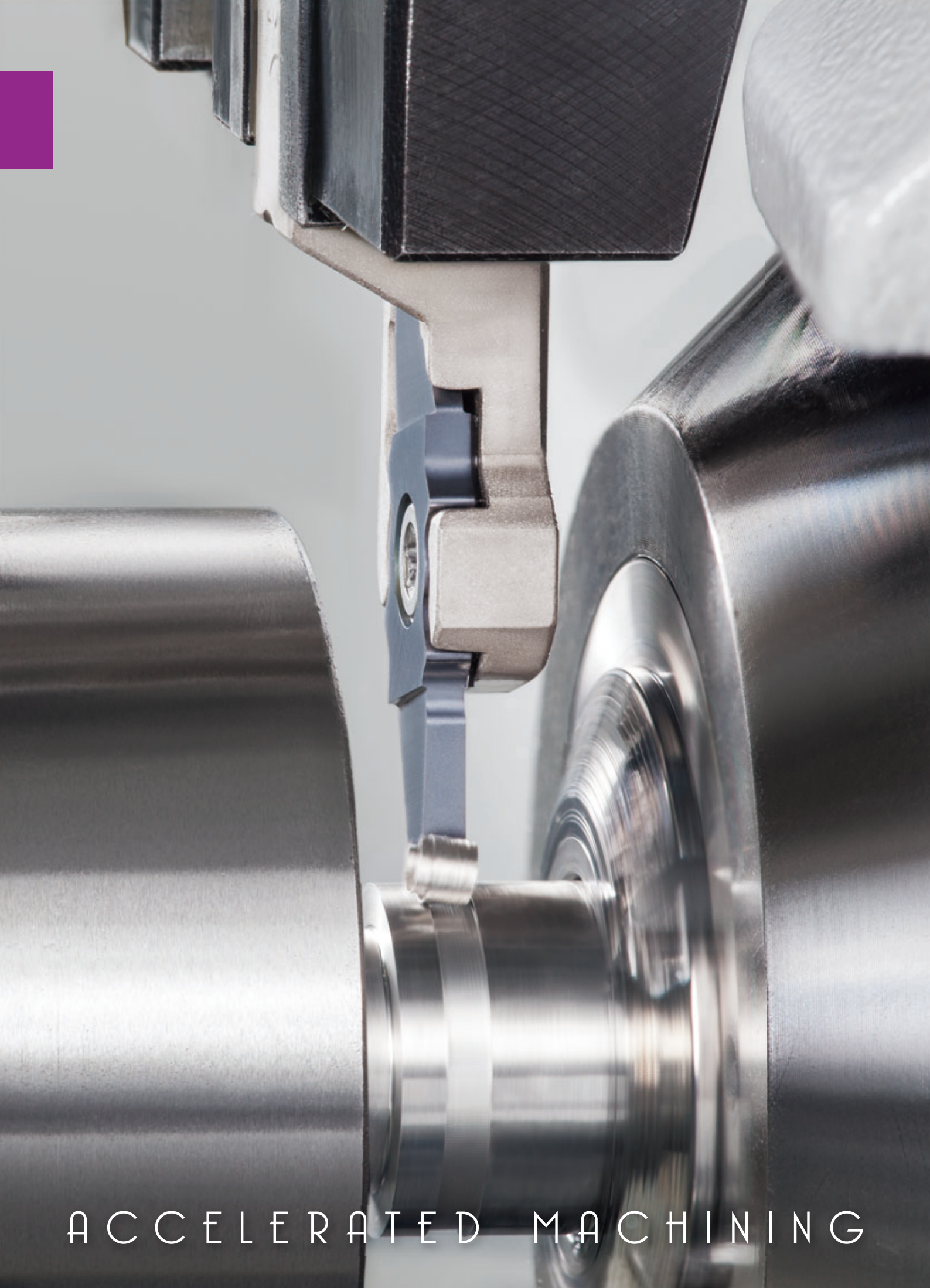


Stable parting-off operations due to **unique clamping system**





ACCELERATED MACHINING



GrooveLine

DUO^{JUST}CUT
TUNGALOY

TUNG FORCE
ROOVE
ACCELERATED MACHINING



DuoJust-Cut, a new line of small tools with durable insert containing 2 cutting edges, is **excellent for parting miniature parts** up to 16-mm diameter.

Innovative clamping system assures stability in **part-off operation**

3 types of inserts that are available for different parting-off diameters can be mounted **on the same pocket of the toolholder**.

