

**10 and 12 Flute High Performance Solid Carbide Fiberglass and Composite Cutting  
CVD Diamond Coated Router Bits**  
Depth of Cut: 1 x Tool Diameter †

**Slotting**

| Material            | Diameter      | Flutes | Chip Load Per Tooth | RPM           | Feed Rate Inch/min |
|---------------------|---------------|--------|---------------------|---------------|--------------------|
| Carbon Fiber (CFRP) | 1/4" (6.35mm) | 10     | 0.0003" - 0.00033"  | 5,000 - 9,000 | 15" - 30"          |
|                     | 3/8" (9.53mm) | 12     | 0.0005" - 0.0007"   | 5,000 - 6,000 | 30" - 50"          |
|                     | 1/2" (12.7mm) | 12     | 0.0007" - 0.0009"   | 3,800 - 4,500 | 30" - 50"          |

| Tool Reference #'s |           |
|--------------------|-----------|
| 46486-CVD          | 1/4" Dia. |
| 46488-CVD          | 3/8" Dia. |
| 46489-CVD          | 1/2" Dia. |

**Peripheral Milling**

| Material            | Diameter      | Flutes | Chip Load Per Tooth | RPM            | Feed Rate Inch/min |
|---------------------|---------------|--------|---------------------|----------------|--------------------|
| Carbon Fiber (CFRP) | 1/4" (6.35mm) | 10     | 0.0003" - 0.00031"  | 6,000 - 12,000 | 15" - 30"          |
|                     | 3/8" (9.53mm) | 12     | 0.0004" - 0.0005"   | 6,000 - 9,000  | 30" - 50"          |
|                     | 1/2" (12.7mm) | 12     | 0.0005" - 0.0006"   | 4,800 - 7,500  | 30" - 50"          |

† **Depth of Cut:** 1 x D Use recommended chip load  
 2 x D Reduce chip load by 25%  
 3 x D Reduce chip load by 50%

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

To find **Chip Load:** Feed Rate IPM / (RPM x # of flutes)

To find **Ramp Down:** Feed Rate IPM / # of flutes

**Disclaimer:** It is important to understand that these values are only recommendations.

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