

GrooveLine

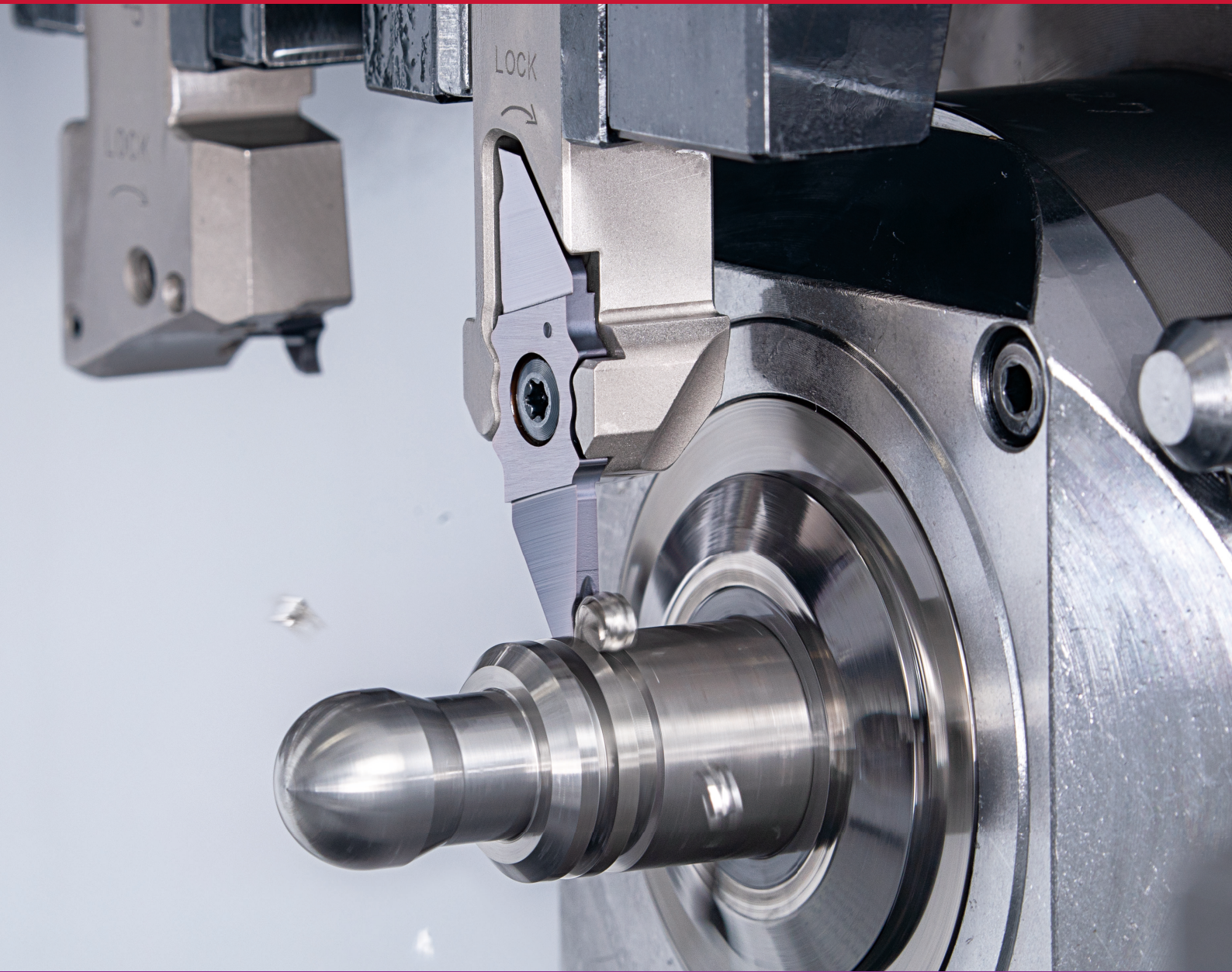
DUO J^{UST} CUT

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Tungaloy Report No. 504S1-G



New JXPS-style parting insert with 3D chipbreaker



INDUSTRY 4.0
FEED the SPEED!

