

VF4MV

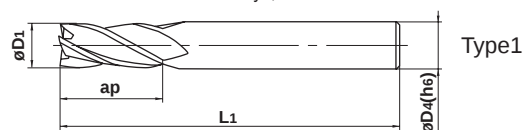
End mill, Medium cut length, 4 flute, Irregular helix flutes



CARBIDE

Carbon Steel, Alloy Steel, Cast Iron (≤30HRC)	Tool Steel, Pre-Hardened Steel, Hardened Steel (≤45HRC)	Hardened Steel (≤55HRC)	Hardened Steel (>55HRC)	Austenitic Stainless Steel	Titanium Alloy, Heat Resistant Alloy	Copper Alloy	Aluminium Alloy
○	◎	◎	◎				

★ For austenitic stainless steels, titanium and heat-resistant alloys, the VF4MV is recommended.



D1≤12	D1>12			
0 - 0.020	0 - 0.030			
D4=6	8≤D4≤10	12≤D4≤16	D4=20	
0 - 0.008	0 - 0.009	0 - 0.011	0 - 0.013	

● An irregular helix 4 flute square end mill suitable for high-speed machining of hardened steel.

Unit : mm

Order Number	D1	ap	L1	D4	Flutes	Stock	Type
VF4MVD0600	6	15	50	6	4	●	1
D0800	8	20	60	8	4	●	1
D1000	10	25	70	10	4	●	1
D1200	12	30	90	12	4	●	1
D1600	16	40	100	16	4	●	1
D2000	20	50	110	20	4	●	1

RECOMMENDED CUTTING CONDITIONS

Work material	Alloy steel, Tool steel, Pre-hardened steel			Hardened steel (45—55HRC)			Hardened steel (55—62HRC)		
	X40CrMoV51			X40CrMoV51			X210Cr12		
Dia. (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Depth of cut (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Depth of cut (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Depth of cut (mm)
6	10000	2100	0.60	7000	1400	0.30	2700	320	0.20
8	8000	1500	0.80	5600	1100	0.40	2000	240	0.20
10	6400	1400	1.00	4500	950	0.50	1600	210	0.30
12	5400	1200	1.00	3800	860	0.50	1300	160	0.30
16	2400	550	3.00	1200	280	0.80	1000	130	0.30
20	1900	480	4.00	1000	240	1.00	800	100	0.30
Depth of cut	≤Please refer to the list above for depth of cut. ≤D ≤Please refer to the list above for depth of cut. D: Dia.								

- 1) When slotting, reduce the revolutions by 50—70% and the feed rate by 40—60%.
- 2) For austenitic stainless steels, titanium and heat-resistant alloys, the VF4MV is recommended.
- 3) The irregular helix flute end mill has a larger effect on controlling vibration when compared to standard end mills. However, if the rigidity of the machine or the workpiece installation is poor, vibration or abnormal sound can occur. In this case, please reduce the revolution and feed rate proportionately, or set a lower depth of cut.

● : Inventory maintained.

SQUARE

BALL

RADIUS

TAPER

SOLID END MILLS