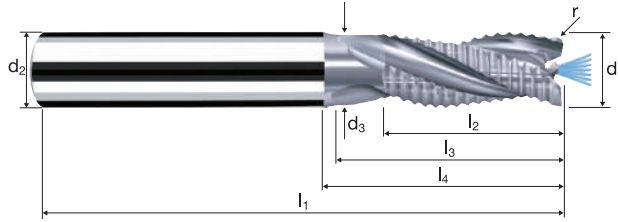
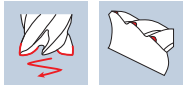
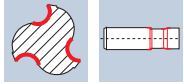
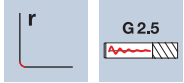


Cylindrical end mills AX-FPS

Profiled, normal version, short neck
High-performance penetration edge, central cooling channel



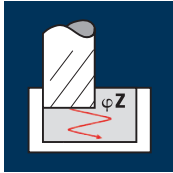
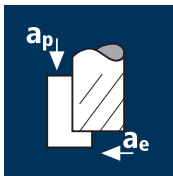
HM
MG10 λ 30°
 γ 20°



| | | | | | | | | | |
|--|--|--|--------------------------|--------------------------|-------------------------|--|--------------|------------------------|--|
| | | | Al Aluminium > 99% | Al Aluminium Alloy | Al Aluminium Cast | | Cu Copper | Plastic Thermoplast | |
|--|--|--|--------------------------|--------------------------|-------------------------|--|--------------|------------------------|--|

| Ø Code | d ₁ e8 | d ₂ h5 | d ₃ | l ₁ | l ₂ | l ₃ | l ₄ | r | z | Example: Order-N°. | |
|--|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|-------|---|-----------------------|-------------|
| | | | | | | | | | | Coating | Article-N°. |
| 300 | 6.00 | 6.00 | 5.50 | 57 | 13.00 | 18.15 | 20.00 | 0.100 | 3 | ● | ● |
| 391 | 8.00 | 8.00 | 7.40 | 63 | 18.00 | 23.63 | 26.00 | 0.150 | 3 | ● | ● |
| 450 | 10.00 | 10.00 | 9.20 | 72 | 22.00 | 27.99 | 31.00 | 0.200 | 3 | ● | ● |
| 501 | 12.00 | 12.00 | 11.00 | 83 | 26.00 | 33.29 | 37.00 | 0.200 | 3 | ● | ● |
| 610 | 16.00 | 16.00 | 15.00 | 95 | 32.00 | 41.73 | 46.00 | 0.200 | 3 | ● | ● |
| 682 | 20.00 | 20.00 | 19.00 | 104 | 40.00 | 48.23 | 53.00 | 0.200 | 3 | ● | ● |
| 770** | 25.00 | 25.00 | 24.00 | 121 | 44.00 | 58.68 | 64.00 | 0.250 | 3 | ● | ● |
| 772* | 25.00 | 25.00 | 24.00 | 121 | 50.00 | 64.68 | 70.00 | 0.250 | 3 | ● | ● |
| * Cylindrical shank HA, shank length = 50 mm ** Shank with side clamping according to DIN 6535 HB | | | | | | | | | | | |

Application



Material

Wrought aluminium
Construction aluminium



| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _Z [°] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|
| 6.00 | 3 | 500 | 0.080 | 9.000 | 4.800 | 26525 | 6365 | 275.0 | 20° |
| 8.00 | 3 | 500 | 0.100 | 12.000 | 6.400 | 19895 | 5970 | 458.4 | 20° |
| 10.00 | 3 | 500 | 0.120 | 15.000 | 8.000 | 15915 | 5730 | 687.5 | 20° |
| 12.00 | 3 | 500 | 0.140 | 18.000 | 9.600 | 13265 | 5570 | 962.6 | 20° |
| 16.00 | 3 | 500 | 0.160 | 24.000 | 12.800 | 9945 | 4775 | 1466.8 | 20° |
| 20.00 | 3 | 500 | 0.180 | 30.000 | 16.000 | 7960 | 4295 | 2062.6 | 20° |
| 25.00 | 3 | 500 | 0.200 | 37.500 | 20.000 | 6365 | 3820 | 2864.8 | 20° |

Cast aluminium



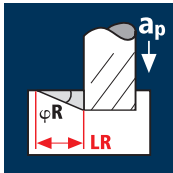
| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _Z [°] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|
| 6.00 | 3 | 450 | 0.080 | 9.000 | 4.800 | 23875 | 5730 | 247.5 | 20° |
| 8.00 | 3 | 450 | 0.100 | 12.000 | 6.400 | 17905 | 5370 | 412.5 | 20° |
| 10.00 | 3 | 450 | 0.120 | 15.000 | 8.000 | 14325 | 5155 | 618.8 | 20° |
| 12.00 | 3 | 450 | 0.140 | 18.000 | 9.600 | 11935 | 5015 | 866.3 | 20° |
| 16.00 | 3 | 450 | 0.160 | 24.000 | 12.800 | 8950 | 4295 | 1320.1 | 20° |
| 20.00 | 3 | 450 | 0.180 | 30.000 | 16.000 | 7160 | 3865 | 1856.4 | 20° |
| 25.00 | 3 | 450 | 0.200 | 37.500 | 20.000 | 5730 | 3440 | 2578.3 | 20° |

