

Edge of Arlington Saw & Tool, Inc.

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Item #DRB-200, Amana Tool CNC Polycrystalline Diamond (PCD) Tipped Compression Up/Down Shear R/H Direction 1/2" Dia x 1" CH x 1/2" Shank Router Bit (Industrial) \$185.09

Thank you for shopping with us! Diamond is the hardest naturally-occurring material on the earth. Polycrystalline Diamond (PCD) tooling is manufactured in a high-temperature and high-pressure laboratory that fuses diamond particles onto a carbide substrate, which allows the diamond to be brazed onto a tool body. If you're looking for the ultimate in tooling, you've found it. Our diamond router bits will cut a wide variety of tough, abrasive materials. The cutting edge lasts up to 100 times longer than carbide; in the long-run, PCD is the most economical choice. Diamond-tipped compression with carbide plunge point router bits for grooving, jointing & rabbeting in composites, MDF (both raw or with melamine), laminate, plastic, wood, veneers, and more. Up/Down-shear for double-sided material. **Excellent for Cutting:**

- Fiberglass Reinforced Composites
- Lightweight composites
- Custom composite materials
- Fiber-reinforced urethane
- Fiber-reinforced structural foam floors
- And More

Benefits of Diamond Technology

- Improved cycle times by enabling high material removal rates
- Faster speeds and feeds compared to conventional cutting tools
- Improved workpiece quality with tight dimensional control
- Optimized machine tool efficiency by increasing production capacity
- Consistently good component surface finish
- Can be reground up to 5 to 7 times
- Wear rate is much less than the carbide-tipped tools



PCD* CNC Up/Down Shear Compression Router Bit Speed and Feed Chart



Tool No.	Diameter Inch/mm	No. Teeth	Chip Load Per Tooth Inch (mm)/min	RPM	Feed Rate Inch (mm)/min
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)

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: RPM x # of flutes x chip load

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

SPECIFICATIONS	
Manufacturer	Amana Tool
Diameter	1/2 in
Flute Geometry	Upcut/Downcut
Flute	1+1
Length	1 3/8 in Shank Length
Overall Length	2 3/4 in
Rotation	Right
RPM	30,000
Shank	1/2 in
Style	Compression with carbide plunge point