

## GROVING INSERTS (11ER/IL, 11IR/EL, 16ER/IL, 16IR/EL)



MATERIAL GROUP	MATERIAL TO BE MACHINED	CUTTING SPEED m/min
<b>P</b>	Low & Medium Carbon Steels	20 - 100
	High Carbon Steels	30 - 80
	Alloy Steels, Treated Steels	40 - 90
<b>M</b>	Stainless Steel	30 - 80
	Cast Steels	30 - 90
<b>K</b>	Cast Iron	30 - 90
<b>N</b>	Non-Ferrous and Aluminium	20 - 200

Key	
Vc	Cutting speed (m/min)
n	RPM (rev/min)
Fz	Feed rate (mm/tooth)
f	Feed rate (mm/rev)
z	No. of teeth

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

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

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.