Unalloyed copper



| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _Z [°] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|
| 6.00 | 3 | 400 | 0.072 | 9.000 | 4.800 | 21220 | 4585 | 198.0 | 12° |
| 8.00 | 3 | 400 | 0.090 | 12.000 | 6.400 | 15915 | 4295 | 330.0 | 12° |
| 10.00 | 3 | 400 | 0.108 | 15.000 | 8.000 | 12730 | 4125 | 495.0 | 12° |
| 12.00 | 3 | 400 | 0.126 | 18.000 | 9.600 | 10610 | 4010 | 693.0 | 12° |
| 16.00 | 3 | 400 | 0.144 | 24.000 | 12.800 | 7960 | 3440 | 1056.1 | 12° |
| 20.00 | 3 | 400 | 0.162 | 30.000 | 16.000 | 6365 | 3095 | 1485.1 | 12° |
| 25.00 | 3 | 400 | 0.180 | 37.500 | 20.000 | 5095 | 2750 | 2062.6 | 12° |

Application



Material

Wrought aluminium
Construction aluminium



| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _R [°] | LR [mm] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|---------|
| 6.00 | 3 | 450 | 0.072 | 9.000 | 6.000 | 23875 | 5155 | 278.5 | 25° | 19.3 |
| 8.00 | 3 | 450 | 0.090 | 12.000 | 8.000 | 17905 | 4835 | 464.1 | 25° | 25.7 |
| 10.00 | 3 | 450 | 0.108 | 15.000 | 10.000 | 14325 | 4640 | 696.1 | 25° | 32.2 |
| 12.00 | 3 | 450 | 0.126 | 18.000 | 12.000 | 11935 | 4510 | 974.6 | 25° | 38.6 |
| 16.00 | 3 | 450 | 0.144 | 24.000 | 16.000 | 8950 | 3865 | 1485.1 | 25° | 51.5 |
| 20.00 | 3 | 450 | 0.162 | 30.000 | 20.000 | 7160 | 3480 | 2088.4 | 25° | 64.3 |
| 25.00 | 3 | 450 | 0.180 | 37.500 | 25.000 | 5730 | 3095 | 2900.6 | 25° | 80.4 |

Cast aluminium



| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _R [°] | LR [mm] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|---------|
| 6.00 | 3 | 405 | 0.072 | 9.000 | 6.000 | 21485 | 4640 | 250.6 | 25° | 19.3 |
| 8.00 | 3 | 405 | 0.090 | 12.000 | 8.000 | 16115 | 4350 | 417.7 | 25° | 25.7 |
| 10.00 | 3 | 405 | 0.108 | 15.000 | 10.000 | 12890 | 4175 | 626.5 | 25° | 32.2 |
| 12.00 | 3 | 405 | 0.126 | 18.000 | 12.000 | 10745 | 4060 | 877.1 | 25° | 38.6 |
| 16.00 | 3 | 405 | 0.144 | 24.000 | 16.000 | 8055 | 3480 | 1336.6 | 25° | 51.5 |
| 20.00 | 3 | 405 | 0.162 | 30.000 | 20.000 | 6445 | 3135 | 1879.6 | 25° | 64.3 |
| 25.00 | 3 | 405 | 0.180 | 37.500 | 25.000 | 5155 | 2785 | 2610.5 | 25° | 80.4 |

Unalloyed copper



| d1 [mm] | z | v _c [m/min] | f _s [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _r [mm/min] | Q [cm ³ /min] | q _R [°] | LR [mm] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|--------------------|---------|
| 6.00 | 3 | 320 | 0.058 | 9.000 | 6.000 | 16975 | 2935 | 158.4 | 15° | 33.6 |
| 8.00 | 3 | 320 | 0.072 | 12.000 | 8.000 | 12730 | 2750 | 264.0 | 15° | 44.8 |
| 10.00 | 3 | 320 | 0.086 | 15.000 | 10.000 | 10185 | 2640 | 396.0 | 15° | 56.0 |
| 12.00 | 3 | 320 | 0.101 | 18.000 | 12.000 | 8490 | 2565 | 554.4 | 15° | 67.2 |
| 16.00 | 3 | 320 | 0.115 | 24.000 | 16.000 | 6365 | 2200 | 844.9 | 15° | 89.6 |
| 20.00 | 3 | 320 | 0.130 | 30.000 | 20.000 | 5095 | 1980 | 1188.1 | 15° | 112.0 |
| 25.00 | 3 | 320 | 0.144 | 37.500 | 25.000 | 4075 | 1760 | 1650.1 | 15° | 140.0 |



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