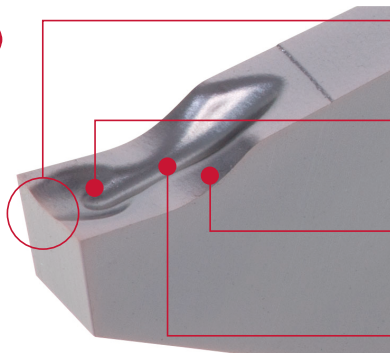


Innovative clamping system ensures stability in **parting-off operations**

Innovative dual-rake JXPS chipbreaker enables effective chip control

- Chip entanglement and other unwanted chip issues are eliminated
- **Excellent surface integrity** is achieved as chips are compressed, curled and effectively removed away from the surface

New



Concave cutting edge

Rolls up and compresses the chip at the entry of the cut

Dimple

Curles the chip allowing effective chip evacuation

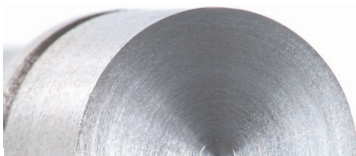
Prime chipbreaker

Directs the chip away from the surface ensuring good surface finishing

Coolant route

Chip forms and surface quality

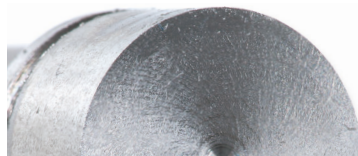
3D chipbreaker



No scratches by chips



Ground chipbreaker



Scruchs by chips

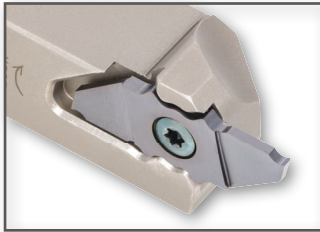


Toolholder	: JSXXL1212X09
Insert	: JXPS12L15F SH725
Workpiece material	: SUS304 / X5CrNi18-9
Cutting speed	: $V_c = 100$ m/min
Feed	: $f = 0.02$ mm/rev
Groove width	: $CW = 1.5$ mm
Machining	: Parting-off ($\phi 12$ mm)
Coolant	: Wet
Machine	: Swiss lathe

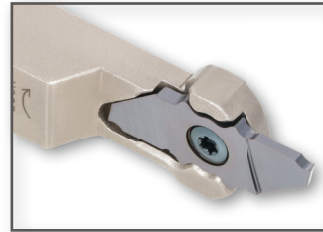
4 types of inserts are available for various parting-off diameters and can be mounted **in the same pocket of the toolholder**.

- Optimized overhang length for **stable machining**

Regular-type toolholder



Toolholder for sub-spindle



Max. parting dia.

• $\varnothing 6$ mm

• $\varnothing 12$ mm

• $\varnothing 16$ mm

• $\varnothing 20$ mm



New

3D chipbreaker

–

New JXPS12

New JXPS16

New JXPS20

Ground chipbreaker JXPG06

JXPG12

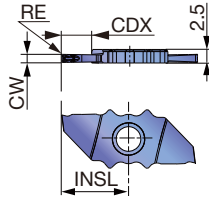
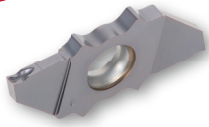
JXPG16

JXPG20

INSERT

JXPS**R/L-F (with 3D chipbreaker, sharp edge)

New



Right-hand (R) shown.

Designation	CW±0.025	RE	SH725		Dimensions (mm)		
			R	L	CUTDIA	CDX*	INSL
JXPS12R/L10F	1	0.05	●	●	12	6.5	12.5
JXPS12R/L15F	1.5	0.05	●	●	12	6.5	12.5
JXPS16R/L15F	1.5	0.05	●	●	16	8.5	14.5
JXPS20R/L20F	2	0.05	●	●	20	10.5	16.5

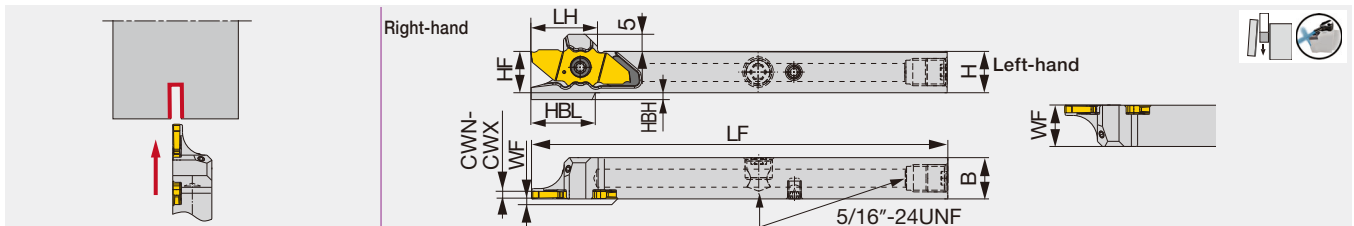
*Max grooving depth (CDX) varies depending on workpiece diameters.

● : New product
CUTDIA: Max. parting-off dia.
Package quantity = 5 pcs.

