

Polycrystalline Diamond (PCD) CNC Up/Down Shear Compression Router Bits



Tool No.	Diameter Inch/mm	No. Teeth	Chip Load Per Tooth Inch (mm)/min	RPM	Feed Rate Inch (mm)/min
DRB-192	3/8" (9.5mm)	1+1	.008" (0.20mm)	18,000	80" (2,030mm)
DRB-200	1/2" (12.7mm)	1+1	.008" (0.20mm)	18,000	140" (3,600mm)
DRB-208	1/2" (12.7mm)	1+1	.008" (0.20mm)	18,000	140" (3,600mm)
DRB-212	5/8" (15.9mm)	1+1	.008" (0.20mm)	18,000	140" (3,600mm)
DRB-216	5/8" (15.9mm)	1+1	.008" (0.20mm)	18,000	140" (3,600mm)
DRB-224	3/4" (19.1mm)	1+1	.01" (0.25mm)	18,000	180" (4,500mm)
DRB-240	1/2" (12.7mm)	2+2	.009" (0.23mm)	18,000	310" (7,874mm)
DRB-242	1/2" (12.7mm)	2+2	.009" (0.23mm)	18,000	310" (7,874mm)
DRB-244	1/2" (12.7mm)	2+2	.009" (0.23mm)	18,000	310" (7,874mm)
DRB-250	1/2" (12.7mm)	3+3	.007" (0.18mm)	18,000	390" (9,906mm)

Multipliers for different materials:

0.8% = MDF with or without Coating

1.1% = Chipboard with or without Coating

0.7% = Cross grain veneer

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 IPM**: RPM x # of flutes x chip load (When calculating feed rate IPM use only 1 flute)

To find **Chip Load** = $\frac{\text{Feed Rate IPM}}{\text{RPM} \times \# \text{ of Flutes}}$