# Solid Carbide Fiberglass and Composite Cutting Router Bits
# Speed and Feed Chart
**Operating RPM:** 18,000

| Material | Surface Feet Per Minute | | | | Chip Load Per Tooth | | | |
|---|---|---|---|---|---|---|---|---|
| | 1/8" (0.125) | 1/4" (0.250) | 3/8" (0.375) | 1/2" (0.500) | 1/8" (0.125) | 1/4" (0.250) | 3/8" (0.375) | 1/2" (0.500) |
| Carbon, Carbon Graphite, Unfilled Plastics | 1,600 - 3,200 | 1,600 - 3,200 | 1,600 - 3,200 | 1,600 - 3,200 | 0.0008" - 0.0025" | 0.0025" - 0.0040" | 0.0040" - 0.0065" | 0.0065" - 0.0080" |
| Composites | 1,200 - 2,800 | 1,200 - 2,800 | 1,600 - 3,200 | 1,600 - 3,200 | 0.0004" - 0.0008" | 0.0008" - 0.0020" | 0.0030" - 0.0055" | 0.0050" - 0.0070" |
| Fiberglass Filled Plastics | 1,200 - 2,800 | 1,200 - 2,800 | 1,600 - 3,200 | 1,600 - 3,200 | 0.0004" - 0.0008" | 0.0008" - 0.0020" | 0.0030" - 0.0055" | 0.0050" - 0.0070" |
| Green Ceramic, Green Carbide | 800 - 1,600 | 800 - 1,600 | 800 - 1,600 | 800 - 1,600 | 0.0004" - 0.0008" | 0.0015" - 0.0030" | 0.0030" - 0.0055" | 0.0050" - 0.0070" |

| Tool Reference #'s | |
|---|---|
| 46098 | 1/4" Dia. |
| 48001 | 1/4" Dia. |
| 48002 | 3/8" Dia. |
| 48003 | 1/2" Dia. |
| 48010 | 1/8" Dia. |
| 48011 | 1/4" Dia. |
| 48012 | 1/4" Dia. |
| 48014 | 1/4" Dia. |
| 48016 | 3/8" Dia. |

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)

**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%

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