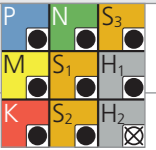


NEW

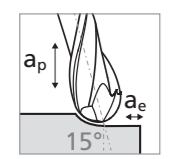
Type B - Finishing

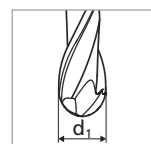
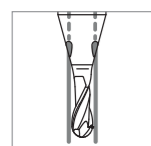
V_c [m/min] | [SFM]
f_z [mm] | [IPT]

RECOMMENDATION FOR USE
● Excellent | ● Good | ○ Acceptable | ☒ Not recommended



MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW

Inclination 15°

 ■ $a_p = 0.1 \times d$,
 ■ $a_e = 0.05 - 0.1 \times d$,
 n_{max} = 60'000 rpm



| Materials group | Material | Mat. no. | DIN | AISI/ASTM/UNS | 1.0 mm .039" | | 1.2 mm .047" | | Ød1 | | | | 3/32" | | 1/8" | | 5/32" | | 3/16" | | 7/32-1/4" | | | | |
|----------------------------------|--|-----------------------------|--------------------|-------------------------|-------------------------------|----------------|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|--|
| | | | | | v _c f _z | | v _c f _z | | 1.5 .059" | | 1.8 mm .071" | | 2.0 mm .079" | | 2.5 mm .098" | | 3.0 mm .118" | | 4.0 mm .158" | | 5.0 mm .197" | | 6.0-8.0 mm .236"-.315" | | |
| | | | | | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | v _c | f _z | |
| P | Unalloyed carbon steel Rm < 800 N/mm ² | 1.0301 | C10 | AISI 1010 | | | | | | | | | | | | | | | | | | | | | |
| | | 1.0401 | C15 | AISI 1015 | | | | | | | | | | | | | | | | | | | | | |
| | | 1.1191 | C45E/CK45 | AISI 1045 | | 140 | 0.015 | 140 | 0.017 | | | | | | | | | | | | | | | | |
| | | 1.0044 | S275JR | AISI 1020 | | 459 | .00059 | 459 | .00067 | | | | | | | | | | | | | | | | |
| | | 1.0715 | 11SMn30 | AISI 1215 | | | | | | | | | | | | | | | | | | | | | |
| | Low alloyed steel Rm > 900 N/mm ² | 1.5752 | 15NiCr13 | ASTM 3415 / AISI 3310 | | | | | | | | | | | | | | | | | | | | | |
| | | 1.7131 | 16MnCr5 | AISI 5115 | | | | | | | | | | | | | | | | | | | | | |
| | | 1.3505 | 100Cr6 | AISI 52100 | | 140 | 0.014 | 140 | 0.016 | | | | | | | | | | | | | | | | |
| | | 1.7225 | 42CrMo4 | AISI 4140 | | 459 | .00055 | 459 | .00063 | | | | | | | | | | | | | | | | |
| | | 1.2842 | 90MnCrV8 | AISI O2 | | | | | | | | | | | | | | | | | | | | | |
| | | 1.2379 | X153CrMoV12 | AISI D2 | | | | | | | | | | | | | | | | | | | | | |
| | M | Stainless steel ferritic | 1.4016 | X6Cr17 | AISI 430 / UNS S43000 | | | | | | | | | | | | | | | | | | | | |
| | | | 1.4105 | X6CrMoS17 | AISI 430F | | 140 | 0.016 | 140 | 0.018 | | | | | | | | | | | | | | | |
| | | | 459 | .00063 | 459 | .00071 | | | | | | | | | | | | | | | | | | | |
| | | Stainless steel martensitic | 1.4034 | X46Cr13 | AISI 420C | | | | | | | | | | | | | | | | | | | | |
| 1.4112 | | | X90CrMoV18 | AISI 440B | | 140 | 0.015 | 140 | 0.017 | | | | | | | | | | | | | | | | |
| 459 | | | .00059 | 459 | .00067 | | | | | | | | | | | | | | | | | | | | |
| Stainless steel martensitic - PH | | 1.4542 | X5CrNiCuNb16-4 | AISI 630 / ASTM 17-4 PH | | | | | | | | | | | | | | | | | | | | | |
| | | 1.4545 | X5CrNiCuNb15-5 | ASTM 15-5 PH | | 140 | 0.015 | 140 | 0.017 | | | | | | | | | | | | | | | | |
| | | 459 | .00059 | 459 | .00067 | | | | | | | | | | | | | | | | | | | | |
| Stainless steel austenitic | 1.4301 | X5CrNi18-10 | AISI 304 | | | | | | | | | | | | | | | | | | | | | | |
