

Double Edge V-Grooving ZrN Coated Router Bits with Flat Bottom for ACM Materials
Operating RPM: 18,000

| Material | Spindle Speed SFM* | Chip Load Per Tooth Based On Depth Of Cut | | | | |
|--|-----------------------|---|--------------------------|---------------------------|----------------------------|------------------------------|
| | | < 1/8" (< 3mm) | 1/8" - 3/16" (3mm - 5mm) | 3/16" - 5/16" (5mm - 8mm) | 5/16" - 9/16" (8mm - 14mm) | 9/16" - 23/32" (14mm - 18mm) |
| Aluminum | 656 - 1,312 | 0.0004" - 0.001" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.005" | 0.005" - 0.006" |
| Brass | 492 - 984 | 0.0003" - 0.0008" | 0.0008" - 0.0016" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.004" |
| Bronze | 328 - 492 | 0.0003" - 0.0008" | 0.0008" - 0.0016" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.004" |
| Plastics-Bakelite | 164 - 328 | 0.001" - 0.0016" | 0.002" - 0.003" | 0.003" - 0.005" | 0.005" - 0.008" | 0.008" - 0.010" |
| Plastics-PVC | 328 - 656 | 0.001" - 0.002" | 0.002" - 0.004" | 0.004" - 0.007" | 0.006" - 0.008" | 0.008" - 0.011" |
| Thermoplastics, Acetate, Plexiglass, Nylon | 984 - 1,640 | 0.0004" - 0.0014" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.006" | 0.006" - 0.007" |
| Wood | 984 - 1,312 | 0.0005" - 0.0014" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.005" | 0.005" - 0.006" |
| Titanium Composite Material (TCM) | 164 - 295 | 0.0003" - 0.0005" | 0.0004" - 0.001" | 0.001" - 0.002" | 0.002" - 0.003" | 0.003" - 0.004" |

* SFM Surface feet per minute

Depth of Cut: 1 x D Use recommended feed rate
 2 x D Reduce feed rate by 25%
 3 x D Reduce feed rate 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

| Tool Reference #'s | Angle |
|--------------------|-------|
| 45741 | 135° |
| 45743 | 135° |
| 45745 | 90° |
| 45747 | 90° |
| 45781 | 108° |
| 45785 | 108° |