

VFR2MV

RECOMMENDED CUTTING CONDITIONS

Material	DC	n	f	ap
P Pre-hardened steel (35 – 45 HRC) Carbon steel	0.5	40000	1000	0.015
	1.0	40000	2000	0.06
	1.5	40000	3000	0.12
	2.0	30000	3000	0.18
	2.5	24000	2600	0.25
	3.0	20000	2300	0.30
	4.0	15000	2000	0.40
	5.0	12000	1600	0.50
H Hardened steel (45 – 55 HRC)	6.0	10000	1400	0.60
	0.5	40000	960	0.015
	1.0	32000	1600	0.06
	1.5	32000	1900	0.08
	2.0	24000	1900	0.10
	2.5	19000	1600	0.13
	3.0	16000	1400	0.15
	4.0	12000	1200	0.20
H Hardened steel (55 – 62 HRC)	5.0	9000	900	0.25
	6.0	7000	700	0.30
	0.5	30000	600	0.01
	1.0	16000	550	0.05
	1.5	10600	500	0.08
	2.0	8100	400	0.10
	2.5	6400	350	0.13
	3.0	5400	300	0.15
H Hardened steel (62 – 70 HRC)	4.0	4000	240	0.20
	5.0	3200	190	0.20
	6.0	2700	160	0.20
	0.5	19100	260	0.01
	1.0	9600	180	0.01
	1.5	6400	160	0.05
	2.0	4800	120	0.08
	2.5	3800	100	0.08
H Hardened steel (62 – 70 HRC)	3.0	3200	90	0.08
	4.0	2400	80	0.10
	5.0	1900	70	0.10
	6.0	1600	60	0.10

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1. When slotting, reduce the revolutions by 50 – 70 % and the feed rate by 40 – 60 %.
2. If the depth of cut is shallow, the revolution and feed rate can be increased.
3. Vibration damping end mills are more effective in suppressing chatter and vibration compared to general end mills, but may still occur if the rigidity of the machine or the workpiece material is low. In this case, please adjust the spindle speed, feed rate and depth of cut according to the table above.