Polycrystalline Diamond (PCD) 60° Engraving, 'V' Grooving and Chamfering CNC Router Bit Speed and Feed Chart

Tool No. DRB-416			Surface Cutting Speed		Chip Load Per Tooth		RPM		Feed Rate	
Material	Diameter Inch/mm	No. Teeth	From Inch (mm)/min	To Inch (mm)/min	From Inch (mm)/min	To Inch (mm)/min	From	To	From Inch (mm)/min	To Inch (mm)/min
Titanium	1/4" (6.35mm)	2	1.5" (40mm)	2" (45mm)	.002" (0.05mm)	.006" (0.15mm)	2,000	2,300	8" (201mm)	27" (677mm)
Wood	1/4" (6.35mm)	2	12" (300mm)	20" (500mm)	.002" (0.05mm)	.007" (0.17mm)	15,000	24,000	60" (1,505mm)	340" (8,526mm)
Homogenous Marble	1/4" (6.35mm)	2	2" (50mm)	8" (200mm)	.002" (0.05mm)	.007" (0.17mm)	2,500	10,000	10" (251mm)	140" (3,410mm)

Correction factor for chip load:
0.8 = MDF with or without Coating
1.1 = Chipboard with or without Coating
0.7 = Veneer across grain
0.9 = Aluminum

⚠ **Maximum RPM:** 24,000

Warning: Maximum recommended material depth in one pass varies from 1/64" (0.5mm) - 1/8" (3.0mm) depending on the hardness of the material. The harder the material the less the depth.

Simple Machining Calculations:
To find **RPM:** SFM x 3.82 / diameter of tool
To find **SFM:** 0.262 x diameter of tool x RPM
To find **Feed Rate:** RPM x # of flutes x chip load