- Optimized overhang length for **stable machining**

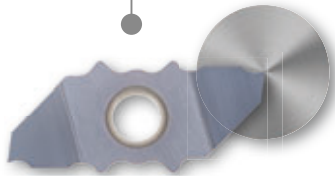
Regular-type toolholder



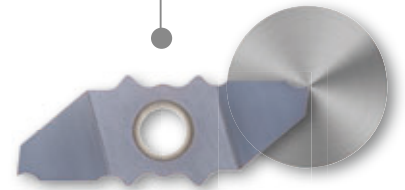
Toolholder for sub-spindle



JXPG06
Max. parting-off dia.
ø6 mm



JXPG12
Max. parting-off dia.
ø12 mm

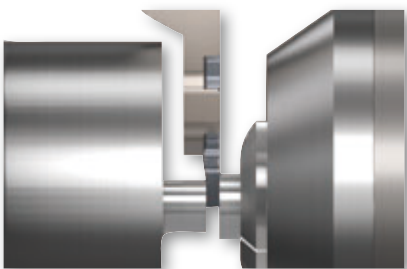


JXPG16
Max. parting-off dia.
ø16 mm

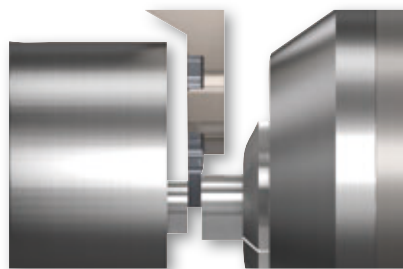
Toolholder for sub-spindle

- Perfect for parting off a short workpiece in a narrow approach when a sub-spindle is used.

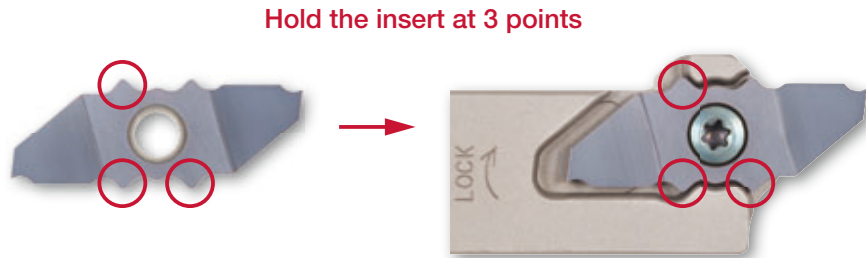
Right hand



Left hand



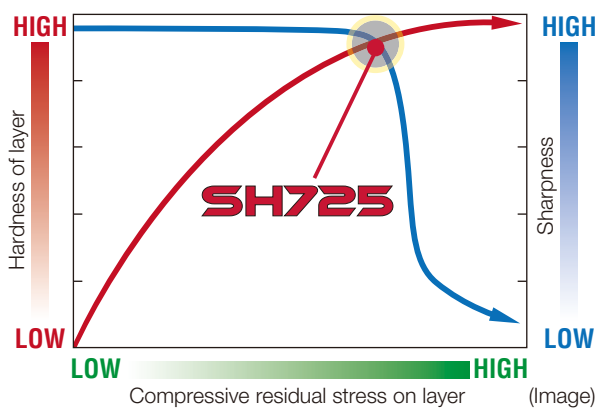
Unique clamping system for highly rigid clamping



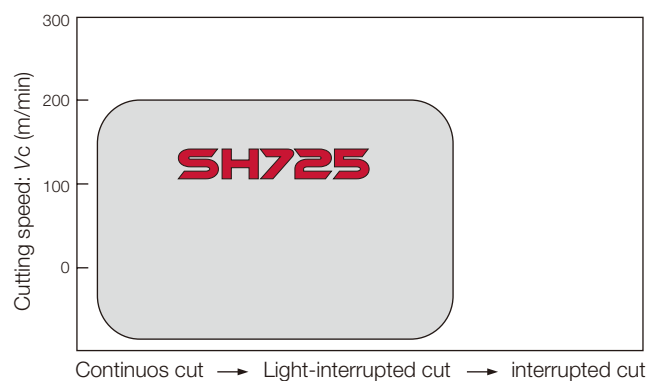
- An unused cutting edge is always protected due to the innovative clamping system.
- Even if the first cutting edge is chipped, the other unused cutting edge can be used because the insert is clamped in the center.

