# GARRTOOL Milling Guide for V5 End Mills in Titanium, Inconel, and Stainless 

## Fractional

|  | Titanium Alloys | Nickel or Cobalt-based Material | Stainless <br> (400 Series, pH Series) |
| :---: | :---: | :---: | :---: |
|  | SFM = 150-250 | SFM $=60-125$ | SFM = 150-300 |
| DIAMETER | CPT (Fz) | CPT (Fz) | CPT (Fz) |
| .2362" - .2755" | .0008" - .0011" | .0004" - .0008" | .0008" - .0012" |
| .2756" - .3124" | .0010" -.0015" | .0005" - .0010" | .0010"-.0018" |
| . 3125 " - .3749" | .0012" - .0018" | .0007" - .0012" | .0012" -.0020" |
| . 3750 " - .4999" | .0012" -.0021" | .0008" - .0015" | .0015"-.0022" |
| .5000" - .6249" | .0015" - .0025" | .0010" - .0018" | .0018" - .0030" |
| .6250" - .7499" | .0018" - .0030" | .0012" - .0020" | .0020"-.0033" |
| .7500" - .8749" | .0020" - .0032" | .0015" - .0022" | .0025"-.0037" |
| .8750" - 1.000" | .0025"-.0035" | .0018" - .0025" | .0030"-.0042" |



|  | Titanium Alloys | Nickel or Cobalt-based Material | Stainless <br> (400 Series, pH Series) |
| :---: | :---: | :---: | :---: |
|  | SFM = 300-500 | SFM = 100-200 | SFM = 250-400 |
| DIAMETER | CPT (Fz) | CPT (Fz) | CPT (Fz) |
| .2362" - .2755" | .0011"-.0015" | .0007" - .0011" | .0011"-.0015" |
| .2756" - .3124" | .0013"-.0021" | .0008" - .0013" | .0015"-.0021" |
| .3125"-.3749" | .0015" -.0023" | .0010" -.0015" | .0018" - .0025" |
| . 3750 " - .4999" | .0018" - .0025" | .0011"-.0018" | .0021"-.0028" |
| .5000"-.6249" | .0021" - .0033" | .0013"-.0021" | .0023" - .0033" |
| .6250" - .7499" | .0023" - .0036" | .0015"-.0023" | .0028" -.0038" |
| .7500" - .8749" | .0028" -.0040" | .0018" - .0025" | .0033" -.0043" |
| .8750" - 1.000" | .0033" - .0045" | .0021"-.0028" | .0038" - .0048" |


|  | Profling <br> Side Cutting | Slotting <br> Pocket Milling |
| :--- | :---: | :---: |
| Axial (ap) | $1 \times \mathrm{x}$ | $20 \%$ of Dia. |
| Radial (ae) | $20 \%$ of Dia. | $1 \times \mathrm{D}$ |



|  | Titanium Alloys | Nickel or Cobalt-based Material | Stainless <br> (400 Series, pH Series) |
| :---: | :---: | :---: | :---: |
|  | SFM $=400-700$ | SFM $=150-250$ | SFM = 300-500 |
| DIAMETER | CPT (Fz) | CPT (Fz) | CPT (Fz) |
| .2362" - .2755" | .0018" - .0022" | .0015" - .0020" | .0020" - .0025" |
| . 2756 " - .3124" | .0022" - .0028" | .0017" - .0022" | .0022" - .0030" |
| . 3125 " - .3749" | .0025" - .0032" | .0018" - .0025" | .0025" - .0035" |
| . 3750 " - .4999" | .0028" - .0035" | .0020" -.0028" | .0028" - .0040" |
| .5000" - .6249" | .0030" - .0040" | .0022" - .0030" | .0030" -.0045" |
| .6250" - .7499" | .0035" - .0045" | .0025" - .0032" | .0032" - .0050" |
| .7500" - .8749" | .0040" -.0050" | .0028" -.0035" | .0035" - .0055" |
| .8750"-1.000" | .0045" - .0055" | .0032" - .0040" | .0040"-.0060" |



NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.

