

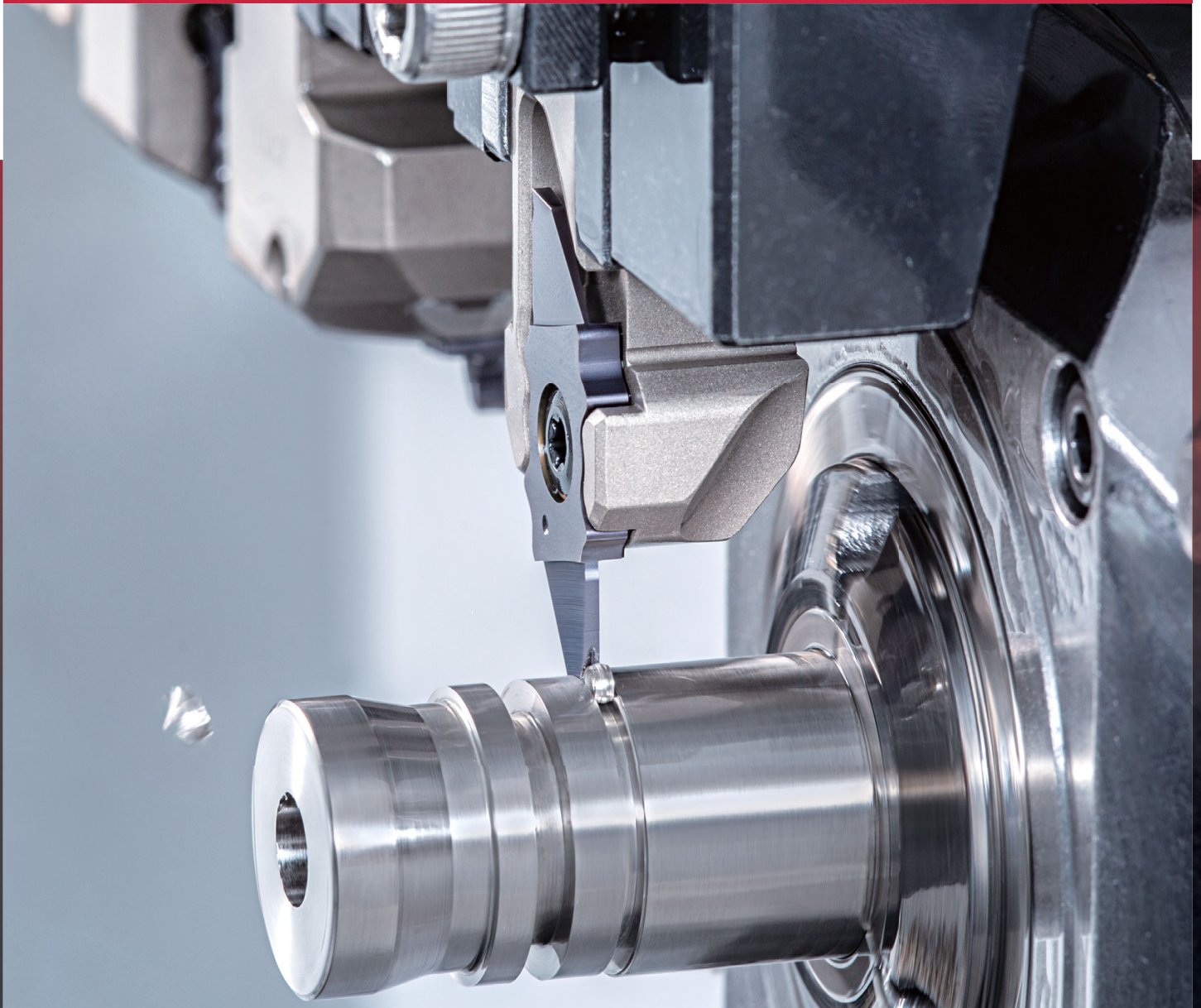


Parting off, Grooving, Threading Tools

DUO^{UST}JCUT

Tungaloy Report No. 504-G

Addition of 0.6 and 0.8 mm width inserts with pressed-in 3D chipbreakers





INDUSTRY 4.0
FEED the SPEED!



DUO^{UST}JCUT



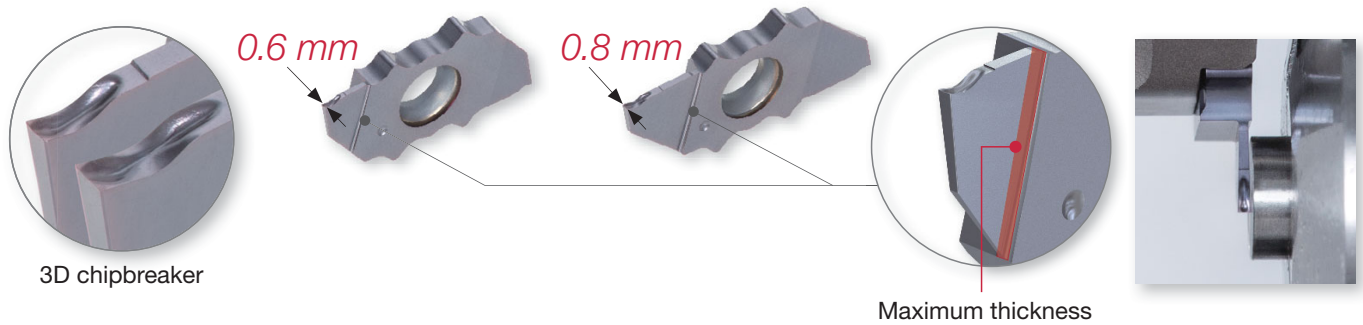
**Parting-off, grooving and threading tool series
with rigid insert clamping.**

Perfect for machining bar stock of $\varnothing 20$ mm or smaller

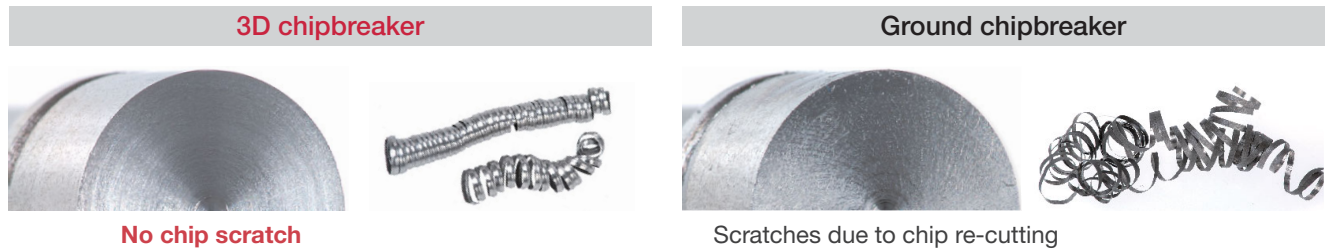
New

0.6 mm and 0.8 mm width insert with pressed-in 3D chipbreaker

- Provides reduced material waste and low cutting forces during parting-off operations
- Robust insert design withstands repeating bar feeder pressures, allowing the toolholder to be used for workpiece positioning.



