

Drill and Chamfer Thread Mills



	Material Group	V _c (m/min)	Thread milling f _z (mm/tooth)		Drilling f _n (mm/rev)	
			Cutter diameter ≤ ø8.0	Cutter diameter > ø8.0	Cutter diameter ≤ ø8.0	Cutter diameter > ø8.0
K	31 Grey cast iron soft	115 (80-150)	0.055 (0.03 - 0.08)	0.1 (0.08 - 0.12)	0.15 (0.1 - 0.2)	0.225 (0.2 - 0.25)
	32 Grey cast iron hard					
	33 Nodular graphite cast iron <200HB					
	34 Nodular graphite cast iron <300HB					
N	71 Aluminium, Magnesium, unalloyed	200 (100-300)	0.075 (0.05 - 0.1)	0.125 (0.1 - 0.15)	0.15 (0.1 - 0.2)	0.25 (0.2 - 0.3)
	72 Aluminium, alloyed Si < 0.5%					
	73 Aluminium, alloyed, Si < 10%					
	74 Aluminium, alloyed, Si > 10%					
O	01 Thermoplastics	115 (80-150)	0.075 (0.05 - 0.1)	0.125 (0.1 - 0.15)	0.15 (0.1 - 0.2)	0.25 (0.2 - 0.3)
	02 Thermosetting Plastics					

v_c - cutting speed (m/min)

n - RPM (rev/min)

f_z - feed rate (mm/tooth)

f - feed rate (mm/rev)

z - No. of teeth

f₁ - feed at cutting edge

f₂ - feed at centre line

D - thread major diameter

$$\text{To calculate RPM from cutting speed: } n = \frac{v_c \times 1000}{\pi \times \phi}$$

$$\text{To calculate feed per revolution: } f_1 = n \times f_z \times z$$

$$\text{To calculate feed at tool centre line: } f_2 = \frac{f_1 \times (D - \phi)}{D}$$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.