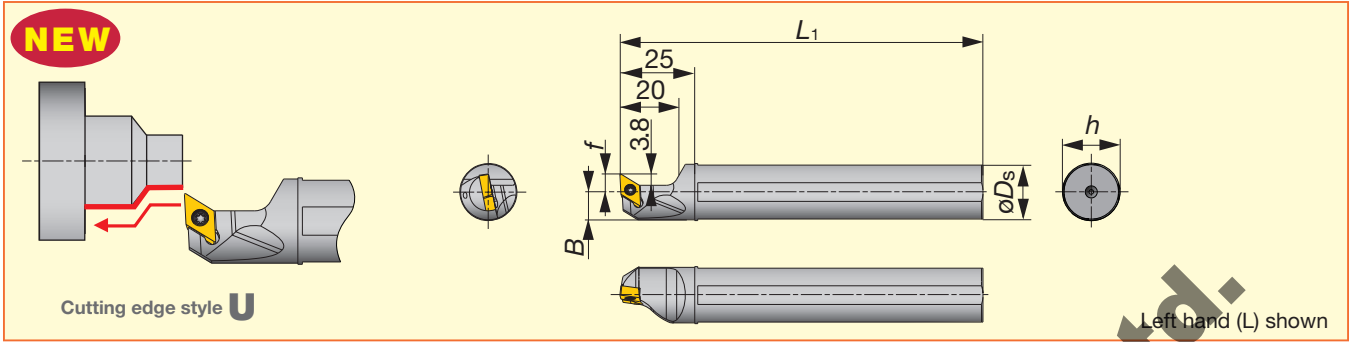
① Right hand toolholder with left hand insert shown



② Left hand toolholder with right hand insert shown

● : Stocked items

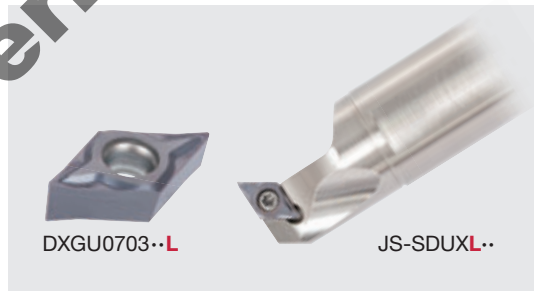
JS-SDUXL Turning & profiling J-type (Positive rake, screw-on system)



Cat. No.	Stock	Dimensions (mm)					Std. corner radius r_E	Insert	Parts		Torque (N·m)
		ϕD_s	f	L_1	h	B			Clamping screw	Wrench	
JS14H-SDUXL07	●	14	6	100	13	6.75	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS159F-SDUXL07	●	15.875	6	85	13	7.687	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS16F-SDUXL07	●	16	6	85	15	7.75	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS19G-SDUXL07	●	19.05	6	90	18	9.275	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS19X-SDUXL07	●	19.05	6	120	18	9.275	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS20G-SDUXL07	●	20	6	90	19	9.75	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS20X-SDUXL07	●	20	6	120	19	9.75	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS22X-SDUXL07	●	22.0	10	120	21	10.75	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS25H-SDUXL07	●	25.0	10	100	24	12.25	0.2	DXGU0703**L	SR34-514	T-7F	0.9
JS254X-SDUXL07	●	25.4	10	120	24	12.45	0.2	DXGU0703**L	SR34-514	T-7F	0.9

① Left hand toolholders (L) are used with left hand inserts (L)

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① Left hand toolholder with left hand insert shown

● : Stocked items

Internal turning

Cutting performance

● Unique design which prevents vibration

Steel shank diameter : $\phi 12$ mm
 Workpiece : S45C / C45
 Insert : WXGU040304L-TS AH725
 Cutting speed : $V_c = 150$ m/min
 Overhang length : 36 mm (L/D = 3)
 Coolant : Wet (internal supply)

DOMTURN

Depth of cut: a_p (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
a_p/f	0.05	0.10	0.15	0.20	
Feed: f (mm/rev)					

ISO positive insert

Depth of cut: a_p (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
a_p/f	0.05	0.10	0.15	0.20	
Feed: f (mm/rev)					

