

# MIRACLE END MILLS

CARBIDE

## VC2JS

End mill, Semi long cut length, 2 flute

### RECOMMENDED CUTTING CONDITIONS

Work material	Carbon steel, Cast iron, Alloy steel (—30HRC)		Alloy steel, Tool steel, Pre-hardened steel		Austenitic stainless steel, Titanium alloy		Hardened steel (45—55HRC)	
	AISI 1050, AISI No 35 B, AISI P20		AISI H13, AISI W1-10, AISI P21		AISI 304, AISI 306, Ti-6Al-4V		AISI H13	
Dia. DC (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)	Revolution (min <sup>-1</sup> )	Feed rate (mm/min)
1	13000	60 (60)	9000	35 (35)	6500 (6500)	20 (20)	5700	20 (15)
2	6400	60 (60)	4800	45 (45)	3500 (3500)	30 (30)	3000	25 (15)
3	4200	65 (60)	3400	55 (55)	2600 (2600)	40 (40)	2100	30 (20)
4	3400	80 (60)	2700	65 (30)	2100 (1600)	50 (20)	1700	35 (20)
5	2900	100 (60)	2300	80 (40)	1800 (1350)	60 (25)	1500	40 (20)
6	2500	120 (60)	2000	100 (50)	1500 (1100)	75 (30)	1300	50 (25)
8	1900	130 (60)	1500	100 (50)	1200 (900)	85 (35)	1000	50 (25)
10	1600	130 (60)	1300	100 (50)	950 (710)	75 (30)	800	50 (25)
12	1300	120 (60)	1100	90 (45)	800 (600)	60 (25)	670	40 (20)
16	1000	80 (40)	820	65 (30)	600 (450)	45 (20)	500	30 (15)
20	800	65 (30)	650	50 (25)	480 (360)	40 (15)	400	25 (13)
25	650	50 (25)	520	40 (20)	380 (280)	30 (12)	320	20 (10)

  

Depth of cut	Standard		Slotting	
	DC	DC	DC	DC
Standard	≤0.05DC (MAX. 0.5mm)	≤2.5DC	≤0.02DC (MAX. 0.3mm)	≤2DC
Slotting	≤0.05DC (DC=φ1)	≤0.1DC (φ1 < DC ≤ φ2)	≤0.15DC (φ2 < DC ≤ φ3)	≤0.3DC (DC > φ3) (MAX. 3mm)

( ) : Indicates standard revolution and feed rates for slotting.

DC: Dia.

SOLID END MILLS

- 1) When cutting austenitic stainless steels, the use of water-soluble cutting fluid is effective.
- 2) If the depth of cut is shallow, the revolution and feed rate can be increased.
- 3) When drilling, please set the feed rate at 1/3 or below the values above.
- 4) If the rigidity of the machine or the work materials installation is very low, or chattering and noise are generated, reduce the revolution and feed rate proportionately.