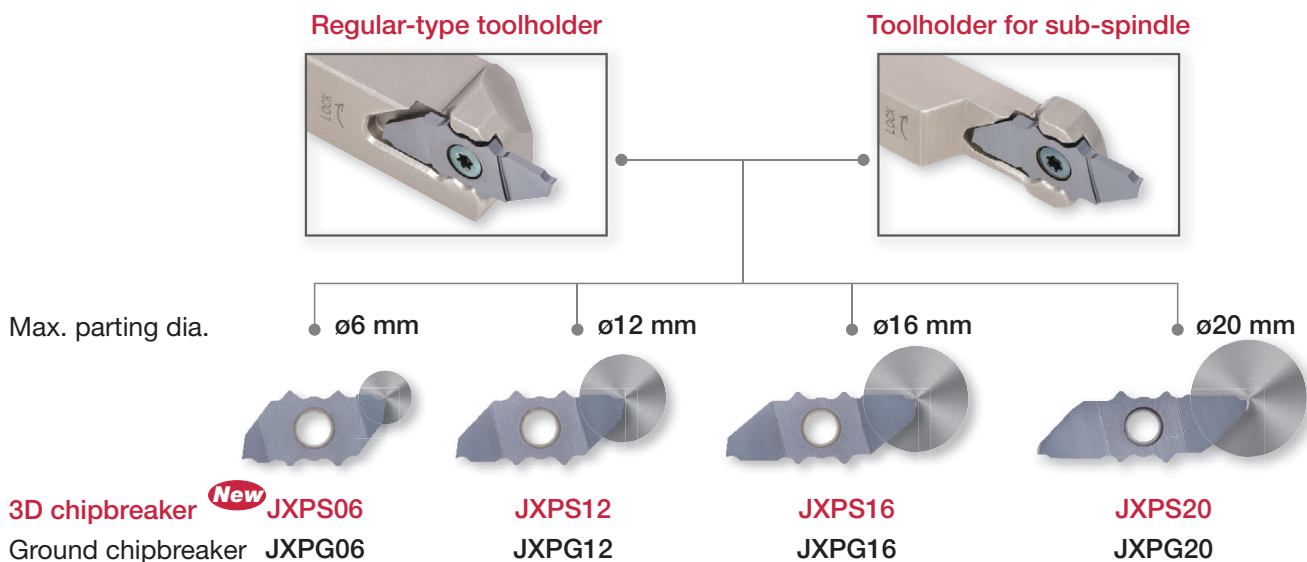
Chip forms and surface quality



M Toolholder	: JSXXL1212X09	Groove width	: CW = 1.5 mm
Insert	: JXPS12L15F SH725	Machining	: Parting-off (ø12 mm)
Workpiece material	: SUS304 / X5CrNi18-9	Coolant	: Oil
Cutting speed	: $V_c = 100$ m/min	Machine	: Swiss lathe
Feed	: $f = 0.02$ mm/rev		

A wide variety of parting-off insert sizes

- The same holder can carry four different sizes of inserts.
- Optimum insert sizes are available for all parting diameters, ensuring stability.

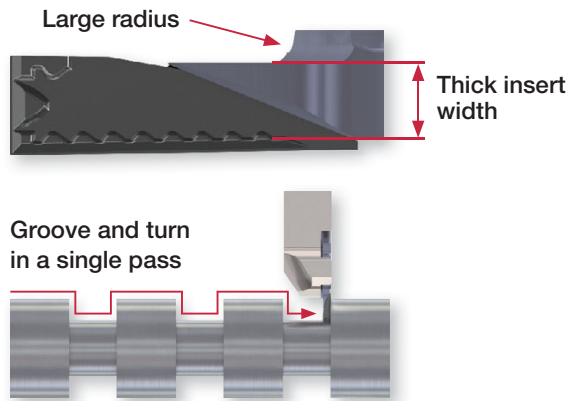


New

PCD insert with 3D laser-etched chipbreaker for huge improvement of aluminium spool machining

Extremely robust tool design

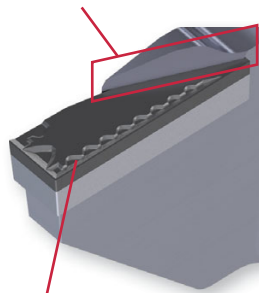
- Secure insert clamping and strong insert design of **DuoJust-Cut** prevents insert breakage when machining at high rates.
- Side-turning of up to 6 mm D.O.C. is possible.



Chip control

- All-round chipbreaker geometry allows effective chip breaking regardless of the insert's depth of cut thanks to its 3D laser-etched style on the rake for small D.O.C and the wall chipbreaker for large D.O.C.

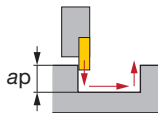
■ Chip control comparison (for side turning)



3D chipbreaker

For chip control at low D.O.C.

Insert : JXDX12R20F DX110
Workpiece material : A6061
Barstock diameter : $\varnothing 16$ mm
Cutting speed : $V_c = 200$ m/min
Coolant : Oil
Machine : Swiss lathe



Depth of cut: ap (mm)	6				
	5				
	4				
	3				
	2				
	1				
		0.05	0.07	0.1	0.15
		Feed: f (mm/rev)			

Competitor

PCD insert with chipbreaker

Depth of cut: ap (mm)	6	Parameters out of the recommendations			
	5				
	4				PCD edge broken
	3				
	2				
	1				
		0.05	0.07	0.1	0.15
Feed: f (mm/rev)					

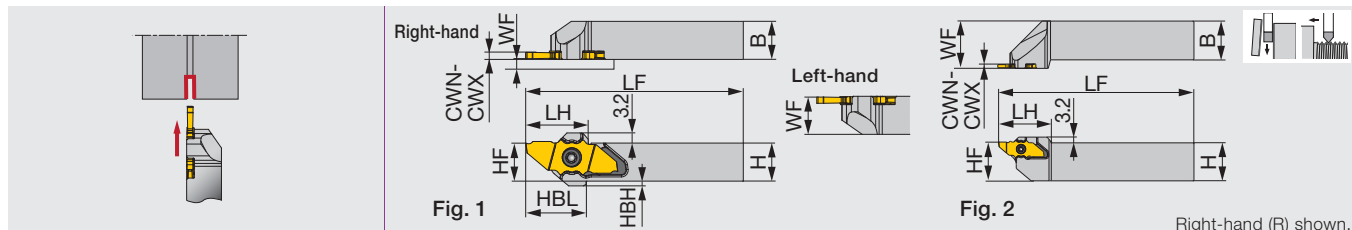
Excellent surface quality

- With submicron-sized diamond grains with very strong bonding, **DX110** provides better surface finish and longer tool life than carbide inserts.

