

Cylindrical end mills

Finishing, short-shank version

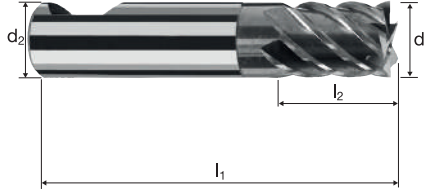


| | |
|------|---------------|
| HM | λ 45° |
| MG10 | γ 10° |

| | |
|-----|--|
| 90° | |
|-----|--|

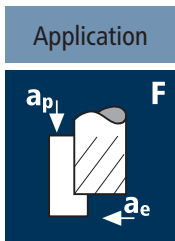
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|----------|-------------|--------------|--|--|--|--|-------------------|----------------|---------------------|
| Rm < 850 | Rm 850-1100 | Rm 1100-1300 | | | | | Inox Stainless | Ti Titanium | GG(G) Tool Steel |
|----------|-------------|--------------|--|--|--|--|-------------------|----------------|---------------------|

| | | | | | | | | | POLYCHROM |
|-----------------------|-------------|-------------|-------|-------|-------|----------|-----|--|-----------|
| Example: Order-N°. | | | | | | | | | |
| Coating: P | | | | | | | | | |
| Article-N°: 5337 | | | | | | | | | |
| ø-Code: 180 | | | | | | | | | |
| Ø Code | d_1 e8 | d_2 h6 | l_1 | l_2 | l_4 | α | z | | |
| 180 | 3.00 | 6.00 | 38 | 4.00 | 11.96 | 8.0° | 4 | | ● |
| 220 | 4.00 | 6.00 | 38 | 5.00 | 11.59 | 5.5° | 4 | | ● |
| 260 | 5.00 | 6.00 | 38 | 6.00 | 10.72 | 3.0° | 4 | | ● |
| 300 | 6.00 | 6.00 | 38 | 7.00 | - | 0.0° | 6 | | ● |
| 391 | 8.00 | 8.00 | 41 | 9.00 | - | 0.0° | 6 | | ● |
| 450 | 10.00 | 10.00 | 48 | 11.00 | - | 0.0° | 6 | | ● |
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Material

Steel
< 850 N/mm²

| d1 [mm] | z | v _c [m/min] | f _t [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|
| 3.00 | 4 | 160 | 0.010 | 3.000 | 0.150 | 16975 | 680 |
| 4.00 | 4 | 160 | 0.010 | 4.000 | 0.200 | 12730 | 510 |
| 5.00 | 4 | 160 | 0.015 | 5.000 | 0.250 | 10185 | 610 |
| 6.00 | 6 | 160 | 0.015 | 6.000 | 0.300 | 8490 | 765 |
| 8.00 | 6 | 160 | 0.025 | 8.000 | 0.400 | 6365 | 955 |
| 10.00 | 6 | 160 | 0.030 | 10.000 | 0.500 | 5095 | 915 |

Steel
850 - 1100 N/mm²

| | | | | | | | |
|-------|---|-----|-------|--------|-------|-------|-----|
| 3.00 | 4 | 100 | 0.010 | 3.000 | 0.150 | 10610 | 425 |
| 4.00 | 4 | 100 | 0.010 | 4.000 | 0.200 | 7960 | 320 |
| 5.00 | 4 | 100 | 0.015 | 5.000 | 0.250 | 6365 | 380 |
| 6.00 | 6 | 100 | 0.015 | 6.000 | 0.300 | 5305 | 475 |
| 8.00 | 6 | 100 | 0.025 | 8.000 | 0.400 | 3980 | 595 |
| 10.00 | 6 | 100 | 0.030 | 10.000 | 0.500 | 3185 | 575 |

Steel
1100 - 1300 N/mm²

| | | | | | | | |
|-------|---|----|-------|--------|-------|------|-----|
| 3.00 | 4 | 75 | 0.010 | 3.000 | 0.150 | 7960 | 320 |
| 4.00 | 4 | 75 | 0.010 | 4.000 | 0.200 | 5970 | 240 |
| 5.00 | 4 | 75 | 0.015 | 5.000 | 0.250 | 4775 | 285 |
| 6.00 | 6 | 75 | 0.015 | 6.000 | 0.300 | 3980 | 360 |
| 8.00 | 6 | 75 | 0.025 | 8.000 | 0.400 | 2985 | 450 |
| 10.00 | 6 | 75 | 0.030 | 10.000 | 0.500 | 2385 | 430 |

