Technical Section

Cutting data

ISO Standard	Materials Class	Vc [m/min]		
		Grades		
		XT3	XT5	XT7
P	Low & Medium Carbon Steels <0.55%C	5-45	5-40	10-35
	High Carbon Steels ≥0.55%C			
	Alloy Steels, Treated Steels			
M	Stainless Steel-Free Cutting	5-20	5-20	10-30
	Stainless Steel-Austenitic			
	Cast Steels			
K	Cast Iron	10-35	5-30	-
N	Aluminum ≤12%Si, Copper	10-35	10-35	15-45
	Aluminum >12%Si			
	Synthetics, duroplastics, thermoplastics			
S	Nickel alloys, Titanium alloys	1-10	-	-

Rotation speed (rpm): $n = \frac{1000 \cdot v_c}{\pi \cdot d_1}$

Feed $\left(\frac{mm}{min}\right)$: $f = p \cdot N$

Torque $(N \cdot m)$: $M = \frac{p^2 \cdot d_1 \cdot k_c}{8000}$

d_1 – *nominal diameter (mm)*

v_c – *cutting speed (m/min)*

n – *spindle rotating speed*

p – *thread pitch*

f – *feed*

k_c – *specific resistance of workpiece material (N/mm²)*

M – *torque when tapping (N*m)*