

Radius Endmill for Exotic Alloys

SSEH Series



J 24, J 41

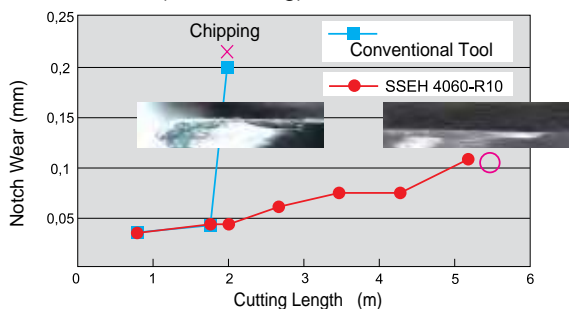
SSEH Radius

Characteristics and Applications

- Steep helix (45° helix) improves sharpness.
- Combination of unique flute design and semi-mirrored surface improves chip evacuation and adhesion resistance.
- Ultra-smooth coating with improved hardness and heat resistance combined with tough carbide substrate improves tool life when working with heat resistant alloys.
- Unique, smooth radius shape mitigates cutting impact and improves fracture resistance.
- Both coated and uncoated types are available in stock to meet various conditions.

Application Examples

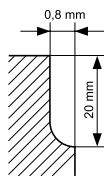
● Inconel 718 (Side Milling)



Tool Diameter: $\varnothing 6 \times R1$
 Cutting Conditions: $v_c = 20 \text{ m/min}$, $f_t = 0,025 \text{ mm/t}$,
 $d_{oc} = 5 \text{ mm}$, $w_{oc} = 0,5 \text{ mm}$, wet

● Inconel 713 (Side Milling)

SSEH 4100W-R10	Competitor's Product
Tool Diameter : $\varnothing 10 \times R1$ Cutting Conditions : $v_c = 32 \text{ m/min}$, $f_t = 0,018 \text{ mm/t}$ $d_{oc} = 20 \text{ mm}$, $w_{oc} = 0,8 \text{ mm}$, Dry	



In Sumitomo Electric Hardmetal tests, the special coating with excellent adhesion resistance provided less cutting edge adhesion than the competitor's product and enabled fracturefree machining. The competitor's product suffered from edge adhesion leading to breakage.

Unique, smooth radius design

- = Euro stock
- = Delivery on request

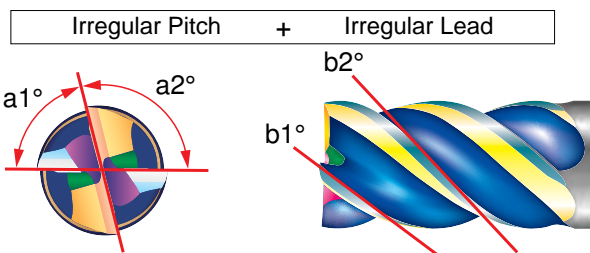


J 23, J 41

SSEH Radius Anti-vibration Type

Characteristics and Applications

- New anti-vibration type added to the SSEH type endmill for exotic alloys.
- Builds on the same features of existing endmills by adding an irregular lead for exceptionally good anti-vibration performance.
- Compatible with wide range of milling for exotic alloys including SUS, Inconel, and titanium.
- Reduces chattering for high-speed, high-feed cutting.
- Both coated and uncoated types are available in stock to meet various conditions.



Application Examples

● Surface Roughness Comparison

SSEH Anti-vibration Type	Conventional Tool
<p>Good Surface Quality Ra 0,37μm Rz 1,86μm</p>	<p>Surface shows chattering Ra 1,52μm Rz 6,45μm</p>

Work Material: X5CrNi1810 (Surface Milling)
 Tool Diameter: $\varnothing 12 \text{ mm}$
 Cutting Conditions: $n = 1.300 \text{ rpm}$, $v_f = 300 \text{ mm/min}$
 $d_{oc} = 18 \text{ mm}$, $w_{oc} = 1,2 \text{ mm}$
 Equipment: BT50