Chip control

P

Depth of cut: a_p (mm)	2.0				
	1.5				
	1.0				
	0.5				
a_p/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)

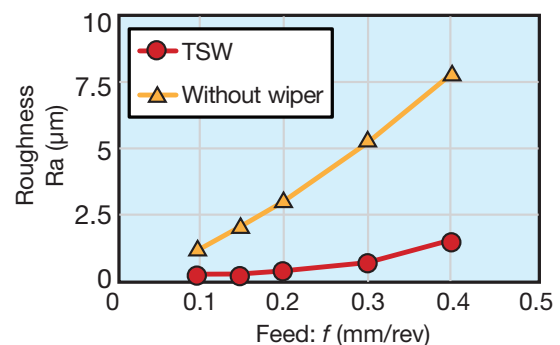
M

Depth of cut: a_p (mm)	1.50				
	1.00				
	0.50				
	0.25				
a_p/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)

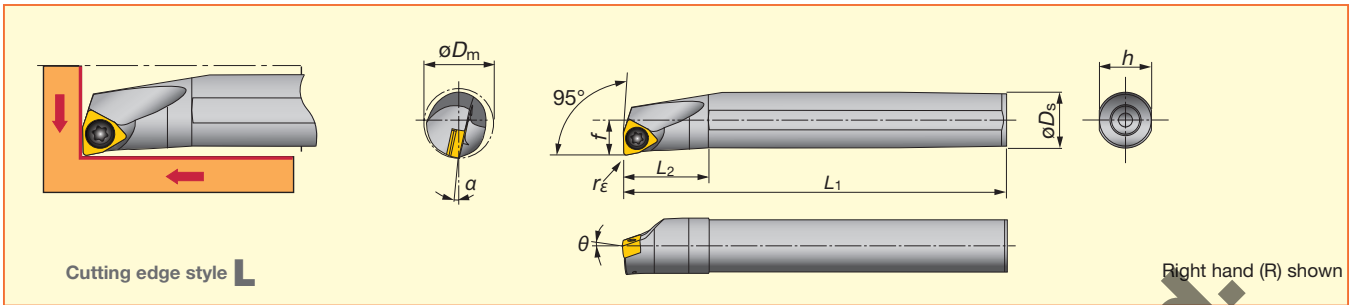
Wiper performance

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



Internal toolholders

SWLXR/L Boring & internal facing



Steel shank

Cat. No	Stock		Dimensions (mm)							Std. corner radius r_ϵ	Insert	Parts		Torque (N·m)		
	R	L	Min bore dia. ϕD_m	ϕD_s	f	L_1	L_2	h	f_2			θ	a		Clamping screw	Wrench
A10K-SWLXR/L04-D120	●	●	12	10	6	125	20	9	-	-10°	-16°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
A12M-SWLXR/L04-D140	●	●	14	12	7	150	24	11	-	-10°	-14°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
A16Q-SWLXR/L04-D180	●	●	18	16	9	180	32	15	-	-10°	-11°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
A20R-SWLXR/L04-D220	●	●	22	20	11	200	36	18	-	-10°	-10°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9

Carbide shank

Cat. No	Stock		Dimensions (mm)							Std. corner radius r_ϵ	Insert	Parts		Torque (N·m)		
	R	L	Min bore dia. ϕD_m	ϕD_s	f	L_1	L_2	h	f_2			θ	a		Clamping screw	Wrench
E10M-SWLXR/L04-D120	●	●	12	10	6	150	25	9	-	-10°	-16°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
E12Q-SWLXR/L04-D140	●	●	14	12	7	180	27	11	-	-10°	-14°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
E16R-SWLXR/L04-D180	●	●	18	16	9	200	32	15	-	-10°	-11°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9
E20S-SWLXR/L04-D220	●	●	22	20	11	250	36	18	-	-10°	-10°	0.4	WXGU0403** L/R	SR34-514	T-7F	0.9