SH725, new PVD grade for small lathes

- PVD grade designed for precision part machining
- Good balance between hardness and sharpness
- High adhesion strength



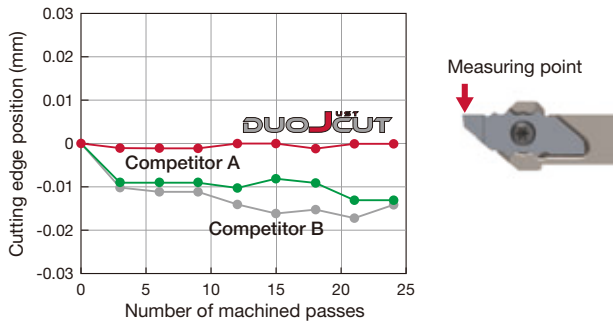
Application Range



Deliver stable machining on small lathes

CUTTING PERFORMANCE

Cutting edge positions during machining

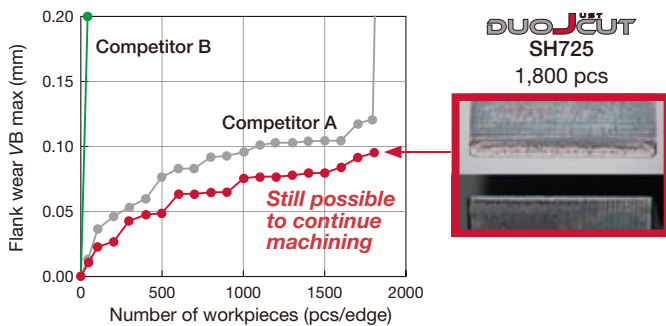


Process: Measure 1 → machining → Measure 2
 Displacement of cutting edge position = Difference between Measure 1 & 2

Toolholder : JSXXL1212F09-S
 Insert : JXPG16L20F / SH725
 Workpiece material : S45C / C45, 170HB
 Cutting speed : $V_c = 100$ m/min
 Feed : $f = 0.06$ mm/rev
 Groove width : $W = 2.0$ mm
 Machining : Parting-off ($\phi 16$)
 Coolant : Wet
 Machine : Swiss lathe

DuoJust-Cut's 3-point clamping system is highly rigid, delivering stable machining with small displacement of the cutting edge position.

Tool life of regular-type toolholder: Carbon steel

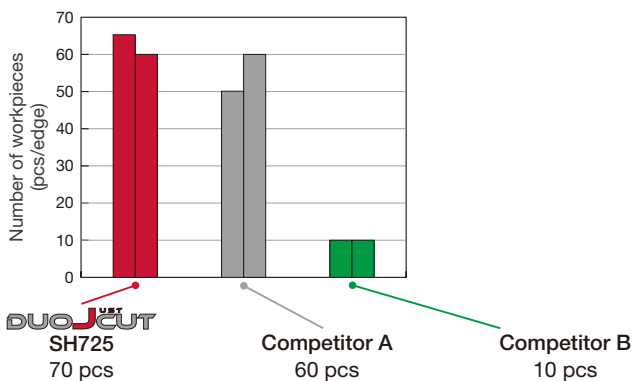


P Toolholder : JSXXL1212X09
 Insert : JXPG16L20F / SH725
 Workpiece material : S45C / C45, 210HB
 Cutting speed : $V_c = 150$ m/min
 Feed : $f = 0.06$ mm/rev
 ($\leq \phi 2$: 0.01 mm/rev)
 Groove width : $W = 2$ mm
 Machining : Parting-off ($\phi 16$)
 Coolant : Wet
 Machine : Swiss lathe

DuoJust-Cut extends tool life and reduces flank wear on steel machining due to improved clamping rigidity and wear resistance.



Tool life of regular-type toolholder: Stainless steel



M Toolholder : JSXXL1212X09
 Insert : JXPG16L20F / SH725
 Workpiece material : SUS303 / X10CrNiS18-9, 230HB
 Cutting speed : $V_c = 120$ m/min
 Feed : $f = 0.04$ mm/rev ($\leq \phi 2$: 0.01 mm/rev)
 Groove width : $W = 2.0$ mm
 Machining : Parting-off ($\phi 16$)
 Coolant : Wet
 Machine : Swiss lathe