Inox normal
[Cr-Ni/1.4301]
[Cr-Ni-Mo/1.4571]

| | | | | | | | |
|-------|---|----|-------|--------|-------|------|-----|
| 3.00 | 4 | 90 | 0.010 | 3.000 | 0.150 | 9550 | 380 |
| 4.00 | 4 | 90 | 0.010 | 4.000 | 0.200 | 7160 | 285 |
| 5.00 | 4 | 90 | 0.015 | 5.000 | 0.250 | 5730 | 345 |
| 6.00 | 6 | 90 | 0.015 | 6.000 | 0.300 | 4775 | 430 |
| 8.00 | 6 | 90 | 0.025 | 8.000 | 0.400 | 3580 | 535 |
| 10.00 | 6 | 90 | 0.030 | 10.000 | 0.500 | 2865 | 515 |

Cast iron
(lamellar / spheroidal)

| | | | | | | | |
|-------|---|-----|-------|--------|-------|-------|-----|
| 3.00 | 4 | 120 | 0.010 | 3.000 | 0.150 | 12730 | 510 |
| 4.00 | 4 | 120 | 0.010 | 4.000 | 0.200 | 9550 | 380 |
| 5.00 | 4 | 120 | 0.015 | 5.000 | 0.250 | 7640 | 460 |
| 6.00 | 6 | 120 | 0.015 | 6.000 | 0.300 | 6365 | 575 |
| 8.00 | 6 | 120 | 0.025 | 8.000 | 0.400 | 4775 | 715 |
| 10.00 | 6 | 120 | 0.030 | 10.000 | 0.500 | 3820 | 690 |

Cold work tool steel
(12% Cr),
high alloyed
[1.2379]

| | | | | | | | |
|-------|---|----|-------|--------|-------|------|-----|
| 3.00 | 4 | 65 | 0.010 | 3.000 | 0.150 | 6895 | 275 |
| 4.00 | 4 | 65 | 0.010 | 4.000 | 0.200 | 5175 | 205 |
| 5.00 | 4 | 65 | 0.015 | 5.000 | 0.250 | 4140 | 250 |
| 6.00 | 6 | 65 | 0.015 | 6.000 | 0.300 | 3450 | 310 |
| 8.00 | 6 | 65 | 0.025 | 8.000 | 0.400 | 2585 | 390 |
| 10.00 | 6 | 65 | 0.030 | 10.000 | 0.500 | 2070 | 370 |

Titanium alloys
up to 300 HB
[Ti5Al2.5Sn]

| | | | | | | | |
|-------|---|----|-------|--------|-------|-------|-----|
| 3.00 | 4 | 95 | 0.010 | 3.000 | 0.150 | 10080 | 405 |
| 4.00 | 4 | 95 | 0.010 | 4.000 | 0.200 | 7560 | 300 |
| 5.00 | 4 | 95 | 0.015 | 5.000 | 0.250 | 6050 | 365 |
| 6.00 | 6 | 95 | 0.015 | 6.000 | 0.300 | 5040 | 455 |
| 8.00 | 6 | 95 | 0.025 | 8.000 | 0.400 | 3780 | 565 |
| 10.00 | 6 | 95 | 0.030 | 10.000 | 0.500 | 3025 | 545 |

Inox difficult
[Cr-Ni-Mo+/1.4529]
Heat resistant steel
[1.4841]

| | | | | | | | |
|-------|---|----|-------|--------|-------|------|-----|
| 3.00 | 4 | 50 | 0.010 | 3.000 | 0.150 | 5305 | 210 |
| 4.00 | 4 | 50 | 0.010 | 4.000 | 0.200 | 3980 | 160 |
| 5.00 | 4 | 50 | 0.015 | 5.000 | 0.250 | 3185 | 190 |
| 6.00 | 6 | 50 | 0.015 | 6.000 | 0.300 | 2655 | 240 |
| 8.00 | 6 | 50 | 0.025 | 8.000 | 0.400 | 1990 | 300 |
| 10.00 | 6 | 50 | 0.030 | 10.000 | 0.500 | 1590 | 285 |