



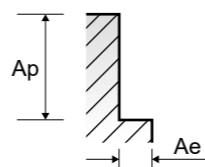
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

G9A42 SERIES MULTI FLUTE ROUGHING - SIDE CUTTING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

| ISO | VDI 3323 | Material Description | Ae | Ap | Parameter | Mill Diameter (Ø) | | | | | | | | |
|-------------|------------------------------------|----------------------|------|-------|-----------|-------------------|-------|-------|-------|-------|-------|-------|-------|------|
| | | | | | | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 25.0 |
| P | 1-4 | Non-alloy steel | 0.3D | 1.5D | Vc | 250 | 250 | 245 | 255 | 255 | 255 | 250 | 260 | 285 |
| | | | | | fz | 0.05 | 0.067 | 0.063 | 0.075 | 0.088 | 0.1 | 0.112 | 0.112 | 0.1 |
| | RPM | | | | 13263 | 9947 | 7799 | 6764 | 5798 | 5073 | 4421 | 4138 | 3629 | |
| | FEED | | | | 1989 | 1999 | 1965 | 2029 | 2041 | 2029 | 1981 | 1854 | 1814 | |
| | Vc | | | | 200 | 195 | 205 | 190 | 195 | 205 | 210 | 190 | 210 | |
| | fz | | | | 0.022 | 0.023 | 0.028 | 0.033 | 0.04 | 0.04 | 0.041 | 0.039 | 0.039 | |
| | 5 | Low alloy steel | 0.3D | 1.5D | RPM | 10610 | 7759 | 6525 | 5040 | 4434 | 4078 | 3714 | 3024 | 2674 |
| | | | | | FEED | 700 | 535 | 731 | 665 | 709 | 653 | 609 | 472 | 521 |
| | Vc | | | | 250 | 250 | 245 | 255 | 255 | 255 | 250 | 260 | 285 | |
| | fz | | | | 0.05 | 0.067 | 0.063 | 0.075 | 0.088 | 0.1 | 0.112 | 0.112 | 0.1 | |
| | RPM | | | | 13263 | 9947 | 7799 | 6764 | 5798 | 5073 | 4421 | 4138 | 3629 | |
| | FEED | | | | 1989 | 1999 | 1965 | 2029 | 2041 | 2029 | 1981 | 1854 | 1814 | |
| 6-7 | High alloyed steel, and tool steel | 0.3D | 1.5D | Vc | 200 | 195 | 205 | 190 | 195 | 205 | 210 | 190 | 210 | |
| | | | | fz | 0.022 | 0.023 | 0.028 | 0.033 | 0.04 | 0.04 | 0.041 | 0.039 | 0.039 | |
| RPM | | | | 10610 | 7759 | 6525 | 5040 | 4434 | 4078 | 3714 | 3024 | 2674 | | |
| FEED | | | | 700 | 535 | 731 | 665 | 709 | 653 | 609 | 472 | 521 | | |
| Vc | | | | 250 | 250 | 245 | 255 | 255 | 255 | 250 | 260 | 285 | | |
| fz | | | | 0.05 | 0.067 | 0.063 | 0.075 | 0.088 | 0.1 | 0.112 | 0.112 | 0.1 | | |
| 8-9 | Stainless steel | 0.3D | 1.5D | RPM | 13263 | 9947 | 7799 | 6764 | 5798 | 5073 | 4421 | 4138 | 3629 | |
| | | | | FEED | 1989 | 1999 | 1965 | 2029 | 2041 | 2029 | 1981 | 1854 | 1814 | |
| Vc | | | | 200 | 195 | 205 | 190 | 195 | 205 | 210 | 190 | 210 | | |
| fz | | | | 0.022 | 0.023 | 0.028 | 0.033 | 0.04 | 0.04 | 0.041 | 0.039 | 0.039 | | |
| RPM | | | | 10610 | 7759 | 6525 | 5040 | 4434 | 4078 | 3714 | 3024 | 2674 | | |
| FEED | | | | 700 | 535 | 731 | 665 | 709 | 653 | 609 | 472 | 521 | | |
| 10 | Heat Resistant Super Alloys | 0.3D | 1.5D | Vc | 135 | 135 | 135 | 135 | 135 | 140 | 130 | 130 | 145 | |
| | | | | fz | 0.022 | 0.022 | 0.028 | 0.034 | 0.039 | 0.038 | 0.039 | 0.038 | 0.038 | |
| RPM | | | | 7162 | 5371 | 4297 | 3581 | 3069 | 2785 | 2299 | 2069 | 1846 | | |
| FEED | | | | 473 | 355 | 481 | 487 | 479 | 423 | 359 | 314 | 351 | | |
| Vc | | | | 40 | 40 | 35 | 40 | 35 | 35 | 35 | 35 | 40 | | |
| fz | | | | 0.026 | 0.024 | 0.036 | 0.04 | 0.037 | 0.032 | 0.038 | 0.041 | 0.06 | | |
| 11.1 - 11.2 | Chilled Cast Iron | 0.3D | 1.5D | RPM | 2122 | 1592 | 1114 | 1061 | 796 | 696 | 619 | 557 | 509 | |
| | | | | FEED | 166 | 115 | 160 | 170 | 118 | 89 | 94 | 91 | 153 | |
| Vc | | | | 200 | 195 | 205 | 190 | 195 | 205 | 210 | 190 | 210 | | |
| fz | | | | 0.022 | 0.023 | 0.028 | 0.033 | 0.04 | 0.04 | 0.041 | 0.039 | 0.039 | | |
| RPM | | | | 10610 | 7759 | 6525 | 5040 | 4434 | 4078 | 3714 | 3024 | 2674 | | |
| FEED | | | | 700 | 535 | 731 | 665 | 709 | 653 | 609 | 472 | 521 | | |

