# VI-Pro Variable Index End Mills - 5 Flute

| Material Guide | | HRc | SFM | | FEED PER TOOTH | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Stub, Reg Length | Long, Xlong Length | 1/8" | 3/16" | 1/4" | 5/16" | 3/8" | 7/16" | 1/2" | 5/8" | 3/4" | 1" |
| COBALT BASE ALLOYS | Stellite, HS - 21, Haynes 25/188, X - 40, L - 605 | under 32<br>over 32 | 315 - 400<br>200 - 290 | 250 - 320<br>160 - 230 | .0004 - .0008 | .0005 - .0011 | .0009 - .0016 | .0010 - .0018 | .0012 - .0019 | .0014 - .0021 | .0016 - .0028 | .0019 - .0031 | .0024 - .0037 | .0029 - .0041 |
| NICKEL BASE ALLOYS | Inconel - 625/718, Waspalloy, Rene, Hastelloy | under 32<br>over 32 | 230 - 345<br>145 - 230 | 185 - 275<br>115 - 185 | .0004 - .0008 | .0005 - .0011 | .0009 - .0016 | .0010 - .0018 | .0012 - .0019 | .0014 - .0021 | .0016 - .0028 | .0019 - .0031 | .0024 - .0037 | .0029 - .0041 |
| IRON BASE ALLOYS | Incoloy 800 - 802, Multimet N - 155, Timkin 16 - 25 - 6, Carpeneter 22 - b3 | under 32<br>over 32 | 290 - 400<br>230 - 290 | 230 - 320<br>185 - 230 | .0004 - .0008 | .0005 - .0011 | .0009 - .0016 | .0010 - .0018 | .0012 - .0019 | .0014 - .0021 | .0016 - .0028 | .0019 - .0031 | .0024 - .0037 | .0029 - .0041 |
| MONEL | Monel - 65% Nickel | | 315 - 400 | 250 - 320 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0015 - .0017 | .0017 - .0019 | .0019 - .0021 | .0026 - .0028 | .0029 - .0031 | .0035 - .0037 | .0039 - .0041 |
| TITANIUM ALLOYS | Commercially Pure, 6AL - 4V, Astm 1/2/3, 6Al - 25N - 4Zr - 2Mo - Si | | 290 - 460 | 230 - 370 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0015 - .0017 | .0017 - .0019 | .0019 - .0021 | .0026 - .0028 | .0029 - .0031 | .0035 - .0037 | .0039 - .0041 |
| STAINLESS STEEL (PRECIPITATION) | 13/8, 15/5, 17 - 4 | under 32<br>over 32 | 290 - 345<br>230 - 290 | 230 - 275<br>185 - 230 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0016 - .0020 | .0017 - .0025 | .0019 - .0031 | .0026 - .0032 | .0029 - .0037 | .0035 - .0039 | .0039 - .0041 |
| STAINLESS STEEL (AUSTENTIC) | 200 Series, 302, 303, 304, 304L, 316, 316L | under 32<br>over 32 | 290 - 430<br>230 - 290 | 230 - 345<br>185 - 230 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0016 - .0020 | .0017 - .0025 | .0019 - .0031 | .0026 - .0032 | .0029 - .0037 | .0035 - .0039 | .0039 - .0041 |
| STAINLESS STEEL (MARTENSITIC) | 403, 410, 416, 440 | | 290 - 345 | 230 - 275 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0016 - .0020 | .0017 - .0025 | .0019 - .0031 | .0026 - .0032 | .0029 - .0037 | .0035 - .0039 | .0039 - .0041 |
| HIGH STRENGTH TOOL STEELS | 4140, 4340, 6150, 5210, A2, D2 P20, H11, H13, S2, 01 | under 32<br>over 32 | 290 - 400<br>170 - 230 | 230 - 420<br>135 - 185 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0016 - .0020 | .0017 - .0025 | .0019 - .0031 | .0026 - .0032 | .0029 - .0037 | .0035 - .0039 | .0039 - .0041 |
| MEDIUM ALLOY STEELS | 200, 250, 300 | under 32<br>over 32 | 240 - 345<br>150 - 200 | 190 - 275<br>120 - 160 | .0004 - .0008 | .0009 - .0011 | .0014 - .0016 | .0016 - .0020 | .0017 - .0025 | .0019 - .0031 | .0026 - .0032 | .0029 - .0037 | .0035 - .0039 | .0039 - .0041 |
| CARBON STEELS | 1000's, 1100's, 1300's | | 480 - 510 | 385 - 405 | .0004 - .0008 | .0011 - .0013 | .0018 - .0020 | .0024 - .0026 | .0030 - .0032 | .0033 - .0035 | .0035 - .0037 | .0039 - .0041 | .0041 - .0043 | .0054 - .0056 |
| DUCTILE | Ductile Cast Irons | | 480 - 510 | 385 - 405 | .0004 - .0008 | .0011 - .0013 | .0018 - .0020 | .0024 - .0026 | .0030 - .0032 | .0033 - .0035 | .0035 - .0037 | .0039 - .0041 | .0041 - .0043 | .0054 - .0056 |
| CAST IRONS | Gray Cast Irons | | 480 - 510 | 385 - 405 | .0004 - .0008 | .0011 - .0013 | .0018 - .0020 | .0024 - .0026 | .0030 - .0032 | .0033 - .0035 | .0035 - .0037 | .0039 - .0041 | .0041 - .0043 | .0054 - .0056 |