JSXXR/L-X-CHP

TUNGJET

Parting-off tool for swiss lathes, coolant-through



Designation	CWN	CWX	H	B	LF**	LH**	HF	WF	HBL**	HBH	Insert	Torque*
New JSXXR/L1012H09-CHP	1	2	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2
JSXXR/L1212X09-CHP	1	2	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2
JSXXR/L1616X09-CHP***	1	2	16	16	120	19.4	16	0.2/15.8	18.7	2.5	JX**06...,12...,16..., 20...	1.2
JSXXR/L1616X09B-CHP	1	2	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2

*Torque: Recommended torque (N-m) for clamping

LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

***To be replaced with the new design

Note: Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

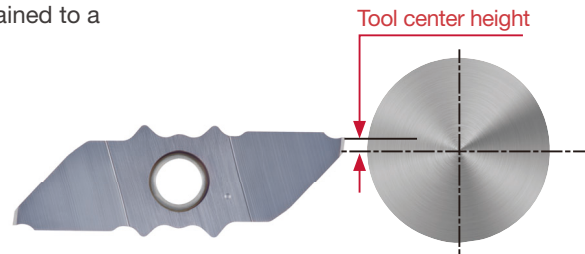
SPARE PARTS

Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectTungJet plug	Wrench
JSXXR...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

For other types of toolholder, please check in Tungaloy Report (NO. 504-G) or General Catalog

Adjustment of tool center height

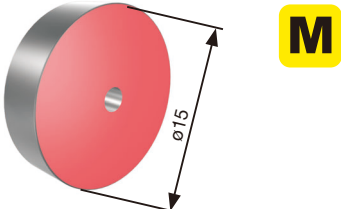
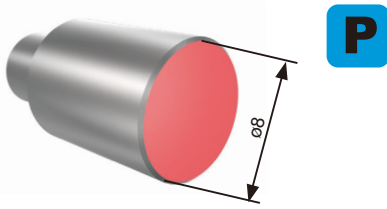



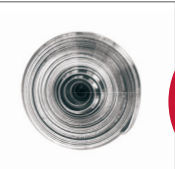
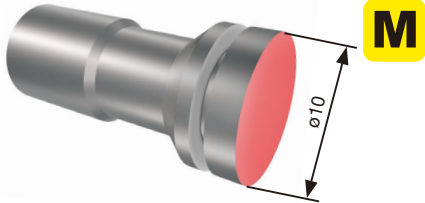
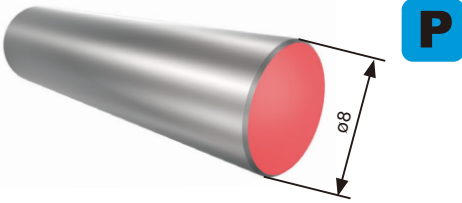
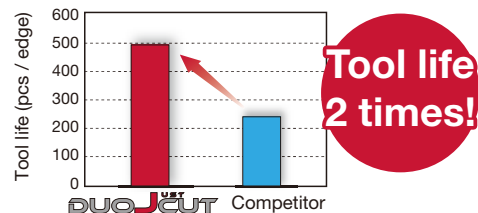
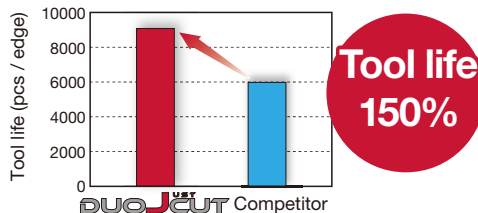
When parting off bars, it is essential that the center height is maintained to a tolerance of ± 0.1 mm for maximum tool life.