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



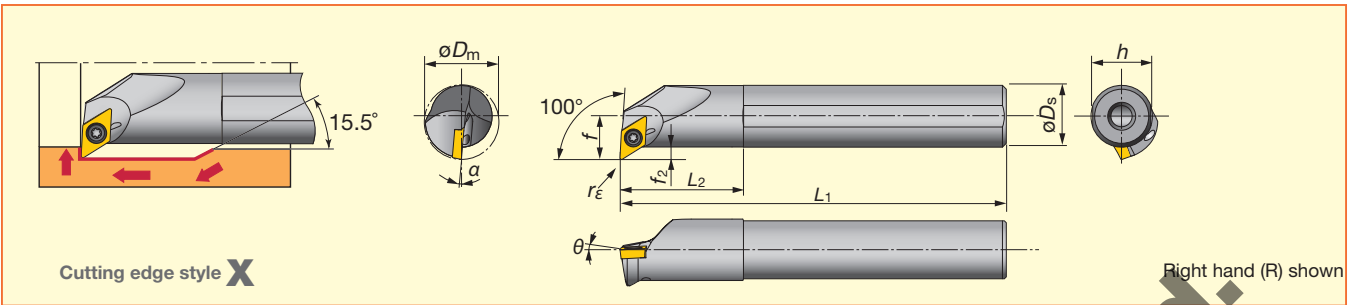
① Right hand toolholder with left hand insert shown



② Left hand toolholder with right hand insert shown

● : Stocked items

SDXXR/L Boring & internal facing



Steel shank

Cat. No	Stock		Dimensions (mm)								Std. corner radius r_ϵ	Insert	Parts		Torque (N·m)	
	R	L	Min bore dia. ϕD_m	ϕD_s	f	L_1	L_2	h	f_2	θ			a	Clamping screw		Wrench
A10K-SDXXR/L07-D130	●	●	13	10	7.6	125	20	9	2.6	-14°	-16°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
A12M-SDXXR/L07-D160	●	●	16	12	8.6	150	24	11	2.6	-14°	-14°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
A16Q-SDXXR/L07-D200	●	●	20	16	10.6	180	32	15	2.6	-13°	-13°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
A20R-SDXXR/L07-D240	●	●	24	20	12.6	200	36	18	2.6	-13°	-12°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9

Carbide shank

Cat. No	Stock		Dimensions (mm)								Std. corner radius r_ϵ	Insert	Parts		Torque (N·m)	
	R	L	Min bore dia. ϕD_m	ϕD_s	f	L_1	L_2	h	f_2	θ			a	Clamping screw		Wrench
E10M-SDXXR/L07-D130	●	●	13	10	7.6	150	25	9	2.6	-14°	-16°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
E12Q-SDXXR/L07-D160	●	●	16	12	8.6	180	27	11	2.6	-14°	-14°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
E16R-SDXXR/L07-D200	●	●	20	16	10.6	200	32	15	2.6	-13°	-13°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9
E20S-SDXXR/L07-D240	●	●	24	20	12.6	250	36	18	2.6	-13°	-12°	0.4	DXGU0703** L/R	SR34-514	T-7F	0.9

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



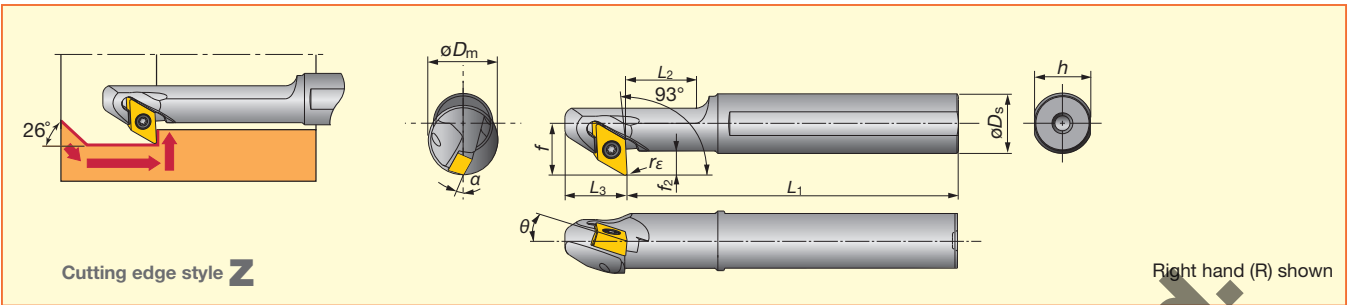
① Right hand toolholder with left hand insert shown



