

HF514SX

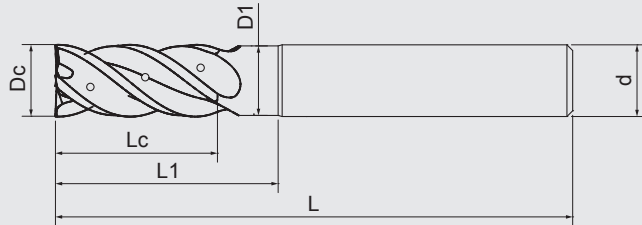
Multipurpose End Mills With Coolant Hole

Designed with variable helix geometry, unequal flutes.

Have a good wear resistance and impact resistance.

Good wear resistance and lubricating effect with Nano ZrN multilayer coating.

With Y-shape special oil-feed design can make cutting fluid act more directly on cutting point to enhance chip removal rate.

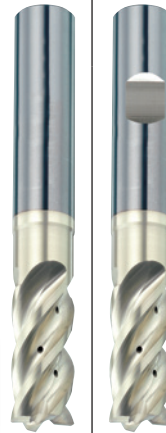


VHM
Carbide

AlTiXN+ZrN
SX



0.05-0.2
Steel
<48HRC



Suitable for cutting different steel below 48HRC as well as stainless steel and aluminium.

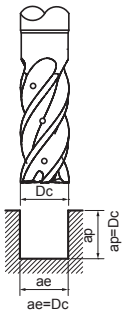
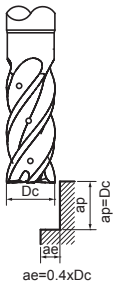
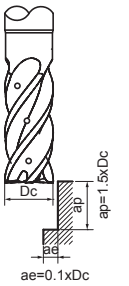
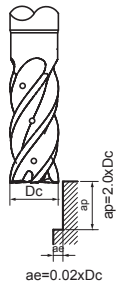
Application from roughing to finishing cutting, drilling, ramping... in different materials.



DIN 6527 Standard Length

Dc 0 -0.02	Lc mm	L mm	d h5	L1 mm	D1 mm	HF514SX HA	HF514SX HB				
6	13	57	6	20	5.8	●	●				
8	19	63	8	26	7.7	●	●				
10	22	72	10	31	9.7	●	●				
12	26	83	12	37	11.6	●	●				
16	32	92	16	43	15.5	●	●				
20	38	104	20	53	19.5	●	●				

Cutting Conditions

HF514SX									
		cutting speed Vc (m/min)	feed per tooth fz (mm)	cutting speed Vc (m/min)	feed per tooth fz (mm)	cutting speed Vc (m/min)	feed per tooth fz (mm)	cutting speed Vc (m/min)	feed per tooth fz (mm)
Carbon Steel Materials									
P	GR1 Carbon Steel	120	0.006xDc	120	0.006xDc	130	0.006xDc	140	0.007xDc
	GR2 <24HRC Low-alloyed Steel	120	0.005xDc	120	0.005xDc	130	0.005xDc	140	0.006xDc
	GR3 <30HRC Hi-alloyed Steel	80	0.005xDc	80	0.005xDc	90	0.005xDc	100	0.006xDc
Hardened Steel Materials									
H	GR4 30-38HRC Hardened Steel	65	0.004xDc	90	0.003xDc	90	0.003xDc	100	0.003xDc
	GR5 38-48HRC Hardened Steel	60	0.003xDc	80	0.003xDc	80	0.003xDc	90	0.003xDc
Stainless Steel Materials									
M	GR8-1 Ferritic \ Martensitic	80	0.003xDc	90	0.004xDc	110	0.003xDc	130	0.003xDc
	GR8-2 Austenitic	70	0.003xDc	80	0.003xDc	90	0.003xDc	100	0.003xDc
	GR8-3 Austenitic-ferritic	40	0.002xDc	50	0.003xDc	90	0.002xDc	60	0.002xDc
	GR8-4 Austenitic-ferritic Heat-resistant	30	0.002xDc	40	0.003xDc	40	0.002xDc	50	0.002xDc
Cast Iron Materials									
K	GR9-1 Grey cast iron	110	0.006xDc	110	0.006xDc	120	0.006xDc	130	0.007xDc
	GR9-2 Nodular cast iron	120	0.006xDc	120	0.006xDc	130	0.006xDc	140	0.007xDc

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.