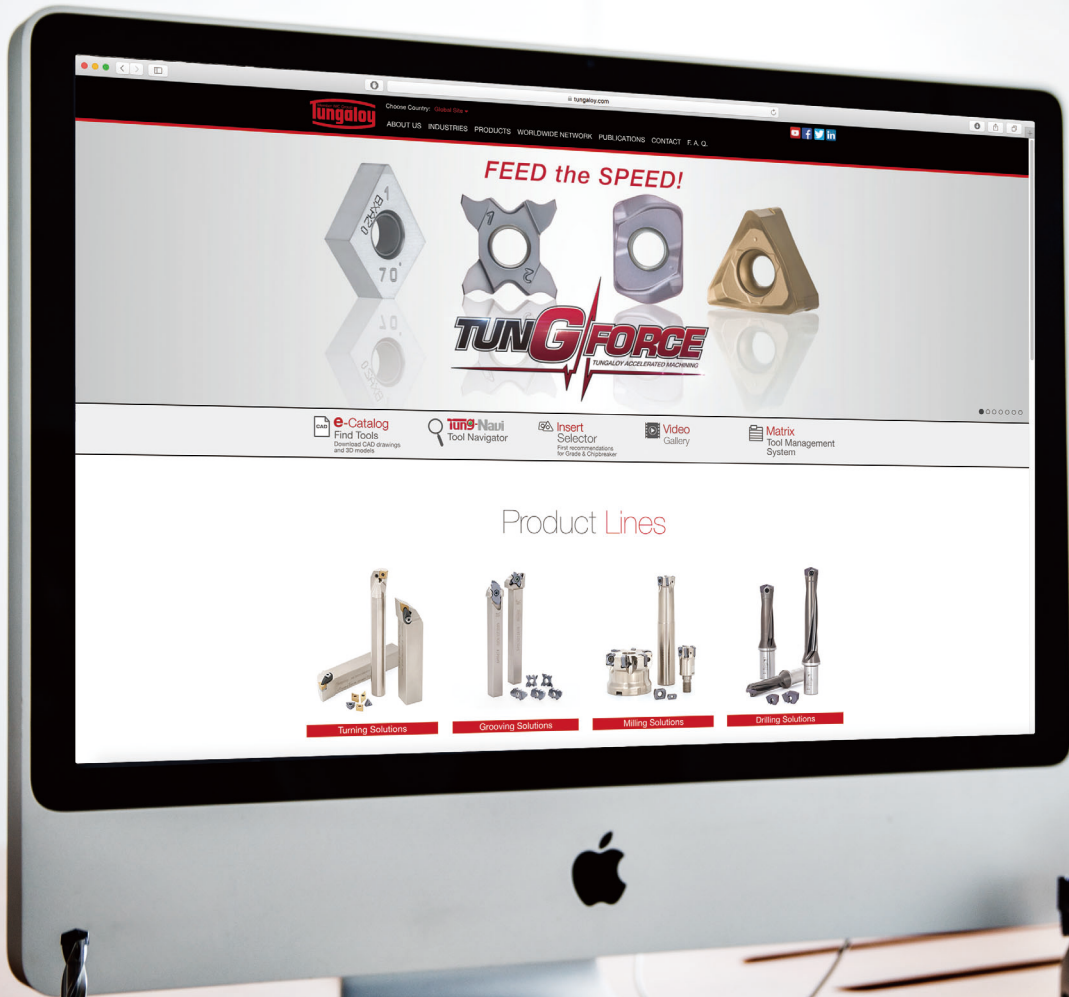
STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grades	Cutting speed V_c (m/min)	Feed f (mm/rev)
P	Low carbon steels S15C, SS400, etc. C15E4, E275A, etc.	SH725	50 - 200	0.01 - 0.05
	Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMo4, etc.	SH725	50 - 200	0.01 - 0.05
	Free cutting steels SUH22, SUH23, etc.	SH725	50 - 200	0.01 - 0.05
M	Stainless steels SUS304, X5CrNi18-9, etc.	SH725	50 - 200	0.01 - 0.05
N	Aluminium alloys A5056, A6061, etc.	SH725	150 - 200	0.01 - 0.05
	Copper alloy C2600, C280C, etc.	SH725	100 - 200	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	SH725	30 - 80	0.01 - 0.05
	Superalloys Inconel718, etc.	SH725	30 - 80	0.01 - 0.05

PRACTICAL EXAMPLES

Workpiece type		Optical part	Motor component
Toolholder		JSXXR1010X09-S	JSXXR1010X09
Insert		New JXPS16R15F	New JXPS12R15F
Grade		SH725	SH725
Workpiece material		SUS304 / X5CrNi18-9	S45C / C45
			
Cutting conditions	Cutting speed: Vc (m/min)	75	70
	Feed : f (mm/rev)	0.01	0.03
	Groove width : CW (mm)	1.5	1.5
	Machining	Parting-off	Parting-off
	Coolant	Wet	Wet
Results		  <p>Excellent chip control</p> <p>Competitor DUOJUST CUT</p> <p>DuoJust-Cut's JXPS geometry has provided effective chip control, enabling superior surface integrity.</p>	  <p>Fewer scraps</p> <p>Competitor DUOJUST CUT</p> <p>DuoJust-Cut's JXPS geometry has provided consistent chip forming, eliminating chip entangling on the workpiece when used with the sub-spindle. The result: part scraps have been significantly reduced.</p>
Workpiece type		Pneumatic part	Motor shaft
Toolholder		JSXXR1010X09	JSXXR1616X09
Insert		New JXPS12R15F	New JXPS20R20F
Grade		SH725	SH725
Workpiece material		SUS304 / X5CrNi18-9	S45C / C45
			
Cutting conditions	Cutting speed: Vc (m/min)	60	65
	Feed : f (mm/rev)	0.01	0.03
	Groove width : CW (mm)	1.5	2.0
	Machining	Parting-off	Parting-off
	Coolant	Wet	Wet
Results		 <p>Tool life 2 times!</p> <p>DuoJust-Cut JXPS geometry has improved surface integrity by eliminating re-cutting of chips that caused scratches on the finished surface. Tool life has also doubled.</p>	 <p>Tool life 150%</p> <p>DuoJust-Cut's JXPS geometry has provided superior surface integrity thanks to its high tool rigidity and good chip control, while enabling 150% longer tool life.</p>

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