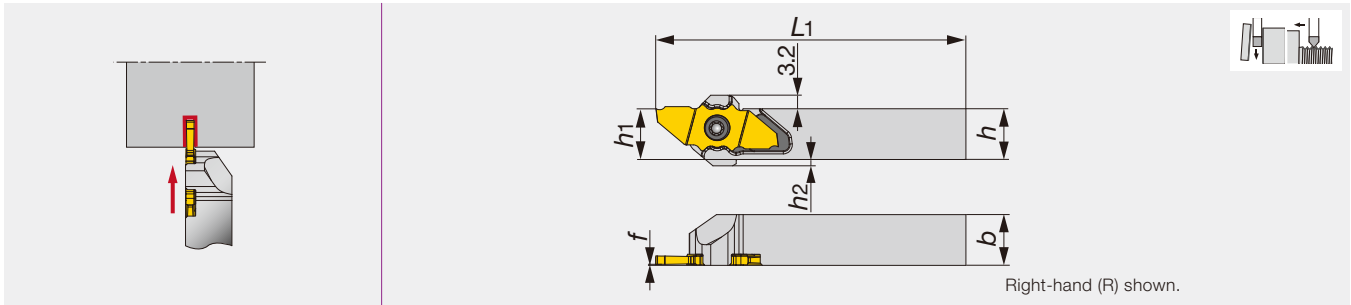
Tool life of DuoJust-Cut in stainless steel machining is longer than the competitors.



"J-series" Parting-off tool for swiss lathes

TOOLHOLDERS - FOR PARTING-OFF AND THREADING

DuoJust-Cut JSXXR/L



Designation	<i>h</i>	<i>b</i>	<i>f</i>	<i>L1</i> *	<i>h1</i>	<i>h2</i>	Insert
JSXXR/L1010X09	10.0	10.0	0.2	≤ 120.0	10.0	3.0	JXPG06,12,16
JSXXR/L1212F09	12.0	12.0	0.2	≤ 85.0	12.0	1.5	JXPG06,12,16
JSXXR/L1212X09	12.0	12.0	0.2	≤ 120.0	12.0	1.5	JXPG06,12,16
JSXXR/L1616X09	16.0	16.0	0.2	≤ 120.0	16.0	0.0	JXPG06,12,16
JSXXR/L2020H09	20.0	20.0	0.2	≤ 100.0	20.0	0.0	JXPG06,12,16

* "L1" is calculated with JXPG16*** insert. When JXPG12*** insert is used, "L1" is 2 mm shorter.

When JXPG06*** insert is used, "L1" is 4 mm shorter.

Note: The right-hand insert (JXPG**R***) is used for the right-hand toolholder (JSXXR***), and the left-hand insert (JXPG**L***) is used for the left-hand toolholder (JSXXL***).

SPARE PARTS



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

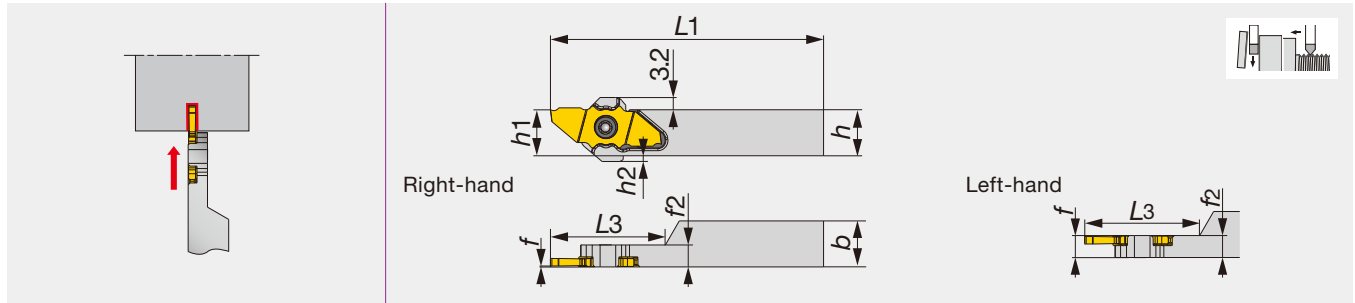
HOW TO SELECT TOOLS

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
<p>Main spindle</p> <p>Position of parting-off is at the side of the main spindle</p>	<p>Sub-spindle Main spindle</p> <p>Position of parting-off is at the side of the sub-spindle</p>	<p>Sub-spindle Main spindle</p> <p>Position of parting-off is at the side of the main spindle</p>	<p>Sub-spindle Main spindle</p> <p>Position of parting-off is at the side of the sub-spindle</p>	
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 (JXPG**L*** type)	Right-hand insert (JXPG**R*** type)	Left-hand insert (JXPG**L*** type)