TOOLHOLDERS

JSXXR/L

Parting-off and grooving toolholders



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1010X09	0.6	2.5	10	10	120	19.65	10	0.2/9.8	19	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09	0.6	2.5	12	12	85	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09	0.6	2.5	12	12	120	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09	0.6	2.5	16	16	120	19.65	16	0.2/15.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2020H09	0.6	2.5	20	20	100	22.5	20	0.2/19.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2525Z09	0.6	2.5	25	25	135	34	25	30	-	-	JX**06...,12...,16..., 20...	1.2	2

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... 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.

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

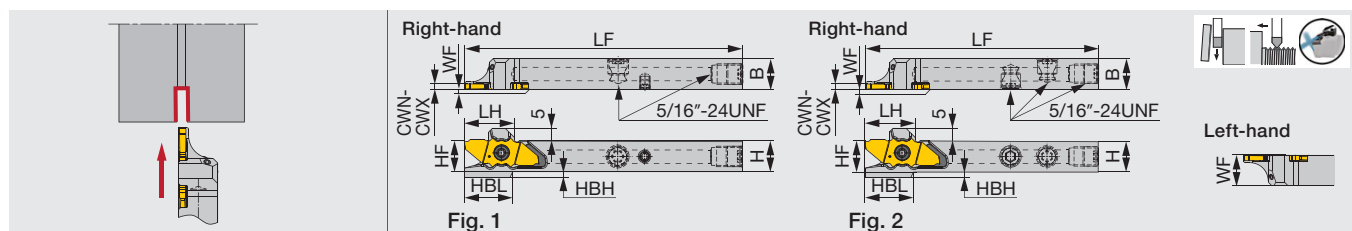
Note: Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR...	CSTC-4L100DL	T-1008/5
JSXXL...	CSTC-4L100DR	T-1008/5

JSXXR/L-F/H/X-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP ⁽³⁾	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP ⁽³⁾	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09-CHP ^{(3),(4)}	0.6	2.5	16	16	120	19.4	16	0.2	18.7	2.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP ⁽³⁾	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... 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.

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

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

(4) To be replaced with the new design

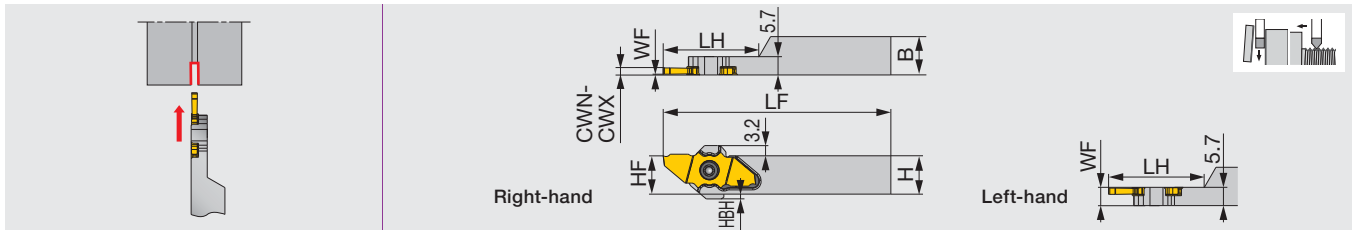
Note: Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**F...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H/X...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H/X...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

JSXXR/L-S

Parting-off toolholders, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF ⁽²⁾	HBH	Insert	Torque*
JSXXR/L1010X09-S	0.6	2.5	10	10	120	26	10	0.2/5.5	3	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212F09-S	0.6	2.5	12	12	85	26	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212X09-S	0.6	2.5	12	12	120	30	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1616X09-S	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

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

(3) JX**20... insert will not fit.

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...).

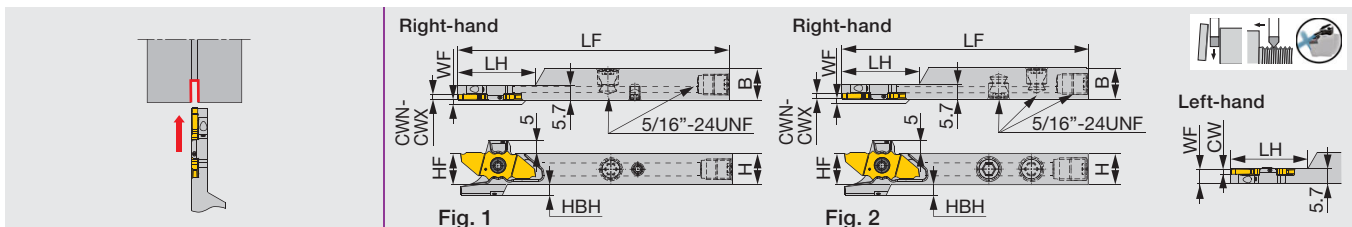
SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR***-S	CSTC-4L055DL	T-1008/5
JSXXL***-S	CSTC-4L055DR	T-1008/5

JSXXR/L-F/X-S-CHP

TUNG T JET

Parting-off toolholders with high pressure coolant capability, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF ⁽²⁾	HBH	Insert	Torque*	Fig.
JSXXR1212F09-S-CHP ⁽⁴⁾	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP ^{(3),(4)}	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP ⁽³⁾	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-S-CHP ^{(3),(4)}	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP ⁽³⁾	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

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

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

(4) To be replaced with the new design

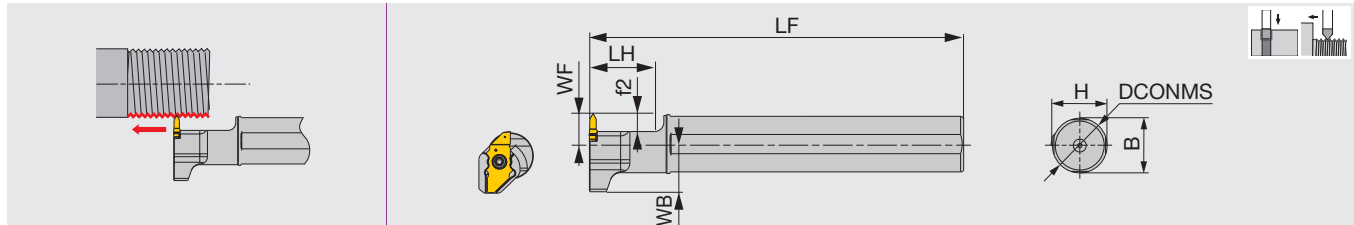
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**F...	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F...	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**X...	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**X...	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

JS-SXXL09

Round shanks, for threading



Designation	DCONMS	H	B	LF	LH	WB	WF ⁽¹⁾	f2 ⁽¹⁾	Insert	Torque*
JS19G-SXXL09	19.05	18	18	90	21	15.43	10	6	JX**06,12*R	1.2
JS19X-SXXL09	19.05	18	18	120	21	15.43	10	6	JX**06,12*R	1.2
JS20G-SXXL09	20	19	19	90	21	15.4	10	6	JX**06,12*R	1.2
JS20X-SXXL09	20	19	19	120	21	15.4	10	6	JX**06,12*R	1.2
JS22X-SXXL09	22	21	21	120	21	15.4	10	6	JX**06,12*R	1.2
JS25H-SXXL09	25	24	24	100	21	15.4	10	6	JX**06,12*R	1.2
JS254X-SXXL09	25.4	24	24	120	21	15.4	10	6	JX**06,12*R	1.2

*Torque: Recommended clamping torque (N·m)

(1) When using JX..06... insert, both WF and f2 sizes will be 2 mm shorter than the values provided above.