② Left hand toolholder with right hand insert shown

● : Stocked items

SDZXR/L Back boring



Steel shank

Cat. No	Stock		Min bore dia. ϕD_m	ϕD_s	Dimensions (mm)							Std. corner radius r_E	Insert	Parts		Torque (N·m)	
	R	L			f	L1	L2	L3	h	f2	θ			α	Clamping screw		Wrench
A12M-SDZXR/L07-D140	●	●	14	12	11	150	30	13	11	4.5	-10°	-14°	0.4	DXGU0703** R/L	SR34-514	T-7F	0.9
A16Q-SDZXR/L07-D160	●	●	16	16	13	180	35	13	15	4.5	-10°	-12.5°	0.4	DXGU0703** R/L	SR34-514	T-7F	0.9
A20R-SDZXR/L07-D200	●	●	20	20	15	200	40	13	18	4.5	-10°	-10.5°	0.4	DXGU0703** R/L	SR34-514	T-7F	0.9

Carbide shank

Cat. No	Stock		Min bore dia. ϕD_m	ϕD_s	Dimensions (mm)							Std. corner radius r_E	Insert	Parts		Torque (N·m)	
	R	L			f	L1	L2	L3	h	f2	θ			α	Clamping screw		Wrench
E12Q-SDZXR/L07-D180	●	●	18	12	11	180	-	13	11	4.5	-11°	-11°	0.4	DXGU0703** R/L	SR34-514	T-7F	0.9
E16R-SDZXR/L07-D220	●	●	22	16	13	200	-	13	15	4.5	-11°	-9°	0.4	DXGU0703** R/L	SR34-514	T-7F	0.9

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

● : Stocked items

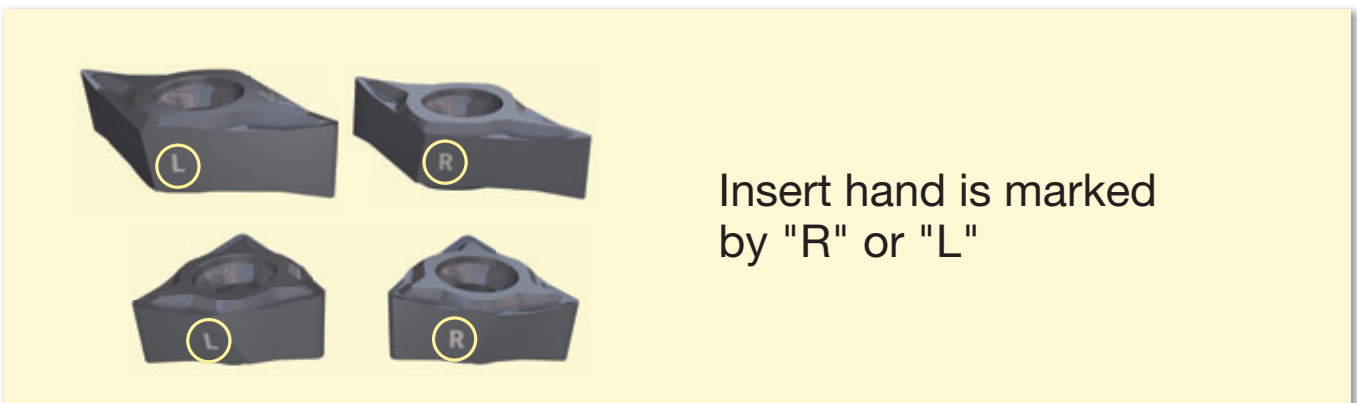


① Right hand toolholder with right hand insert shown



② Left hand toolholder with left hand insert shown

Marking



Inserts

80° Trigon

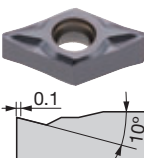
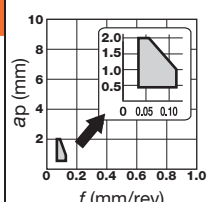