"J-series" Parting-off tool for sub-spindle in swiss lathes

TOOLHOLDERS - FOR PARTING-OFF AND THREADING IN SUB-SPINDLE

DuoJust-Cut JSXXR/L-S



Designation	<i>h</i>	<i>b</i>	<i>f</i>	<i>L1</i> *	<i>L3</i> *	<i>h1</i>	<i>h2</i>	<i>f2</i>	Insert
JSXXR/L1010X09-S	10.0	10.0	0.2/5.5	≤ 120.0	≤ 26.0	10.0	3.0	5.7	JXPG06,12,16
JSXXR/L1212F09-S	12.0	12.0	0.2/5.5	≤ 85.0	≤ 26.0	12.0	1.5	5.7	JXPG06,12,16
JSXXR/L1212X09-S	12.0	12.0	0.2/5.5	≤ 120.0	≤ 30.0	12.0	1.5	5.7	JXPG06,12,16

* "*L1*" and "*L3*" are calculated with JXPG16*** insert. When JXPG12*** insert is used, "*L1*" and "*L3*" are 2 mm shorter.
When JXPG06*** insert is used, "*L1*" and "*L3*" are 4 mm shorter.

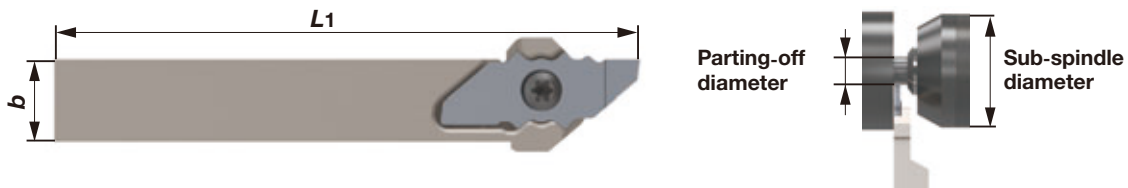
Note: The right-hand insert (JXPG**R***) is used for the right-hand toolholder (JSXXR***), and the left-hand insert (JXPG**L***) is used for the left-hand toolholder (JSXXL***).

SPARE PARTS



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

HOW TO SELECT TOOLHOLDERS FOR SUB-SPINDLE

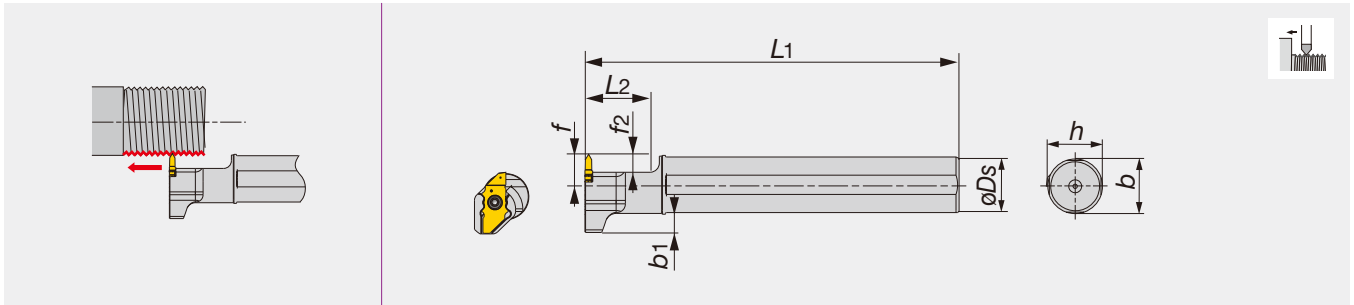


Sub-spindle dia.	Max parting-off dia.	Shank size <i>b</i>	Tool length <i>L1</i>	Insert	Toolholder
ø40	~ ø6	10	116	JXPG06*	JSXXR/L1010X09-S
ø40	~ ø6	12	81	JXPG06*	JSXXR/L1212F09-S
ø40	~ ø12	10	118	JXPG12*	JSXXR/L1010X09-S
ø40	~ ø12	12	83	JXPG12*	JSXXR/L1212F09-S
ø40	~ ø16	10	120	JXPG16*	JSXXR/L1010X09-S
ø40	~ ø16	12	85	JXPG16*	JSXXR/L1212F09-S
ø50	~ ø6	12	116	JXPG06*	JSXXR/L1212X09-S
ø50	~ ø12	12	118	JXPG12*	JSXXR/L1212X09-S
ø50	~ ø16	12	85	JXPG16*	JSXXR/L1212F09-S
ø50	~ ø16	12	120	JXPG16*	JSXXR/L1212X09-S