SPARE PARTS

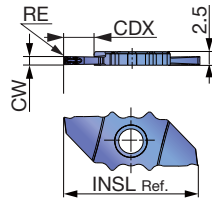


Designation	Clamping screw	Wrench
JS***-SXXL09	CSTC-4L100DL	T-1008/5

INSERTS

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

New



Right-hand (R) shown.

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

★ : First choice

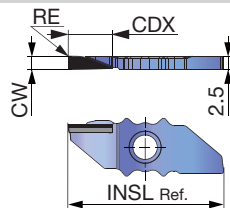
Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL
				SH725						
JXPS06R06F	R	0.6	0.05	●				6	3.5	21
JXPS06L06F	L	0.6	0.05	●				6	3.5	21
JXPS12R08F	R	0.8	0.05	●				12	6.5	25
JXPS12L08F	L	0.8	0.05	●				12	6.5	25
JXPS12R10F	R	1	0.05	●				12	6.5	25
JXPS12L10F	L	1	0.05	●				12	6.5	25
JXPS12R15F	R	1.5	0.05	●				12	6.5	25
JXPS12L15F	L	1.5	0.05	●				12	6.5	25
JXPS16R15F	R	1.5	0.05	●				16	8.5	29
JXPS16L15F	L	1.5	0.05	●				16	8.5	29
JXPS20R20F	R	2	0.05	●				20	10.5	33
JXPS20L20F	L	2	0.05	●				20	10.5	33

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

● : New products
● : Line-up

JXDX**R-F (PCD insert)

New



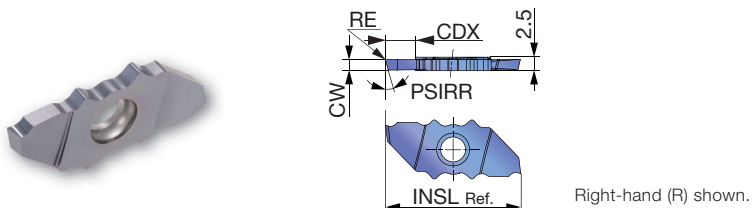
P	Steel							
M	Stainless							
K	Cast iron							
N	Non-ferrous	★						
S	Superalloys							
H	Hard materials							

★ : First choice

Designation	HAND	CW±0.05	RE	PCD				CDX	INSL
				DX110					
JXDX12R20F	R	2	< 0.1	●				6	25
JXDX12R25F	R	2.5	< 0.1	●				6.5	25
JXDX16R25F	R	2.5	< 0.1	●				7	29

● : New products

JXPG**R/L-F (Sharp edge)



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

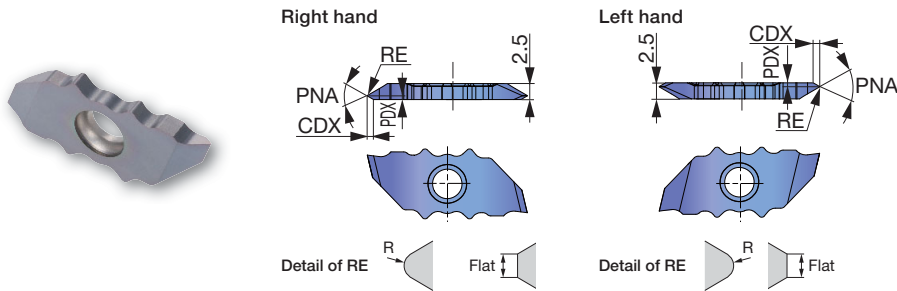
★ : First choice

Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL	PSIRR
				SH725							
JXPG06R10F	R	1	0.05	●				6	3.5	21	0°
JXPG06L10F	L	1	0.05	●				6	3.5	21	0°
JXPG06R15F	R	1.5	0.05	●				6	3.5	21	0°
JXPG06L15F	L	1.5	0.05	●				6	3.5	21	0°
JXPG06R10F-15	R	1	0.05	●				6	3.5	21	15°
JXPG06L10F-15	L	1	0.05	●				6	3.5	21	15°
JXPG06R15F-15	R	1.5	0.05	●				6	3.5	21	15°
JXPG06L15F-15	L	1.5	0.05	●				6	3.5	21	15°
JXPG12R15F	R	1.5	0.05	●				12	6.5	25	0°
JXPG12L15F	L	1.5	0.05	●				12	6.5	25	0°
JXPG12R20F	R	2	0.05	●				12	6.5	25	0°
JXPG12L20F	L	2	0.05	●				12	6.5	25	0°
JXPG12R15F-15	R	1.5	0.05	●				12	6.5	25	15°
JXPG12L15F-15	L	1.5	0.05	●				12	6.5	25	15°
JXPG12R20F-15	R	2	0.05	●				12	6.5	25	15°
JXPG12L20F-15	L	2	0.05	●				12	6.5	25	15°
JXPG16R15F	R	1.5	0.05	●				16	8.5	29	0°
JXPG16L15F	L	1.5	0.05	●				16	8.5	29	0°
JXPG16R20F	R	2	0.05	●				16	8.5	29	0°
JXPG16L20F	L	2	0.05	●				16	8.5	29	0°
JXPG16R15F-15	R	1.5	0.05	●				16	8.5	29	15°
JXPG16L15F-15	L	1.5	0.05	●				16	8.5	29	15°
JXPG16R20F-15	R	2	0.05	●				16	8.5	29	15°
JXPG16L20F-15	L	2	0.05	●				16	8.5	29	15°
JXPG20R15F	R	1.5	0.05	●				20	10.5	33	0°
JXPG20L15F	L	1.5	0.05	●				20	10.5	33	0°
JXPG20R20F	R	2	0.05	●				20	10.5	33	0°
JXPG20L20F	L	2	0.05	●				20	10.5	33	0°
JXPG20R15F-15	R	1.5	0.05	●				20	10.5	33	15°
JXPG20L15F-15	L	1.5	0.05	●				20	10.5	33	15°
JXPG20R20F-15	R	2	0.05	●				20	10.5	33	15°
JXPG20L20F-15	L	2	0.05	●				20	10.5	33	15°

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

● : Line-up

JXTG12FR/L-60 (For Threading / Sharp edge)