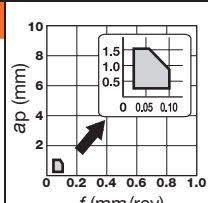
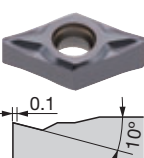
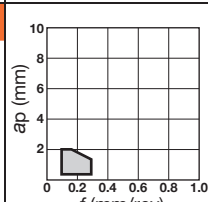
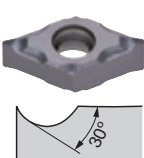
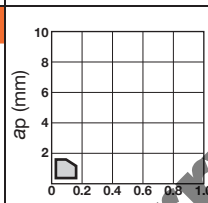
Application	Chipbreaker Appearance (Cross section)	f - ap	Cat. No.	Grades				Dimensions (mm)			
				Coated	Coated Cermet	Cermet	Carbide	I.C. dia. ød	Thick- ness s	Hole dia. ød1	Corner radius rε
				AH725	New GT9530	New NS9530	New KS05F				
Finishing to medium cutting (For swiss type automatic lathes)	JTS 		WXGU040301MR-JTS	●				6.35	3.18	2.7	< 0.1*
			WXGU040301ML-JTS	●				6.35	3.18	2.7	< 0.1*
			WXGU040302MR-JTS	●				6.35	3.18	2.7	< 0.2*
			WXGU040302ML-JTS	●				6.35	3.18	2.7	< 0.2*
Finishing (Low cutting force) (For swiss type automatic lathes)	JSS 		WXGU040301MR-JSS	●				6.35	3.18	2.7	< 0.1*
			WXGU040301ML-JSS	●				6.35	3.18	2.7	< 0.1*
			WXGU040302MR-JSS	●				6.35	3.18	2.7	< 0.2*
			WXGU040302ML-JSS	●				6.35	3.18	2.7	< 0.2*
Finishing to medium cutting	TS 		WXGU040302R-TS	●	●	●	●	6.35	3.18	2.7	0.2
			WXGU040302L-TS	●	●	●	●	6.35	3.18	2.7	0.2
			WXGU040304R-TS	●	●	●	●	6.35	3.18	2.7	0.4
			WXGU040304L-TS	●	●	●	●	6.35	3.18	2.7	0.4
			WXGU040308R-TS	●	●	●	●	6.35	3.18	2.7	0.8
			WXGU040308L-TS	●	●	●	●	6.35	3.18	2.7	0.8
New Finishing (Wiper)	TSW 		WXGU040304R-TSW	●	●	●		6.35	3.18	2.7	0.4
			WXGU040304L-TSW	●	●	●		6.35	3.18	2.7	0.4
			WXGU040308R-TSW	●	●	●		6.35	3.18	2.7	0.8
			WXGU040308L-TSW	●	●	●		6.35	3.18	2.7	0.8
Finishing (Low cutting force)	SS 		WXGU040302R-SS	●	●	●	●	6.35	3.18	2.7	0.2
			WXGU040302L-SS	●	●	●	●	6.35	3.18	2.7	0.2
			WXGU040304R-SS	●	●	●	●	6.35	3.18	2.7	0.4
			WXGU040304L-SS	●	●	●	●	6.35	3.18	2.7	0.4

* JTS and TSS have minus tolerance of corner radius.