New

TOOLHOLDER - ROUND SHANK FOR THREADING

DuoJust-Cut JS-SXXL09



Designation	$\varnothing D_s$	h	b	b_1	L_1	L_2	f	f_2	Insert
JS19G-SXXL09	19.05	18	18	5.9	90	21	10	6	JX*G06,12*R
JS19X-SXXL09	19.05	18	18	5.9	120	21	10	6	JX*G06,12*R
JS20G-SXXL09	20	19	19	5.4	90	21	10	6	JX*G06,12*R
JS20X-SXXL09	20	19	19	5.4	120	21	10	6	JX*G06,12*R
JS22X-SXXL09	22	21	21	4.4	120	21	10	6	JX*G06,12*R
JS25H-SXXL09	25	24	24	2.9	100	21	10	6	JX*G06,12*R
JS254X-SXXL09	25.4	24	24	2.7	120	21	10	6	JX*G06,12*R

* The round shank holder can take a threading insert (JXTG12FR type) or a parting-off insert (JXPG06R and 12R types); nevertheless, the round shank is rarely used for a parting-off operation.

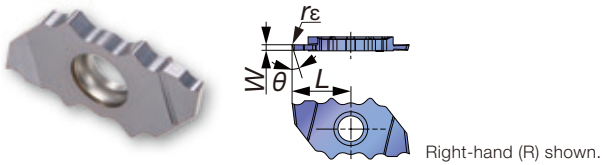
SPARE PARTS



Designation	Clamping screw	Wrench
JS***-SXXL09	CSTC-4L055L	T-1008/5

INSERT

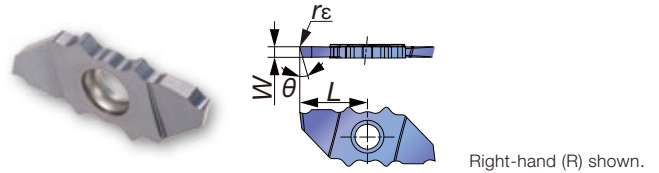
JXPG06R/L-F (Sharp edge)



Designation	Grade SH725		Dimensions (mm)				
	R	L	D_{max}	W	r_{ϵ}	L	θ (deg)
JXPG06R/L10F	●	●	6	1	0.05	10.5	-
JXPG06R/L15F	●	●	6	1.5	0.05	10.5	-
JXPG06R/L10F-15	●	●	6	1	0.05	10.5	15
JXPG06R/L15F-15	●	●	6	1.5	0.05	10.5	15

● : Line-up
Note: D_{max} : Max. parting-off dia.

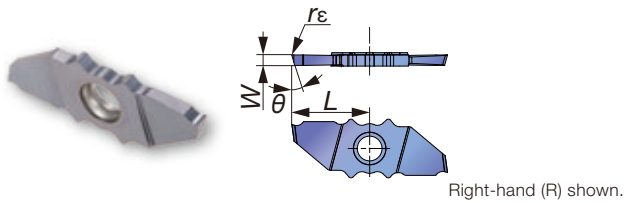
JXPG12R/L-F (Sharp edge)



Designation	Grade SH725		Dimensions (mm)				
	R	L	D_{max}	W	r_{ϵ}	L	θ (deg)
JXPG12R/L15F	●	●	12	1.5	0.05	12.5	-
JXPG12R/L20F	●	●	12	2	0.05	12.5	-
JXPG12R/L15F-15	●	●	12	1.5	0.05	12.5	15
JXPG12R/L20F-15	●	●	12	2	0.05	12.5	15

● : Line-up
Note: D_{max} : Max. parting-off dia.

JXPG16R/L-F (Sharp edge)

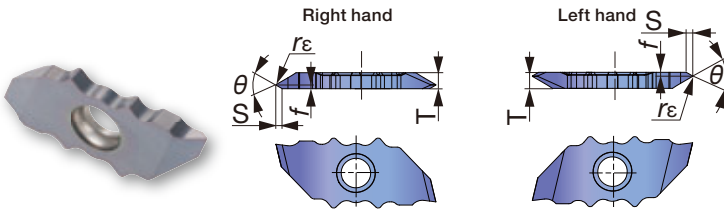


Designation	Grade SH725		Dimensions (mm)				
	R	L	D_{max}	W	r_{ϵ}	L	θ (deg)
JXPG16R/L15F	●	●	16	1.5	0.05	14.5	-
JXPG16R/L20F	●	●	16	2	0.05	14.5	-
JXPG16R/L15F-15	●	●	16	1.5	0.05	14.5	15
JXPG16R/L20F-15	●	●	16	2	0.05	14.5	15

● : Line-up
Note: D_{max} : Max. parting-off dia.