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

★ : First choice

Designation	HAND	RE	Coated					Pitches	PDX	CDX	PNA
			SH725								
JXTG12FR-60A-000	R	Flat 0.05 max	●					0.2 - 0.4	0.25	0.4	60°
JXTG12FL-60A-000	L	Flat 0.05 max	●					0.2 - 0.4	0.25	0.4	60°
JXTG12FR-60B-000	R	Flat 0.05 max	●					0.2 - 0.4	2.25	0.4	60°
JXTG12FL-60B-000	L	Flat 0.05 max	●					0.2 - 0.4	2.25	0.4	60°
JXTG12FR-60A-005	R	R 0.05	●					0.4 - 1	0.6	0.99	60°
JXTG12FL-60A-005	L	R 0.05	●					0.4 - 1	0.6	0.99	60°
JXTG12FR-60B-005	R	R 0.05	●					0.4 - 1	1.9	0.99	60°
JXTG12FL-60B-005	L	R 0.05	●					0.4 - 1	1.9	0.99	60°
JXTG12FR-60N-010	R	R 0.1	●					1 - 1.5	1.25	2.07	60°
JXTG12FL-60N-010	L	R 0.1	●					1 - 1.5	1.25	2.07	60°

● : Line-up

EDGE ORIENTATION AND DESCRIPTION OF THREADING INSERTS

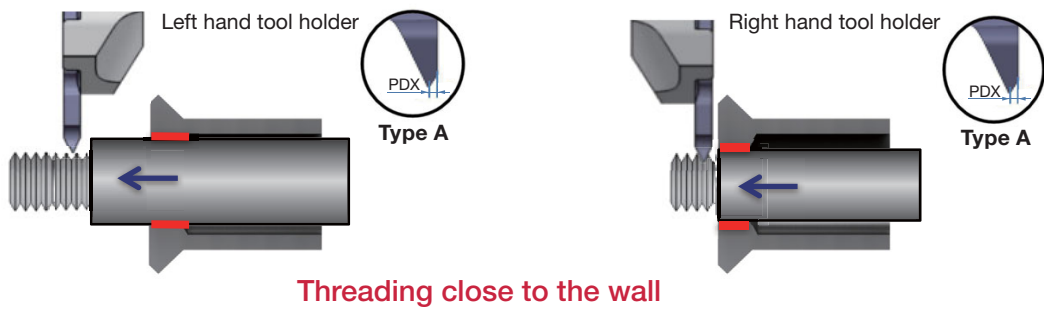
	Edge Orientation		
	Type A	Type B	Type N
Right hand	 a > b	 a < b	 a = b
Left hand	 a > b	 a < b	 a = b

JXTG 12 F R - 60 A - 005

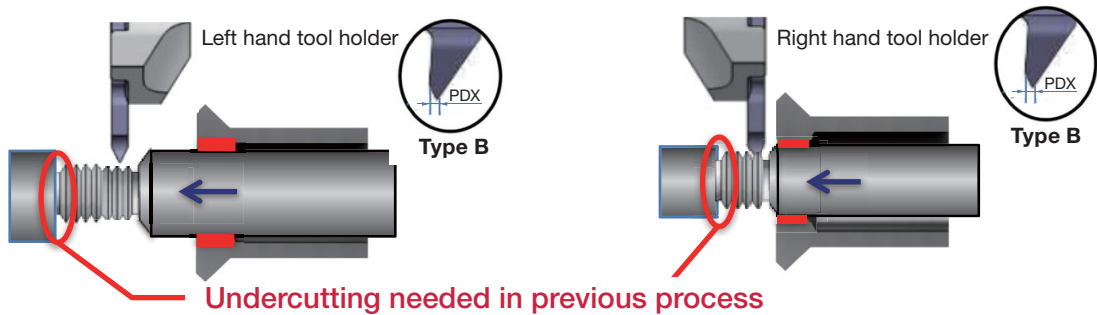
Insert shape Insert size Hand Thread angle Edge orientation Corner radius

F: sharp edge

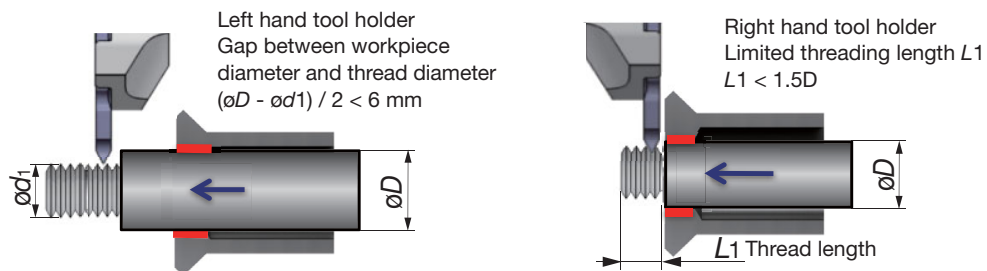
WHEN TO USE TYPE A THREADING INSERT OR TYPE B



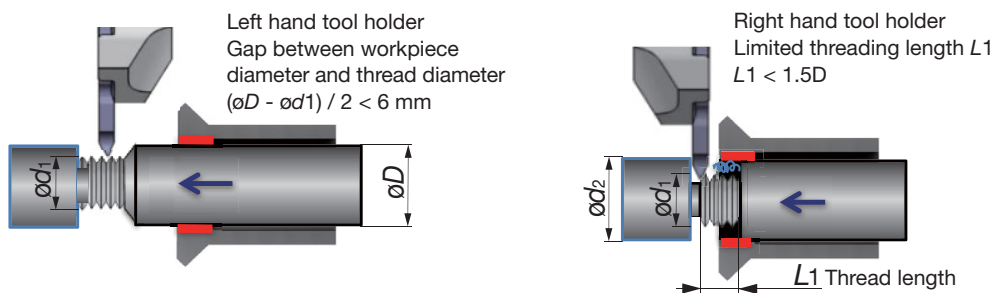
Threading operation following back-turning



THREADING WORKPIECE IN MAIN SPINDLE



Threading operation following back-turning



STANDARD CUTTING CONDITIONS

Parting, Grooving

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

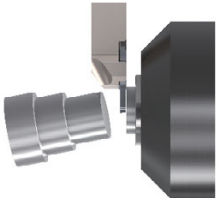
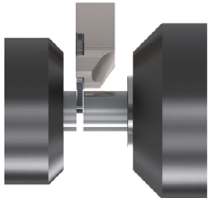
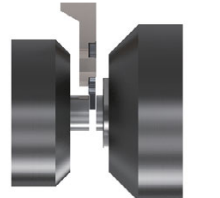
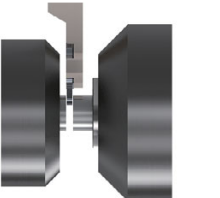
For aluminium and non-ferrous metal PCD insert

ISO	Workpiece materials	Grades	Operation	Cutting speed V _c (m/min)	Feed f (mm/rev)	Depth of cut a _p (mm)
N	Aluminium alloys A5056, A6061, etc.	DX110	Grooving	100 - 300	0.03 - 0.15	-
		DX110	Turning	100 - 300	0.03 - 0.15	< 6

