



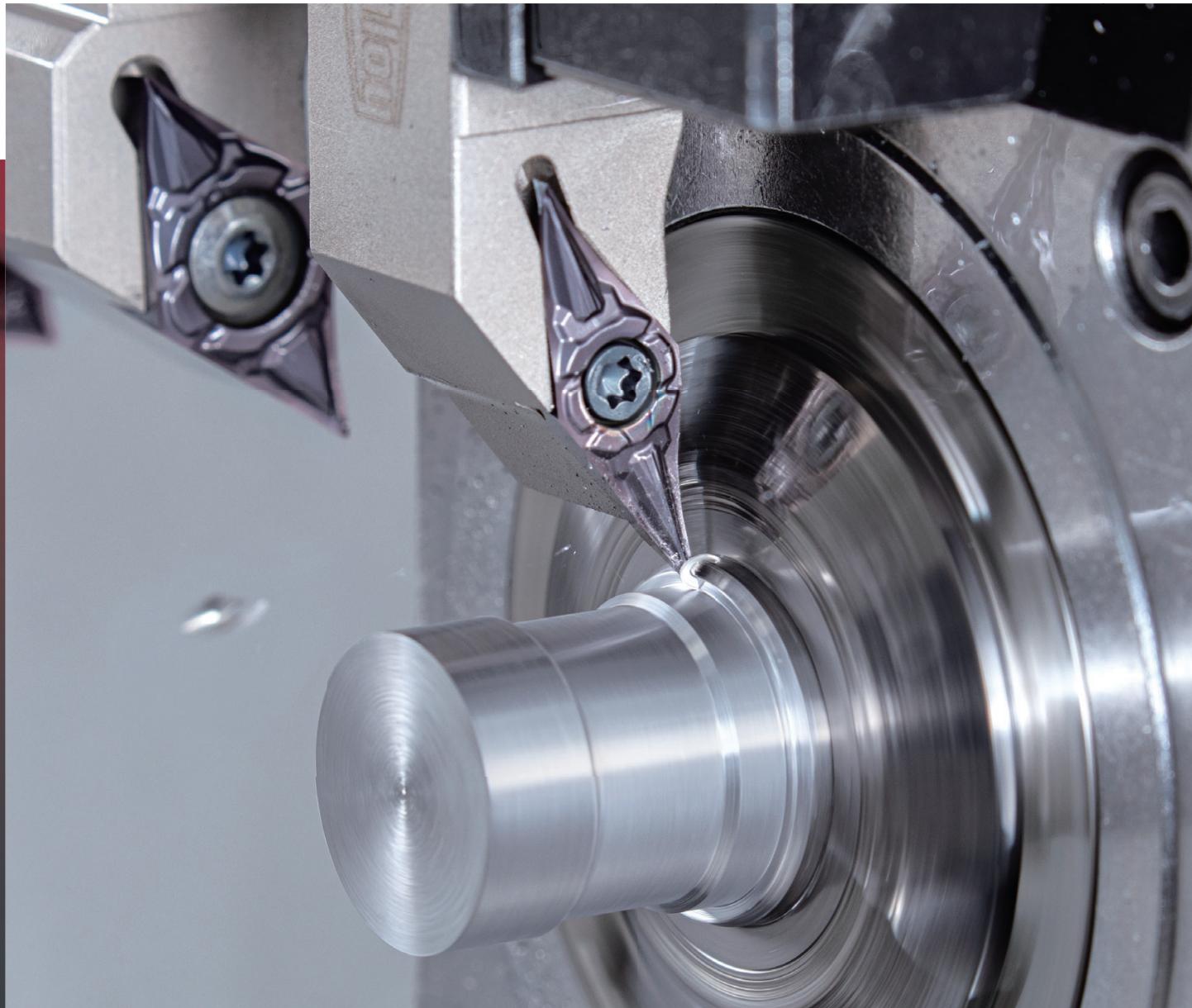
For more information

Grades for small parts machining

SH725

Tungaloy Report No. 436S2-G

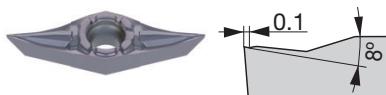
Introducing **JP & JS** chipbreakers for
VPGT inserts dedicated for small part
turning applications



Pressed 3D chipbreaker series for small parts machining

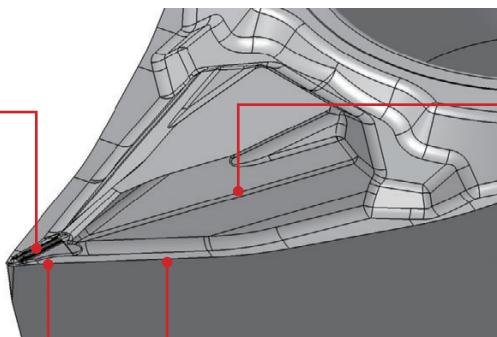
Full lineup of chipbreakers for unrivaled chip control and super surface finishing

I JP First choice chipbreaker for high precision finishing



Eliminates chip nesting and other chip-associated issues that impede the shop's productivity and provides stable chip breaking over a wide range of feed rates and D.O.C.

