

MSTAR END MILLS

MS4MRB...E

End mill, Medium cut length, 4 flute, Corner radius

CARBIDE

RECOMMENDED CUTTING CONDITIONS

Work material	Carbon steel, Alloy steel (—30HRC) Cast iron		Alloy steel, Tool steel, Pre-hardened steel (30—45HRC)		Stainless steel		Hardened steel (45—55HRC)	
Dia. (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)
1	40000	1200	32000	960	27000	675	24000	270
1.5	30000	1350	21000	900	18000	675	15000	270
2	22500	1350	15000	900	13650	675	12000	270
3	15000	1350	10500	900	9000	675	7500	270
4	11250	1350	7800	900	6750	675	6000	270
5	9000	1350	6300	900	5400	675	4800	270
6	7500	1350	5250	900	4500	675	4050	270
8	6000	1170	4200	780	3600	585	3000	240
10	4800	1020	3300	675	2850	510	2400	210
12	4050	1020	2850	615	2400	465	1950	180
16	3000	870	2400	480	1950	345	1650	150
Depth of cut	$\leq 0.1D$ ($D \geq \phi 3$) $\leq 0.2D$ ($D > \phi 3$) $\leq 1.5D$ $\leq 0.1D$ ($D < \phi 2$) $\leq 0.2D$ ($D \geq \phi 2$)				$\leq 0.05D$ $\leq 1D$ $\leq 0.05D$ ($D \leq \phi 2$) $\leq 0.01D$ ($D > \phi 2$)			

D: Dia.

SOLID END MILLS

Work material	Titanium		High Nickel Inconel	
Dia. (mm)	Revolution (min ⁻¹)	Feed rate (mm/min)	Revolution (min ⁻¹)	Feed rate (mm/min)
1	20000	500	10000	110
1.5	12800	400	6400	110
2	9500	400	4800	110
3	6400	400	3100	110
4	4800	480	2400	110
5	4000	400	1900	110
6	3100	400	1600	110
8	2400	300	1200	100
10	1900	300	900	80
12	1600	250	800	80
16	1200	180	600	60
Depth of cut	$\leq 0.1D$ ($D \leq \phi 3$) $\leq 0.2D$ ($D > \phi 3$) $\leq 1.5D$ $\leq 0.1D$ ($D < \phi 2$) $\leq 0.2D$ ($D \geq \phi 2$)			

D: Dia.

1) When using high efficiency conditions, the surface speeds/feeds can be increased by 2-3 times the above values.