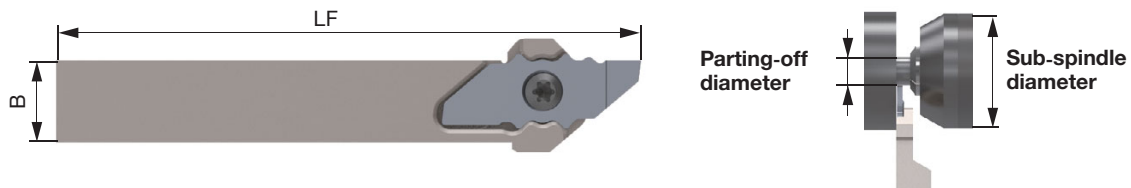
Threading

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

HOW TO SELECT TOOLS

Application	Large diameter machining of workpiece with rigidity		Small diameter machining of workpiece with short overhang	
	Main-spindle tooling	Sub-spindle tooling	Sub-spindle tooling	
			Workpiece with long overhang at the side of sub-spindle for the process after parting-off	Short workpiece with low rigidity
	 Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle
Toolholder	R-hand (JSXXR type)	L-hand (JSXXL type)	R-hand (JSXXR-S type)	L-hand (JSXXL-S type)
Insert	Right-hand insert with lead angle to remove center core (JXPG**R***-15 type)	Left-hand insert (JXP***L*** type)	Right-hand insert (JXP***R*** type)	Left-hand insert (JXP***L*** type)

HOW TO SELECT TOOLHOLDERS FOR SUB-SPINDLE



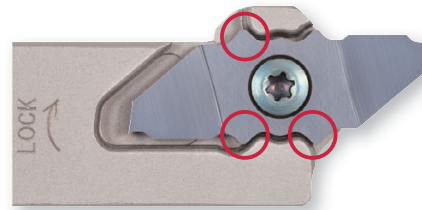
Sub-spindle dia.	Parting-off dia.	B	LF	Insert	Toolholder
ø40	~ ø6	10	116	JXP*06*	JSXXR/L1010X09-S
ø40	~ ø6	12	81	JXP*06*	JSXXR/L1212F09-S
ø40	~ ø12	10	118	JXP*12*	JSXXR/L1010X09-S
ø40	~ ø12	12	83	JXP*12*	JSXXR/L1212F09-S
ø40	~ ø16	10	120	JXP*16*	JSXXR/L1010X09-S
ø40	~ ø16	12	85	JXP*16*	JSXXR/L1212F09-S
ø40	~ ø20	12	87	JXP*20*	JSXXR/L1212F09B-S-CHP
ø50	~ ø6	12	116	JXP*06*	JSXXR/L1212X09-S
ø50	~ ø6	16	116	JXP*06*	JSXXR/L1616X09-S
ø50	~ ø12	12	118	JXP*12*	JSXXR/L1212X09-S
ø50	~ ø12	16	118	JXP*12*	JSXXR/L1616X09-S
ø50	~ ø16	12	85	JXP*16*	JSXXR/L1212F09-S
ø50	~ ø16	12	120	JXP*16*	JSXXR/L1212X09-S
ø50	~ ø16	16	120	JXP*16*	JSXXR/L1616X09-S
ø50	~ ø20	12	87	JXP*20*	JSXXR/L1212F09B-S-CHP
ø50	~ ø20	12	122	JXP*20*	JSXXR/L1212X09B-S-CHP
ø50	~ ø20	16	122	JXP*20*	JSXXR/L1616X09-S

UNIQUE CLAMPING SYSTEM

The unused cutting edge is always protected due to the innovative clamping system.

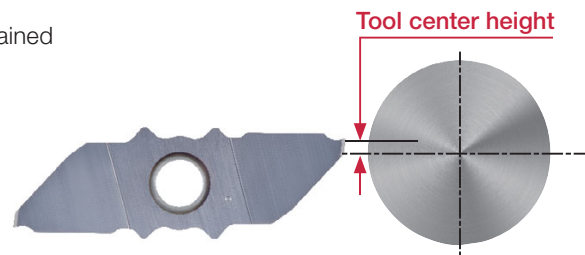
Even if the first cutting edge is chipped, the other unused cutting edge can be used because the insert is clamped in the center.

Insert is secured at 3 points

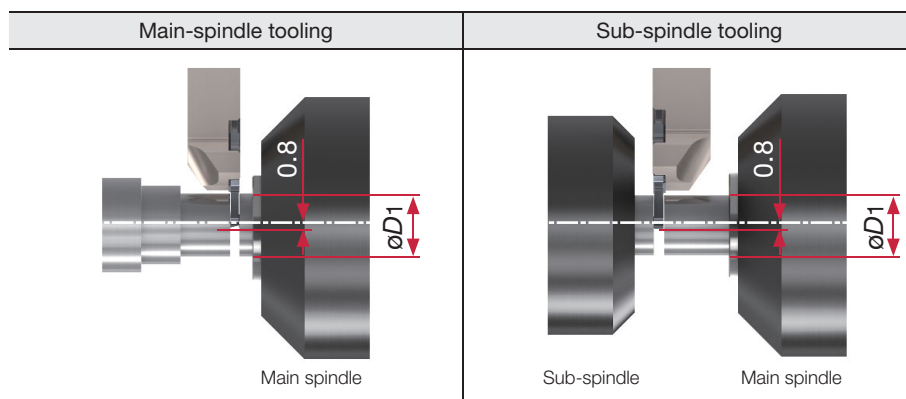


ADJUSTMENT OF TOOL CENTER HEIGHT

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



MAX. PARTING-OFF DIA. & DEPTH

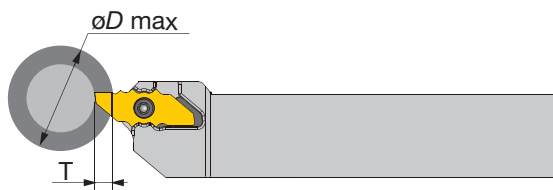


There will be no tool-workpiece interference when parting off the workpiece with the cutting edge position apart from the workpiece center by 0.8 mm or more.

ϕD_1 = Max. parting-off dia.

Maximum grooving depths (T) in relation to workpiece diameters (ϕD max) without interference

Maximum grooving depth (T) is limited relative to workpiece diameter (ϕD max) to avoid interference between workpiece and insert.