- Effective chip breaking for high part quality
- Versatile geometry designed for a broad application range
- Eliminates burr generation and controls vibration during large depth of cut



A protrusion extending towards the nose radius

Provides excellent chip control in finish to precision finish cutting

Secondary rake with multiple facets

Guides and redirects chips generated during machining at large depth of cut

Cutting edge with a steep inclination angle

- For better chip evacuation
- For reduced cutting force

Primary rake with variable angles

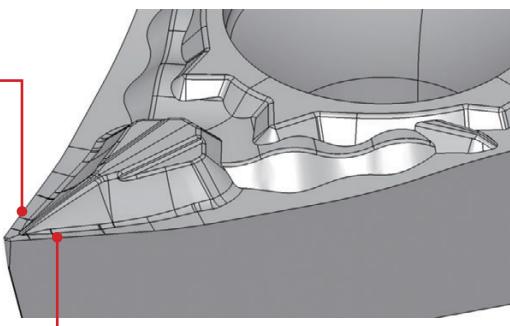
Controls the generation of burrs and vibration when machining at a large depth of cut capability

I JS First choice chipbreaker for finish cutting



Chipbreaker geometry that allows light cutting action and excellent chip breaking

- A steep cutting edge inclination angle for better chip control and reduced cutting force
- A unique protrusion that extends towards the radius effectively controls chip flow from small to large depth of cut



Cutting edge with a steep inclination angle

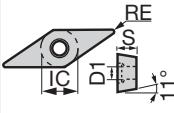
Provides good chip evacuation and reduced cutting force

Rake with variable angles and steep protrusion

Provides stable chip control in the small to large depth of cut range and also maintains cutting edge integrity and sharpness over extended period of time

Insert POSITIVE TYPE

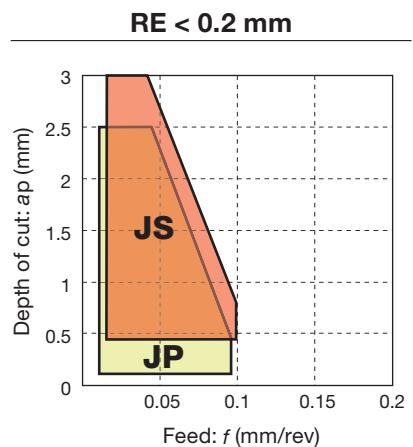
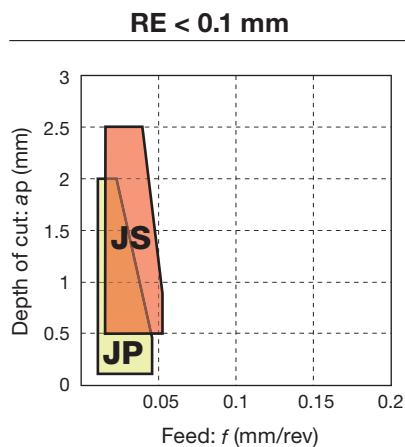
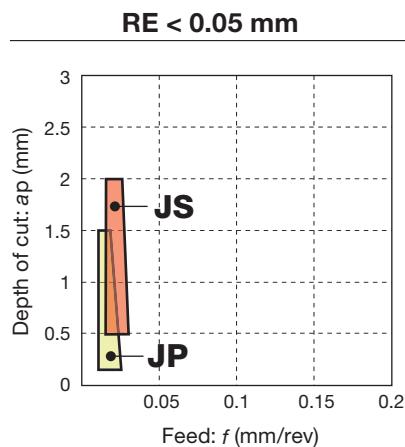
● : Continuous cutting
 ● : Light interrupted cutting
 * : Heavy interrupted cutting

VP															
35° Rhombic with hole Positive 11°		P	Steel	●●											
		M	Stainless	●●											
		K	Cast iron												
		N	Non-ferrous												
		S	Superalloy												
		H	Hard material												
		Coated										Dimension (mm)			
Application		SH725										RE IC S D1			
Precision finishing (sharp edge)		JP	VPGT110300FN-JP	●								<0.05 6.35 3.18 2.8			
			VPGT110301FN-JP	●								<0.1 6.35 3.18 2.8			
			VPGT110302FN-JP	●								<0.2 6.35 3.18 2.8			
Finishing (sharp edge)		JS	VPGT110300FN-JS	●								<0.05 6.35 3.18 2.8			
			VPGT110301FN-JS	●								<0.1 6.35 3.18 2.8			
			VPGT110302FN-JS	●								<0.2 6.35 3.18 2.8			
			VPGT110304FN-JS	●								<0.4 6.35 3.18 2.8			

Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : New product

■ Chip control range



■ STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Chipbreaker	Grade	Cutting speed Vc (m/min)	Depth of cut ap (mm)	Feed: f (mm/rev)			
						RE < 0.03	RE < 0.1	RE < 0.2	RE < 0.4
P	Carbon steel Alloy steel	JP	SH725	10 - 200	0.05 - 2.5	0.02 - 0.03	0.02 - 0.05	0.02 - 0.1	-
		JS	SH725	10 - 200	0.5 - 3	0.02 - 0.03	0.02 - 0.05	0.02 - 0.1	0.05 - 0.2
M	Stainless steel	JP	SH725	10 - 200	0.05 - 2.5	0.02 - 0.03	0.02 - 0.05	0.02 - 0.1	-
		JS	SH725	10 - 200	0.5 - 3	0.02 - 0.03	0.02 - 0.05	0.02 - 0.1	0.05 - 0.2

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