



Speeds & Feeds

**Product Table:** End Mills For Steels & High Temp Alloys - Corner Radius - 4 & 5 Flute - Variable Helix  
**Characteristics:** 2x, 3x Length of Cut, 4 & 5 Flutes  
**Series:** VHM-XXX-X-XXX, VHM-XXXX-X, VHM-XXX-X, VHMM-XXX-X, VHS-XXX-X-XXX, VHSM-XXX-X, VLM-XXX-X-XXX

| Material                                                                                | Hardness<br>(HBn) | SFM | Chip Load (IPT) By Cutter Diameter |        |        |        |        |        |        |        |        |        |        |        | Depth of Cut |         |               |
|-----------------------------------------------------------------------------------------|-------------------|-----|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|---------|---------------|
|                                                                                         |                   |     | 0.015                              |        | 0.031  | 0.047  | 0.062  | 0.078  | 0.093  | 0.125  | 0.187  | 0.250  | 0.312  | 0.375  | 0.500        | Radial  | Axial         |
| Tool Steels: D, H, M, T, S series                                                       | 350 - 400         | 100 | Slotting                           | .00005 | .00010 | .00016 | .00020 | .00026 | .00031 | .00041 | .00062 | .00083 | .00108 | .00130 | .00173       | 1x Dia  | .4x Dia       |
|                                                                                         | 400 - 425         | 80  |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
| Stainless Steels: 40x, 41x, 42x, 43x, 44x, 13-8, 15-5, 15-7, 17-4, 17-7                 | 275 - 300         | 160 | Roughing                           | .00006 | .00013 | .00020 | .00026 | .00033 | .00039 | .00053 | .00079 | .00105 | .00138 | .00165 | .00221       | .4x Dia | .5x - .7x Dia |
|                                                                                         | 300 - 350         | 140 |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
| Titanium: All alloys                                                                    | 275 - 300         | 200 | Finishing                          | .00008 | .00017 | .00026 | .00034 | .00043 | .00051 | .00069 | .00103 | .00138 | .00180 | .00217 | .00289       | .1x Dia | .5x - 1x Dia  |
|                                                                                         | 300 - 350         | 125 |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
|                                                                                         | 350 - 400         | 75  | Max                                | .00010 | .00020 | .00031 | .00041 | .00051 | .00061 | .00083 | .00123 | .00165 | .00216 | .00260 | .00347       | -       | -             |
| 400 - 425                                                                               | 75                |     |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
| Nickel Alloys: Inconel, Hastelloy, Waspalloy, Monel, Nimonic, Haynes, Discoloy, Incoloy | 275 - 300         | 80  | Max                                | .00010 | .00020 | .00031 | .00041 | .00051 | .00061 | .00083 | .00123 | .00165 | .00216 | .00260 | .00347       | -       | -             |
|                                                                                         | 300 - 350         | 60  |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
|                                                                                         | 350 - 400         | 50  |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |
|                                                                                         | 400 - 425         | 40  |                                    |        |        |        |        |        |        |        |        |        |        |        |              |         |               |

**Please note:**  
All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. If less than minimum Axial or Radial DOC values are used, increased feed rates are possible. If greater than maximum Axial or Radial DOC values are used, decreased feed rates may be needed.  
If you require additional information, Micro100 has a team of technical experts available to assist you through even the most challenging applications. Please contact us at **800-421-8065** or **micro100tech@harveyperformance.com**.  
WARNING: Cutting tools may shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment in the vicinity of use.