



Solid Carbide 30°, 45° & 60° Degree Single Flute Engraving Router Bits

CNC Operating Spindle Speed: 18,000 RPM / Depth of Cut: 1 x Tool Diameter

| Material | (Tip Width) 0.005" - 0.090" 30° | | (Tip Width) 0.025" - 0.042" 45° | | (Tip Width) 0.005" - 0.090" 60° | | Tool Reference #'s | | |
|---------------|---------------------------------------|------------------------------|---------------------------------------|------------------------------|---------------------------------------|------------------------------|--------------------|-------|-------|
| | Feed Rate IPM* | Chip Load Per Tooth IPR** | Feed Rate IPM* | Chip Load Per Tooth IPR** | Feed Rate IPM* | Chip Load Per Tooth IPR** | 30° | 45° | 60° |
| | | | | | | | — | — | — |
| Soft Wood | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | 45620 | — | — |
| Hard Wood | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | 45621 | — | — |
| Soft Plastic | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | — | 45601 | — |
| Hard Plastic | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | — | 45602 | — |
| Aluminum | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | — | 45622 | — |
| Solid Surface | 50" - 125" | 0.003" - 0.007" | 50" - 125" | 0.003" - 0.007" | 70" - 100" | 0.004" - 0.006" | — | 45623 | — |
| | | | | | | | 45771 | — | 45760 |
| | | | | | | | 45772 | — | 45761 |
| | | | | | | | 45773 | — | 45763 |
| | | | | | | | 45774 | — | 45765 |
| | | | | | | | 45775 | — | 45766 |
| | | | | | | | 45776 | — | 45767 |
| | | | | | | | 45777 | — | 45768 |
| | | | | | | | 45779 | — | 45769 |

IPM* Inches per minute

IPR** Inches per revolution

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 / 2

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

© Copyright Amana Tool® All Rights Reserved