※ The FEED, in long & extra long types, should be reduced by around 50%



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

G9400 SERIES 2 FLUTE DRILL MILLS - CHAMFERING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

| ISO | VDI 3323 | Material Description | Parameter | Mill Diameter (Ø) | | | | | | | | | | |
|------|------------------------------------|----------------------|-----------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | | | | 3.0 | 4.0 | 5.0 | 6.0 | 8.0 | 10.0 | 12.0 | 16.0 | 20.0 | | |
| P | 1-2 | Non-alloy steel | Vc | 60 | 65 | 65 | 60 | 60 | 65 | 70 | 70 | 85 | | |
| | | | fz | 0.025 | 0.031 | 0.04 | 0.052 | 0.071 | 0.083 | 0.1 | 0.125 | 0.137 | | |
| | RPM | | 6366 | 5173 | 4138 | 3183 | 2387 | 2069 | 1857 | 1393 | 1353 | | | |
| | FEED | | 318 | 321 | 331 | 331 | 339 | 343 | 371 | 348 | 371 | | | |
| | Vc | | 45 | 55 | 55 | 55 | 55 | 55 | 60 | 65 | 65 | | | |
| | fz | | 0.023 | 0.027 | 0.036 | 0.043 | 0.058 | 0.073 | 0.091 | 0.105 | 0.14 | | | |
| | 3-4 | Low alloy steel | 0.3D | 1.5D | RPM | 4775 | 4377 | 3501 | 2918 | 2188 | 1751 | 1592 | 1293 | 1035 |
| | | | | | FEED | 220 | 236 | 252 | 251 | 254 | 256 | 290 | 272 | 290 |
| | Vc | | | | 40 | 45 | 45 | 40 | 40 | 50 | 50 | 50 | 55 | |
| | fz | | | | 0.023 | 0.028 | 0.035 | 0.044 | 0.06 | 0.066 | 0.083 | 0.115 | 0.134 | |
| | RPM | | | | 4244 | 3581 | 2865 | 2122 | 1592 | 1592 | 1326 | 995 | 875 | |
| | FEED | | | | 195 | 201 | 201 | 187 | 191 | 210 | 220 | 229 | 235 | |
| 5 | High alloyed steel, and tool steel | 0.3D | 1.5D | Vc | 60 | 65 | 65 | 60 | 60 | 65 | 70 | 70 | 85 | |
| | | | | fz | 0.025 | 0.031 | 0.04 | 0.052 | 0.071 | 0.083 | 0.1 | 0.125 | 0.137 | |
| RPM | | | | 6366 | 5173 | 4138 | 3183 | 2387 | 2069 | 1857 | 1393 | 1353 | | |
| FEED | | | | 318 | 321 | 331 | 331 | 339 | 343 | 371 | 348 | 371 | | |
| Vc | | | | 45 | 55 | 55 | 55 | 55 | 55 | 60 | 65 | 65 | | |
| fz | | | | 0.023 | 0.027 | 0.036 | 0.043 | 0.058 | 0.073 | 0.091 | 0.105 | 0.14 | | |
| 6 | Stainless steel | 0.3D | 1.5D | RPM | 4775 | 4377 | 3501 | 2918 | 2188 | 1751 | 1592 | 1293 | 1035 | |