New

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



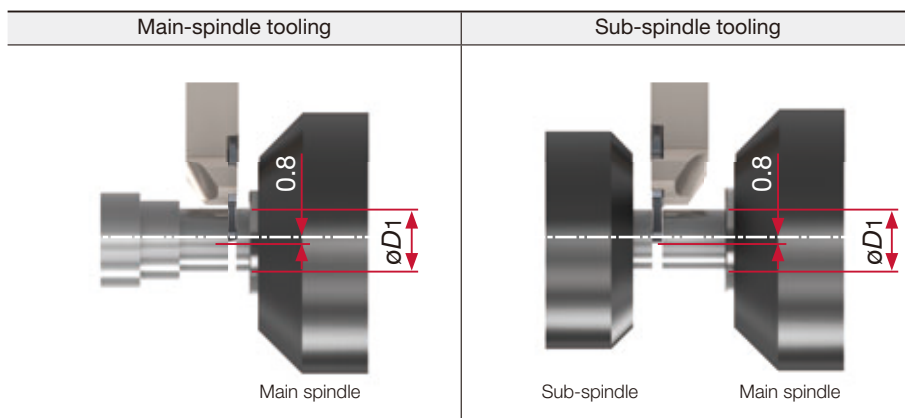
Designation	Grade SH725		Pitch	Dimensions (mm)				θ (deg)
	R	L		f	S	r_ϵ	T	
JXTG12FR/L-60A-000	●	●	0.2 - 0.4	0.25	0.4	0.05 max Flat	2.5	60
JXTG12FR/L-60B-000	●	●	0.2 - 0.4	2.25	0.4	0.05 max Flat	2.5	60
JXTG12FR/L-60A-005	●	●	0.4 - 1	0.6	0.99	0.05	2.5	60
JXTG12FR/L-60B-005	●	●	0.4 - 1	1.9	0.99	0.05	2.5	60
JXTG12FR/L-60N-010	●	●	1 - 1.5	1.25	2.07	0.1	2.5	60

● : Line-up

STANDARD CUTTING CONDITIONS

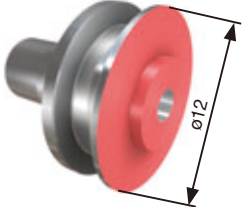
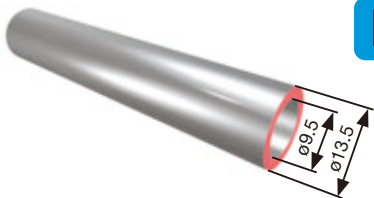
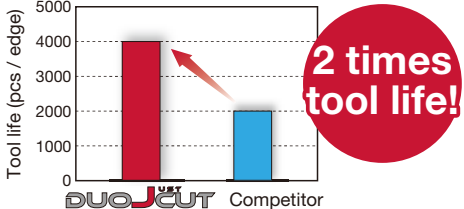

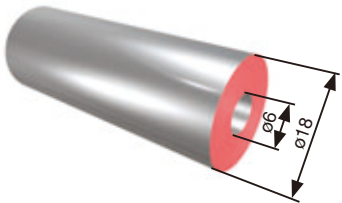
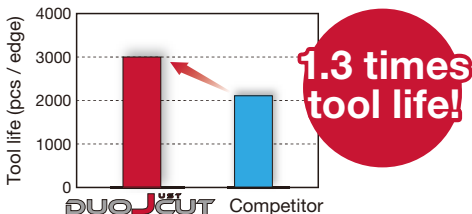
ISO	Workpiece materials	Grades	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steels (C15, C20, etc.)	SH725	50 - 200	0.01 - 0.05
	Carbon steels, Alloy steels (C55, 42CrMoS4, etc.)	SH725	50 - 200	0.01 - 0.05
	Free cutting steels (SUH22, SUH23, etc.)	SH725	50 - 200	0.01 - 0.05
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2, 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

MAX. PARTING-OFF DIA. & DEPTH



The cutting edge reaches 0.8 mm beyond the center line in parting-off.
 $\varnothing D1$ = Max. parting-off dia.