● : Stocked items



55° Rhombic

Application	Chipbreaker	$f - a_p$	Cat. No.	Grades				Dimensions (mm)			
	Appearance (Cross section)			Coated	Coated cermet	Cermet	Carbide	I.C. dia.	Thick- ness	Hole dia.	Corner radius
				AH725	GT9530 <small>New</small>	NS9530 <small>New</small>	KS05F <small>New</small>				
				ϕd	s	ϕd_1	r_ϵ				
Finishing to medium cutting (For swiss type automatic lathes)	JTS 		DXGU070301MR-JTS	●				6.35	3.18	2.7	< 0.1*
			DXGU070301ML-JTS	●				6.35	3.18	2.7	< 0.1*
			DXGU070302MR-JTS	●				6.35	3.18	2.7	< 0.2*
			DXGU070302ML-JTS	●				6.35	3.18	2.7	< 0.2*
Finishing (Low cutting force) (For swiss type automatic lathes)	JSS 		DXGU070301MR-JSS	●				6.35	3.18	2.7	< 0.1*
			DXGU070301ML-JSS	●				6.35	3.18	2.7	< 0.1*
			DXGU070302MR-JSS	●				6.35	3.18	2.7	< 0.2*
			DXGU070302ML-JSS	●				6.35	3.18	2.7	< 0.2*
Finishing to medium cutting	TS 		DXGU070302R-TS	●	●	●	●	6.35	3.18	2.7	0.2
			DXGU070302L-TS	●		●	●	6.35	3.18	2.7	0.2
			DXGU070304R-TS	●	●	●	●	6.35	3.18	2.7	0.4
			DXGU070304L-TS	●	●	●	●	6.35	3.18	2.7	0.4
			DXGU070308R-TS	●	●	●	●	6.35	3.18	2.7	0.8
			DXGU070308L-TS	●	●	●	●	6.35	3.18	2.7	0.8
Finishing (Low cutting force)	SS 		DXGU070302R-SS	●	●	●	●	6.35	3.18	2.7	0.2
			DXGU070302L-SS	●	●	●	●	6.35	3.18	2.7	0.2
			DXGU070304R-SS	●	●	●	●	6.35	3.18	2.7	0.4
			DXGU070304L-SS	●	●	●	●	6.35	3.18	2.7	0.4

* JTS and TSS have minus tolerance of corner radius.

● : Stocked items



● Standard cutting conditions

For external turning

Applications	ISO	Workpiece materials	Priority	Chip-breaker	Grades	Cutting speed Vc (m/min)	Depth of cut ap (mm)	Feed f (mm/rev)
For swiss type automatic lathes	P	Low carbon steels (SS400 / E275A etc.)	First choice	JTS	AH725	50 - 180	0.1 - 2.0	0.03 - 0.10
		Carbon steels (S45C / C45 etc.) Low alloy steels (SCM415 etc.) Alloy steels (SCM440 / 42CrMo4 etc.)	With high sharpness	JSS	AH725	50 - 180	0.1 - 1.5	0.03 - 0.10
	M	Stainless steels (Austenitic) (SUS304 / X5CrNi18-9 etc.)	First choice	JSS	AH725	50 - 180	0.1 - 1.5	0.03 - 0.10
		Stainless steels (Martensitic and ferritic) (SUS430 / X6Cr17 etc.) Stainless steels (Precipitation hardened) (SUS630 / X5CrNiCuNb16-4 etc.)	For impact resistance	JTS	AH725	50 - 180	0.1 - 2.0	0.03 - 0.10
For small size CNC lathes	P	Low carbon steels (SS400 / E275A etc.) Carbon steels (S45C / C45 etc.) Low alloy steels (SCM415 etc.) Alloy steels (SCM440 / 42CrMo4 etc.)	First choice	SS	AH725	50 - 180	0.15 - 1.5	0.05 - 0.2
				TS	AH725	50 - 180	0.3 - 2.0	0.08 - 0.3
			For improved surface finish	SS	NS9530	80 - 200	0.15 - 1.5	0.05 - 0.2
				TS	NS9530	80 - 200	0.3 - 2.0	0.08 - 0.3
		For wear resistance	SS	GT9530	80 - 250	0.15 - 1.5	0.05 - 0.2	
			TS	GT9530	80 - 250	0.3 - 2.0	0.08 - 0.3	
	M	Stainless steels (Austenitic) (SUS304 / X5CrNi18-9 etc.) Stainless steels (Martensitic and ferritic) (SUS430 / X6Cr17 etc.) Stainless steels (Precipitation hardened) (SUS630 / X5CrNiCuNb16-4 etc.)	First choice	SS	AH725	50 - 150	0.15 - 1.5	0.05 - 0.2
			For impact resistance	TS	AH725	50 - 150	0.3 - 2.0	0.08 - 0.3