| | | | | FEED | 220 | 236 | 252 | 251 | 254 | 256 | 290 | 272 | 290 | |
| Vc | | | | 40 | 45 | 45 | 40 | 40 | 50 | 50 | 50 | 55 | | |
| fz | | | | 0.023 | 0.028 | 0.035 | 0.044 | 0.06 | 0.066 | 0.083 | 0.115 | 0.134 | | |
| RPM | | | | 4244 | 3581 | 2865 | 2122 | 1592 | 1592 | 1326 | 995 | 875 | | |
| FEED | | | | 195 | 201 | 201 | 187 | 191 | 210 | 220 | 229 | 235 | | |
| 7 | Heat Resistant Super Alloys | 0.3D | 1.5D | Vc | 60 | 65 | 65 | 60 | 60 | 65 | 70 | 70 | 85 | |
| | | | | fz | 0.025 | 0.031 | 0.04 | 0.052 | 0.071 | 0.083 | 0.1 | 0.125 | 0.137 | |
| RPM | | | | 6366 | 5173 | 4138 | 3183 | 2387 | 2069 | 1857 | 1393 | 1353 | | |
| FEED | | | | 318 | 321 | 331 | 331 | 339 | 343 | 371 | 348 | 371 | | |
| Vc | | | | 40 | 45 | 45 | 40 | 40 | 50 | 50 | 50 | 55 | | |
| fz | | | | 0.023 | 0.028 | 0.035 | 0.044 | 0.06 | 0.066 | 0.083 | 0.115 | 0.134 | | |
| 8-9 | Chilled Cast Iron | 0.3D | 1.5D | RPM | 4244 | 3581 | 2865 | 2122 | 1592 | 1592 | 1326 | 995 | 875 | |
| | | | | FEED | 195 | 201 | 201 | 187 | 191 | 210 | 220 | 229 | 235 | |
| Vc | | | | 30 | 35 | 40 | 35 | 35 | 40 | 40 | 40 | 45 | | |
| fz | | | | 0.021 | 0.025 | 0.029 | 0.037 | 0.055 | 0.064 | 0.078 | 0.11 | 0.122 | | |
| RPM | | | | 3183 | 2785 | 2546 | 1857 | 1393 | 1273 | 1061 | 796 | 716 | | |
| FEED | | | | 134 | 139 | 148 | 137 | 153 | 163 | 166 | 175 | 175 | | |
| 10 | Aluminum-wrought alloy | 0.3D | 1.5D | Vc | 145 | 160 | 150 | 150 | 155 | 175 | 185 | 195 | 195 | |
| | | | | fz | 0.025 | 0.032 | 0.045 | 0.057 | 0.075 | 0.085 | 0.1 | 0.134 | 0.175 | |
| RPM | | | | 15385 | 12732 | 9549 | 7958 | 6167 | 5570 | 4907 | 3879 | 3104 | | |
| FEED | | | | 769 | 815 | 859 | 907 | 925 | 947 | 981 | 1040 | 1086 | | |
| Vc | | | | 145 | 160 | 150 | 150 | 155 | 175 | 185 | 195 | 195 | | |
| fz | | | | 0.025 | 0.032 | 0.045 | 0.057 | 0.075 | 0.085 | 0.1 | 0.134 | 0.175 | | |
| 11.1 | Aluminum-cast, alloyed | 0.3D | 1.5D | RPM | 15385 | 12732 | 9549 | 7958 | 6167 | 5570 | 4907 | 3879 | 3104 | |
| | | | | FEED | 769 | 815 | 859 | 907 | 925 | 947 | 981 | 1040 | 1086 | |

※ The FEED, in long & extra long types, should be reduced by around 50%