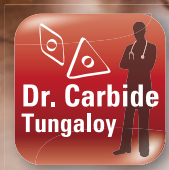
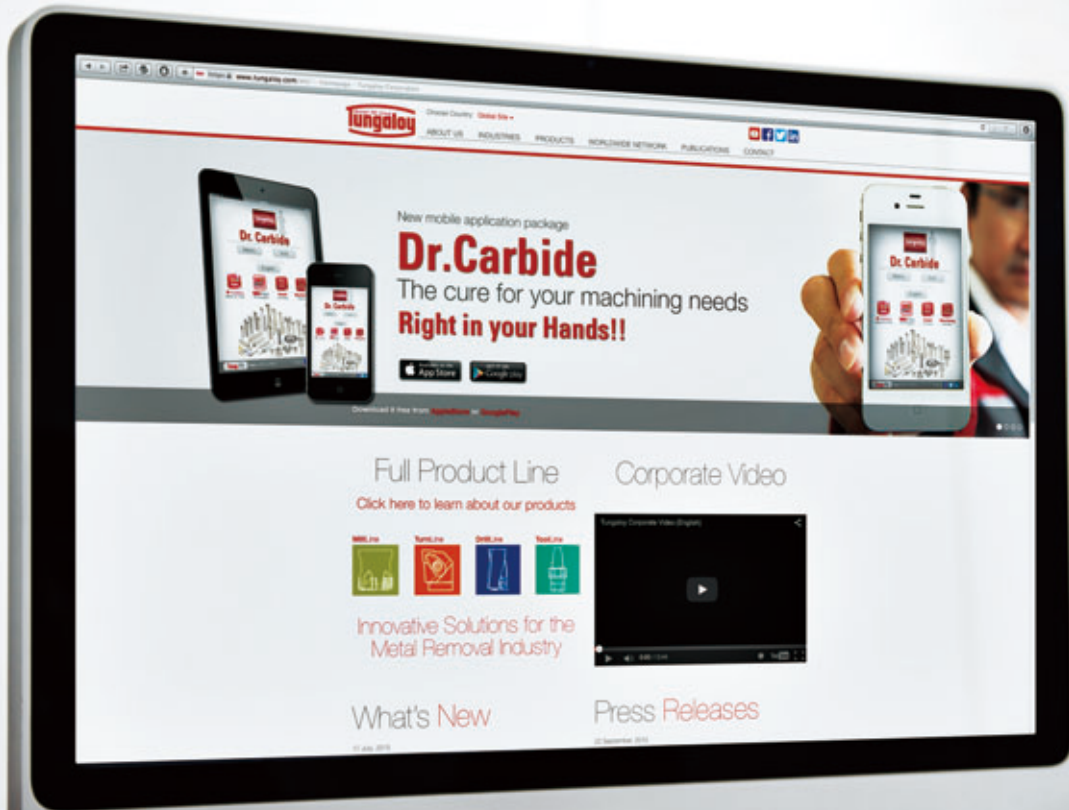
PRACTICAL EXAMPLES

Workpiece type		Hydraulic component	Torque limiter
Toolholder		JSXXL1212X09-S	JSXXL1212X09-S
Insert		JXPG16L20F	JXPG12L15F
Grade		SH725	SH725
Workpiece material		SUS304 / X5CrNi18-9	Low carbon alloy
			
Cutting conditions	Cutting speed: V_c (m/min)	75	120
	Feed : f (mm/rev)	0.02	0.03
	Groove width : W (mm)	2.0	1.5
	Machining	Parting-off	Parting-off
	Coolant	Wet	Wet
Results	 <p>2 times tool life!</p>	 <p>Excellent chip control</p>	
	<p>DuoJust-Cut doubles tool life and provides excellent surface finish due to highly rigid insert clamping.</p> <p>Chip control of DuoJust-Cut is better than the competitor's even in parting-off of thin workpiece. Also, the DuoJust-Cut insert with sharp cutting edge provides stable machining without chattering.</p>		
Workpiece type		Injection parts	
Toolholder		JSXXL1212X09-S	
Insert		JXPG12L20F	
Grade		SH725	
Workpiece material		SUS304L	
			
Cutting conditions	Cutting speed: V_c (m/min)	100	
	Feed : f (mm/rev)	0.05	
	Groove width : W (mm)	2.0	
	Machining	Parting-off	
	Coolant	Wet	
Results	 <p>1.3 times tool life!</p>	<p>DuoJust-Cut extends tool life to 130% and reduces burrs due to the sharp cutting edge.</p>	

MEMO

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

Check our site and our App to get more info!



Available on the App Store



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