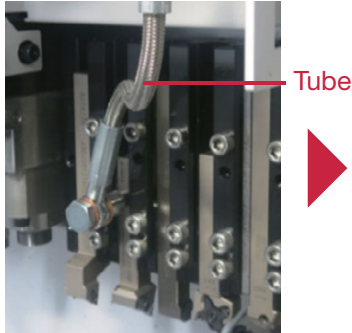


Grooving depths (T) and workpiece diameters (ϕD max) for each insert

Designation	T $\leq$ 1.0	T $\leq$ 2.0	T $\leq$ 2.5	T $\leq$ 3.0	T $\leq$ 3.5	T $\leq$ 4.0	T $\leq$ 5.0	T $\leq$ 5.5	T $\leq$ 6.0	T $\leq$ 6.5	T $\leq$ 7.0	T $\leq$ 7.5	T $\leq$ 8.0	T $\leq$ 8.5	T $\leq$ 9.0	T $\leq$ 9.5	T $\leq$ 10.0	T $\leq$ 10.5
JXP*06...	∞	∞	200	60	30	-	-	-	-	-	-	-	-	-	-	-	-	-
JXP*12...	∞	∞	∞	∞	∞	∞	∞	100	60	35	-	-	-	-	-	-	-	-
JXP*16...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	200	90	50	25	-	-	-	-
JXP*20...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	200	80	50	25

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

External coolant tube

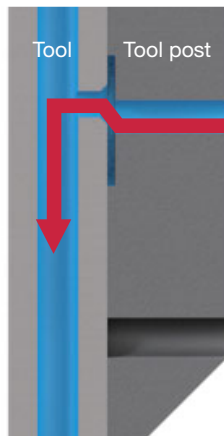
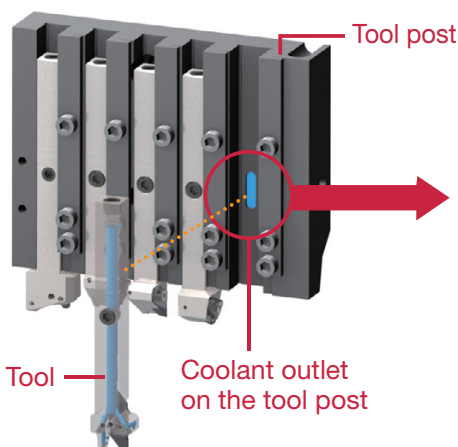


Through-coolant supply

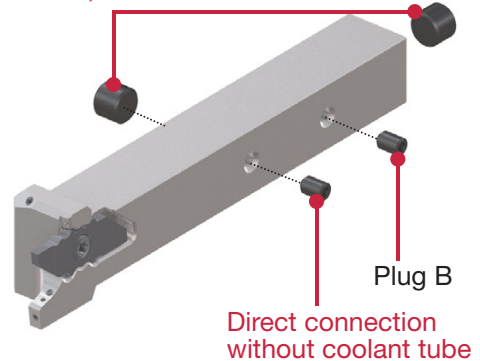


No need for coolant tube setup.
Eliminates chip entanglement on tubes and streamlines tool replacements.

■ Coolant is supplied from the tool post directly to the tools



Plug A
(for connecting an external coolant tube)



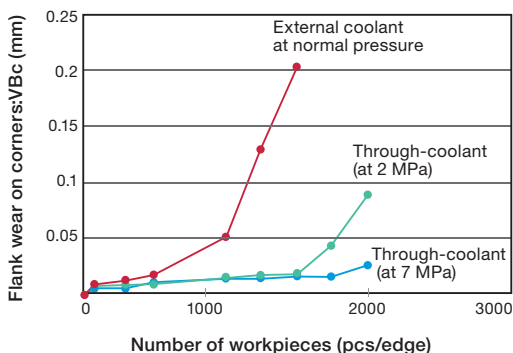
Use a non-coolant-through tool when coolant supply is not needed through the tool.

■ Tool wear reduction with TungTurn-Jet

M Stainless steel: Parting-off (SUS304 / X5CrNi18-9)



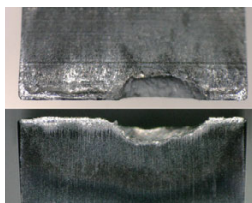
Workpiece material : SUS304 / X5CrNi18-9
Toolholder : JSXXL1212X09-CHP
Insert : JXPG16L20F SH725
Cutting speed : $V_c = 100$ m/min
Feed : $f = 0.03$ mm/rev
Coolant : Oil



DUOJUST CUT

External coolant at normal pressure

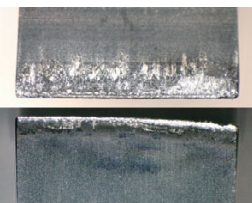
After 1,500 parts machined



TUNGTURNJET

Through-coolant (at 2 MPa)

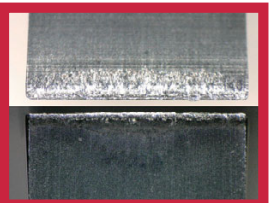
After 2,000 parts machined



TUNGTURNJET

Through-coolant (at 7 MPa)

After 2,000 parts machined



PARTS FOR COOLANT HOSE

Connecting hose

Fig.1

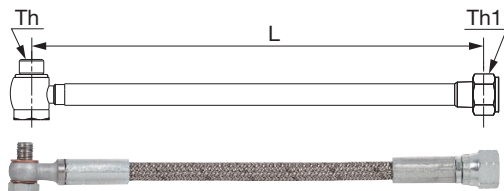
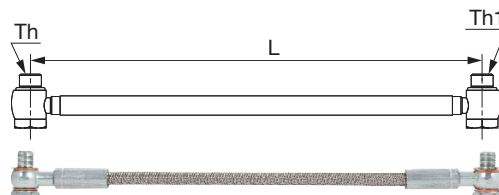
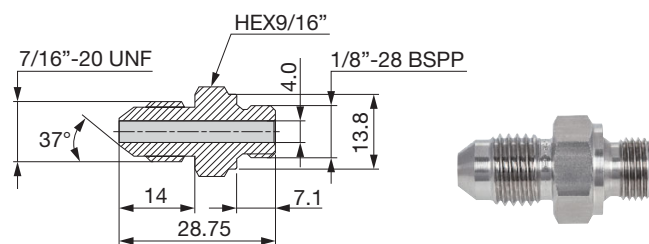


Fig.2



Designation	Length L	Screw		Max. pressure (Mpa)	Fig.
		Th	Th1		
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

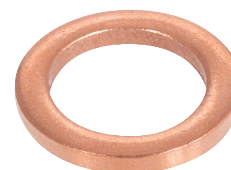
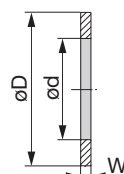
Connector



Designation

CHP-NIPPLE-G1/8-7/16UNF

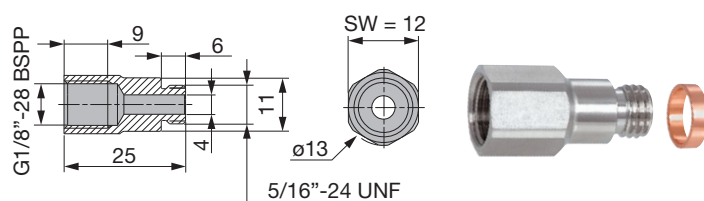
Seal washer



Designation

Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1
CHP-COPPER-SEAL5/16	11.9	8.15	1.35
CHP-COPPER-SEAL5/16-2.5	9.4	8	2.5