| | 1.4435 | X2CrNiMo18-14-3 | AISI 316L | | 140 | 0.012 | 140 | 0.014 | | | | | | | | | | | | | | | | | |
| | 459 | .00047 | 459 | .00055 | | | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | 0.6020 | GG20 | ASTM 30 | | | | | | | | | | | | | | | | | | | | | |
| | | 0.6030 | GG30 | ASTM 40B | | | | | | | | | | | | | | | | | | | | | |
| | | 0.7040 | GGG40 | ASTM 60-40-18 | | 120 | 0.011 | 120 | 0.022 | | | | | | | | | | | | | | | | |
| | | 394 | .00043 | 394 | .00087 | | | | | | | | | | | | | | | | | | | | |
| N | Aluminium alloy wrought | 3.2315 | AlMgSi1 | ASTM 6351 | | | | | | | | | | | | | | | | | | | | | |
| | | 3.4365 | AlZnMgCu1.5 | ASTM 7075 | | 140 | 0.018 | 140 | 0.020 | | | | | | | | | | | | | | | | |
| | | 459 | .00071 | 459 | .00079 | | | | | | | | | | | | | | | | | | | | |
| | Aluminium alloy cast | 3.2163 | GD-ALSi9Cu3 | ASTM A380 | | | | | | | | | | | | | | | | | | | | | |
| | | 3.2381 | GD-ALSi10Mg | UNS A03590 | | 140 | 0.018 | 140 | 0.020 | | | | | | | | | | | | | | | | |
| | Copper | 2.0040 | Cu-OF / CW008A | UNS C10100 | | | | | | | | | | | | | | | | | | | | | |
| | | 2.0065 | Cu-ETP / CW004A | UNS C11000 | | 140 | 0.020 | 140 | 0.022 | | | | | | | | | | | | | | | | |
| | Brass lead free | 2.0321 | CuZn37 CW508L | UNS C27400 | | | | | | | | | | | | | | | | | | | | | |
| | | 2.0360 | CuZn40 CW509L | UNS C28000 | | 140 | 0.020 | 140 | 0.022 | | | | | | | | | | | | | | | | |
| | | 459 | .00079 | 459 | .00087 | | | | | | | | | | | | | | | | | | | | |
| | Brass, Bronze Rm < 400 N/mm ² | 2.0401 | CuZn39Pb3 / CW614N | UNS C38500 | | | | | | | | | | | | | | | | | | | | | |
| | | 2.1020 | CuSn6 | UNS C51900 | | 140 | 0.020 | 140 | 0.022 | | | | | | | | | | | | | | | | |
| | Bronze Rm < 600 N/mm ² | 2.0966 | CuAl10Ni5Fe4 | UNS C63000 | | | | | | | | | | | | | | | | | | | | | |
| | | 2.0960 | CuAl9Mn2 | UNS C63200 | | 140 | 0.018 | 140 | 0.020 | | | | | | | | | | | | | | | | |
| | S₁ | Super alloys | 2.4856 | | Inconel 625 | | | | | | | | | | | | | | | | | | | | |
| 2.4668 | | | | Inconel 718 | | 120 | 0.007 | 120 | 0.008 | | | | | | | | | | | | | | | | |
| 2.4617 | | | NiMo28 | Hastelloy B-2 | | 394 | .00028 | 394 | .00031 | | | | | | | | | | | | | | | | |
| 2.4665 | | | NiCr22Fe18Mo | Hastelloy X | | | | | | | | | | | | | | | | | | | | | |
| S₂ | Titanium pure | 3.7035 | Gr.2 | ASTM B348 / F67 | | | | | | | | | | | | | | | | | | | | | |
| | | 3.7065 | Gr.4 | ASTM B348 / F68 | | 120 | 0.016 | 120 | 0.018 | | | | | | | | | | | | | | | | |
| S₃ | Titanium alloys | 3.7165 | TiAl6V4 | ASTM B348 / F136 | | | | | | | | | | | | | | | | | | | | | |
| | | 9.9367 | TiAl6Nb7 | ASTM F1295 | | 120 | 0.016 | 120 | 0.018 | | | | | | | | | | | | | | | | |
| H₁ | Hardened steel < 55 HRC | 1.2510 | 100MnCrMoW4 | AISI O1 | | | | | | | | | | | | | | | | | | | | | |
| | | 459 | .00028 | 459 | .00031 | | | | | | | | | | | | | | | | | | | | |
| H₂ | Hardened steel ≥ 55 HRC | 1.2379 | X153CrMoV12 | AISI D2 | | | | | | | | | | | | | | | | | | | | | |
| | | 140 | 0.010 | 140 | 0.012 | | | | | | | | | | | | | | | | | | | | |

07