Edge of Arlington Saw & Tool, Inc.

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Item #DRB-192, Amana Tool CNC Polycrystalline Diamond (PCD) Tipped Compression Up/Down Shear R/H Direction 1+1 Flute x 3/8 Dia x 1-1/4 Inch x 3/8 Shank Router Bit $153.77

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

Amana Tool®

INDUSTRIAL DIAMOND TECHNOLOGY

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** = $\frac{\text{Feed Rate}}{\text{RPM x \# of Flutes}}$

* Polycrystalline Diamond

SPECIFICATIONS	
Manufacturer	Amana Tool
Diameter	3/8 in
Flute Geometry	Upcut/Downcut
Flute	1+1
Length	1 1/2 in Shank Length
Overall Length	3 in
Rotation	Right
RPM	24,000
Shank	3/8 in
Style	Compression with carbide plunge point