F653SX

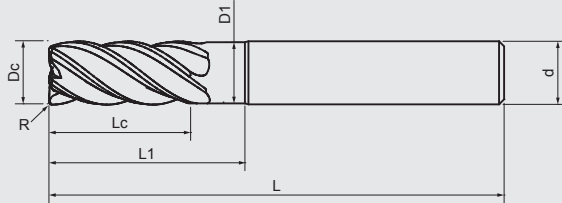# End Mills With Corner Radius For Difficult To Cut Materials

Designed with two variable helix geometry and two unequal flutes.

Sharp cutting edge is good for cutting toughness materials.

Designed with high removal cutting geometry.

Improved cutting edge strength with corner radius.

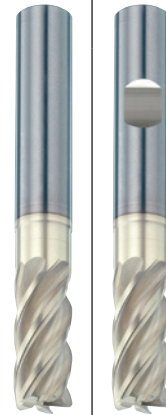Good wear resistance and lubricating effect with Nano multilayer coating.

VHM Carbide	AlTiXN+ZrN SX	38°	5	N 8°	R	Stainless Titainlum Nickel

Sharp cutting edge is suitable for cutting stainless steel, titanium, nickel and high temp alloys... etc.

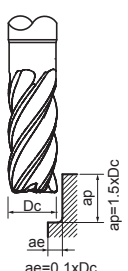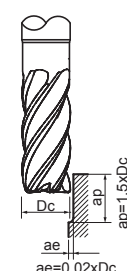Application for HPC/ roughing cutting and HSC/ finishing cutting.

M	M
S	S

DIN 6527 Standard Length

Dc 0 -0.02	R ±0.01	Lc mm	L mm	d h5	L1 mm	D1 mm	F653SX HA	F653SX HB			
3	R0.5	8	57	6	14	2.8	●	●			
4	R0.5	11	57	6	16	3.8	●	●			
5	R0.5	13	57	6	18	4.8	●	●			
6	R0.5	13	57	6	20	5.8	●	●			
8	R0.5	19	63	8	26	7.7	●	●			
10	R0.5	22	72	10	31	9.7	●	●			
12	R0.5	26	83	12	37	11.6	●	●			
16	R0.5	32	92	16	43	15.5	●	●			
20	R0.5	38	104	20	53	19.5	●	●			

Cutting Conditions

F653SX

ap=1.5xDc, ae=0.1xDc

ap=1.5xDc, ae=0.02xDc

		cutting speed Vc (m/min)	feed per tooth fz[mm]	cutting speed Vc (m/min)	feed per tooth fz[mm]
M	**Stainless Steel Materials**				
	GR8-1 Ferritic、Martensitic	80	0.003xDc	90	0.004xDc
	GR8-2 Austenitic	70	0.003xDc	80	0.003xDc
	GR8-3 Austenitic-ferritic	40	0.002xDc	50	0.003xDc
	GR8-4 Austenitic-ferritic Heat-resistant	30	0.002xDc	40	0.003xDc
S	**Cast Lron Materials**				
	GRI5 Titanium	35	0.002xDc	40	0.002xDc
	Nickel Materials				
	GRI6-1 Nickel	30	0.002xDc	35	0.002xDc
	GRI6-2 cobalt-base alloys	30	0.002xDc	35	0.002xDc
	GRI6-3 Iron-based alloy	30	0.002xDc	35	0.002xDc
	Heat-resistant Steel Materials				
	GRI7 Heat-resistant Steel	30	0.002xDc	35	0.002xDc

All cutting data serve for orientation only and should be adapted individually to the technical conditions on location
1. Please work with good rigidity / high precision facilities and collet chuck.
2. Please choose proper cutting fluid.
3. The cutting data is reference value only. Please adjust it according to your real working conditions.
4. If RPM is lower the reference value, the Feed rate (fz) and RPM should be reduced by the same proportion.
5. If vibration occurs during cutting, please reduce cutting parameter.