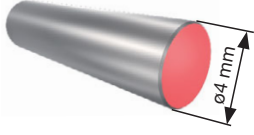
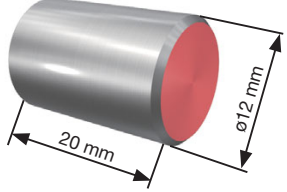
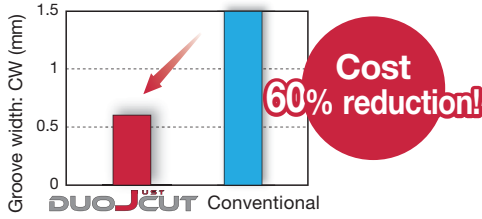
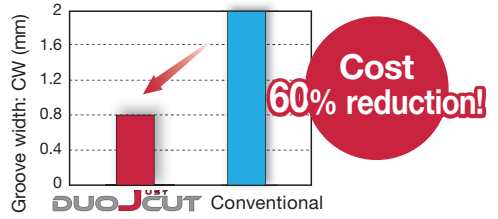
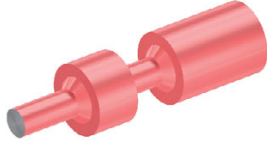
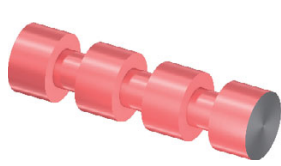
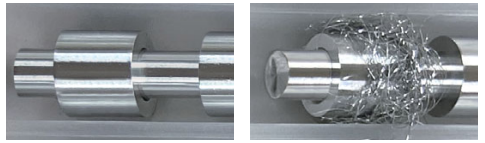
Connector for small lathe with seal washer

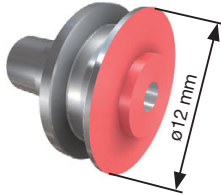
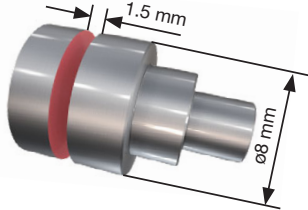
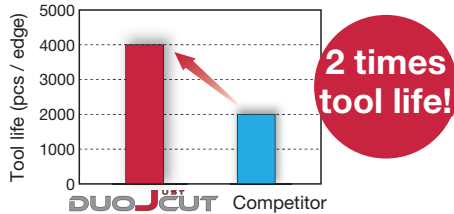
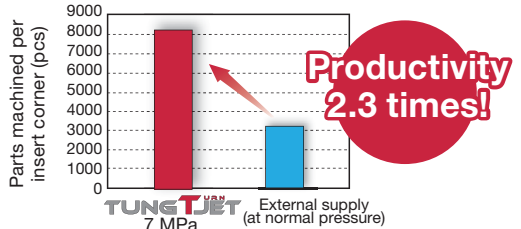
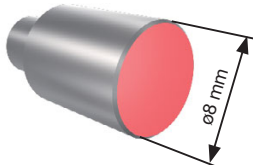
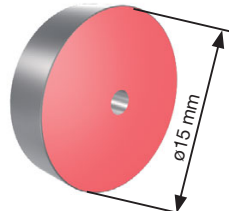
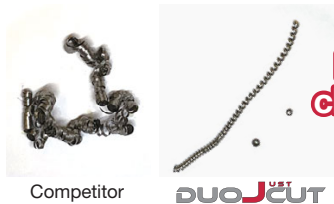


Designation

CHP-CONECTOR5/16-G1/8

PRACTICAL EXAMPLES

Workpiece type		Pin	Electric part
Toolholder		JSXXR1010X09	JSXXR1212X09
Insert		New JXPS06R06F	New JXPS12R08F
Grade		SH725	SH725
Workpiece material		SUS304 / X5CrNi18-9	SUM23
		 M	 P
Cutting conditions	Cutting speed: V_c (m/min)	35	110
	Feed : f (mm/rev)	0.03	0.03
	Groove width : CW (mm)	0.6	0.8
	Machining	Parting-off	Parting-off
	Coolant	Oil	Oil
Results		 0.6 mm width insert can reduce 60% of material usage, compared to the conventional 1.5 mm width insert.	 Changing from 2 mm width insert to new 0.8 mm width DuoJust-Cut insert provided significant reduction of bar stock consumption without increasing the cutting parameters.
Workpiece type		Spool	Spool
Toolholder		JSXXR1212X09	JSXXR1212X09
Insert		New JDX12R20F	New JDX12R20F
Grade		DX110	DX110
Workpiece material		A7057	A6061
		 N	 N
Cutting conditions	Cutting speed: V_c (m/min)	100	300
	Feed : f (mm/rev)	0.04	0.05
	Depth of cut : a_p (mm)	4	5
	Machining	Grooving, Turning (in a single pass)	Grooving, Turning (in a single pass)
	Coolant	Oil	Oil
Results		The customer used DuoJust-Cut's new PCD-tipped grooving insert with laser-etched chipbreaker to eliminate chip associated issues in the unmanned production lines. As the result, machine downtime was eliminated, enabling lights-out production.	 DuoJust-Cut's new PCD-tipped grooving insert improved chip control and eliminated chip entanglements thanks to its laser-etched chipbreaker.

Workpiece type		Hydraulic component	Injection parts
Toolholder		JSXXL1212X09-S	JSXXR1212X09-CHP
Insert		JXPG16L20F	JXPG16R15F
Grade		SH725	SH725
Workpiece material		SUS304 / X5CrNi18-9	SUS304 / X5CrNi18-9
			
Cutting conditions	Cutting speed: V_c (m/min)	75	120
	Feed : f (mm/rev)	0.02	0.05
	Groove width : CW (mm)	2.0	2.5
	Machining	Parting-off	Parting-off
	Coolant	Oil	Oil
Results		 DuoJust-Cut doubles tool life and provides excellent surface finish due to highly rigid insert clamping.	 TungTurn-Jet's high pressure, through-coolant supply system has improved the tool life by 230% over the external coolant supply method, while reducing tool wear.
Workpiece type		Motor component	Optical part
Toolholder		JSXXR1010X09	JSXXR1010X09-S
Insert		JXPS12R15F	JXPS16R15F
Grade		SH725	SH725
Workpiece material		S45C / C45	SUS304 / X5CrNi18-9
			
Cutting conditions	Cutting speed: V_c (m/min)	70	75
	Feed : f (mm/rev)	0.03	0.01
	Groove width : CW (mm)	1.5	1.5
	Machining	Parting-off	Parting-off
	Coolant	Oil	Oil
Results		 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.	 DuoJust-Cut's JXPS geometry has provided effective chip control, enabling superior surface integrity.

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