Jinan

For internal turning

ISO	Workpiece materials	First Choice	For surface finish	For wear resistance (High speed)	Cutting speed Vc (m/min)	Depth of cut ap (mm)	Feed f (mm/rev)
P	Low carbon steels SS400, SM490, S25C etc.	AH725	-	-	50 - 180	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2.0	0.08 - 0.3
	Carbon steels S45C, S55C/ C45, C55 etc.	AH725	-	-	50 - 180	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2.0	0.08 - 0.3
	Low alloy steels SCM415 etc.	AH725	-	-	50 - 180	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2.0	0.08 - 0.3
	Alloy steels SCM440, SCR420 / 42CrMo4, 20Cr4 etc.	AH725	-	-	50 - 180	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2.0	0.08 - 0.3
M	Stainless steels (Austenitic) SUS304, SUS316 / X5CrNi18-9, X5CrNiMo17-12-2 etc.	AH725	-	-	50 - 150	0.3 - 2.0	0.08 - 0.3
		AH725	-	-	50 - 150	0.3 - 2.0	0.08 - 0.3
		AH725	-	-	50 - 150	0.3 - 2.0	0.08 - 0.3
K	Grey cast irons FC250 / GG25 etc.	AH725	-	-	50 - 180	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 300	0.3 - 2.0	0.08 - 0.3
	Ductile cast irons FCD700 / GGG70 etc.	AH725	-	-	50 - 120	0.3 - 2.0	0.08 - 0.3
		-	NS9530	-	80 - 150	0.3 - 2.0	0.08 - 0.3
		-	-	GT9530	80 - 180	0.3 - 2.0	0.08 - 0.3
N	Non ferrous Metals Aluminum alloy etc.	KS05F	-	-	100 - 300	0.3 - 2.0	0.08 - 0.3
	Non ferrous Metals Cu Alloy etc.	KS05F	-	-	100 - 300	0.3 - 2.0	0.08 - 0.3

Grades

AH725**P M K****PREMIUMTEC**
TUNGALOY

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

GT9530**P K****PREMIUMTEC**
TUNGALOY

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

NS9530**P K****PREMIUMTEC**
TUNGALOY

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

KS05F**N**

- 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!

Jinan Terry CNC Tool Co., Ltd.

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		<p>1.3 times longer tool life!</p> <p>DoMiniTurn demonstrates excellent chip control. The tool life of AH725 grade is 1.3 times longer, due to its high wear resistance.</p>		<p>3 times higher efficiency!</p> <p>One double sided DoMiniTurn insert can machine 3 times the number of parts due to its superior tool life and twice the amount of cutting edges per insert. Cost per edge is reduced significantly.</p>	

Workpiece type		Shaft	
Toolholder		JSDJ2XR1212X07	
Insert		DXGU070302L-JTS	
Grade		AH725	
Workpiece material		Alloy steels	
Cutting conditions	Cutting speed: V_c (m/min)	90	
	Feed : f (mm/rev)	0.03	
	Depth of cut : a_p (mm)	0.5	
	Machining	External	
	Coolant	Wet	
Results		<p>Twice the number of parts</p> <p>DoMiniTurn can machine twice the number of workpieces with one double sided 4 cornered insert.</p>	



Internal turning

Workpiece type		Machine Parts	Machine Parts
Toolholder		A16Q-SWLXR04-D180	E12Q-SWLXR04-D140
Insert		WXGU040304L-TSW New	WXGU040304L-TSW
Grade		AH725	GT9530 New
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 : a_p (mm)	0.5	0.2
	Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
	Coolant	Wet	Wet
Results			
Workpiece type		Machine Parts	Machine Parts
Toolholder		A10K-SWLXR04-D120	A12M-SDXXR04-D140
Insert		WXGU040302L-SS	DXGU070304L-TS
Grade		KS05F New	KS05F New
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 : a_p (mm)	1.0	1.0
	Machining	Internal Turning (continuous cutting)	Internal Turning (continuous cutting)
	Coolant	Wet	Wet
Results			

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