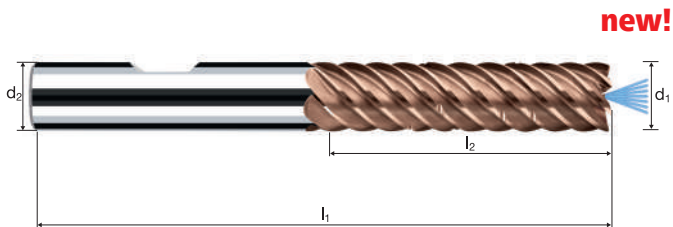
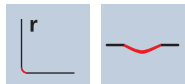


Cylindrical end mills SX



Smooth-edged, chip breaker, medium length version
 High-performance penetration edge, central air/cooling channel

HM
 MG10 λ 55°
 γ 10°



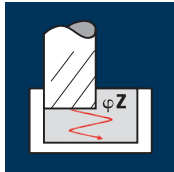
Roughing HPC Roughing HDC Finishing



| | | | | | | | | | |
|--|--|--|--|--|--|--|-------------------|----------------|---------------|
| | | | | | | | Inox Stainless | Ti Titanium | Nickel-Alloys |
|--|--|--|--|--|--|--|-------------------|----------------|---------------|

| Ø Code | d ₁ e8 | d ₂ h6 | l ₁ | l ₂ | r | z | DURO-XI |
|-----------|----------------------|----------------------|----------------|----------------|-------|---|---------|
| | | | | | | | |
| 300 | 6.00 | 6.00 | 63 | 22.00 | 0.100 | 6 | ● |
| 391 | 8.00 | 8.00 | 72 | 31.00 | 0.150 | 6 | ● |
| 450 | 10.00 | 10.00 | 84 | 39.00 | 0.200 | 7 | ● |
| 501 | 12.00 | 12.00 | 97 | 46.00 | 0.200 | 7 | ● |
| 610 | 16.00 | 16.00 | 108 | 53.00 | 0.200 | 8 | ● |
| 682 | 20.00 | 20.00 | 122 | 63.00 | 0.250 | 8 | ● |
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Application



Material

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



| d ₁ [mm] | z | v _c [m/min] | f _z [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _f [mm/min] | φZ [°] |
|------------------------|---|---------------------------|------------------------|------------------------|------------------------|---------------------------|----------------------------|-----------|
| 6.00 | 6 | 70 | 0.019 | 22.000 | 5.400 | 3715 | 424 | 4 |
| 8.00 | 6 | 70 | 0.026 | 31.000 | 7.200 | 2785 | 435 | 4 |
| 10.00 | 7 | 70 | 0.028 | 39.000 | 9.000 | 2230 | 437 | 4 |
| 12.00 | 7 | 70 | 0.033 | 46.000 | 10.800 | 1855 | 429 | 4 |
| 16.00 | 8 | 70 | 0.035 | 53.000 | 14.400 | 1395 | 391 | 4 |
| 20.00 | 8 | 70 | 0.043 | 63.000 | 18.000 | 1115 | 384 | 4 |

Inox medium
[Cr-Ni-Mo+/1.4539]
Duplex steel
[17-4 PH]



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|---|
| 6.00 | 6 | 55 | 0.019 | 22.000 | 5.400 | 2920 | 333 | 4 |
| 8.00 | 6 | 55 | 0.026 | 31.000 | 7.200 | 2190 | 342 | 4 |
| 10.00 | 7 | 55 | 0.028 | 39.000 | 9.000 | 1750 | 343 | 4 |
| 12.00 | 7 | 55 | 0.033 | 46.000 | 10.800 | 1460 | 337 | 4 |
| 16.00 | 8 | 55 | 0.035 | 53.000 | 14.400 | 1095 | 307 | 4 |
| 20.00 | 8 | 55 | 0.043 | 63.000 | 18.000 | 875 | 301 | 4 |

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



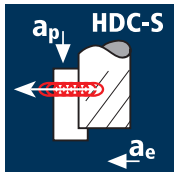
| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|---|
| 6.00 | 6 | 40 | 0.017 | 22.000 | 5.400 | 2120 | 216 | 4 |
| 8.00 | 6 | 40 | 0.023 | 31.000 | 7.200 | 1590 | 219 | 4 |
| 10.00 | 7 | 40 | 0.025 | 39.000 | 9.000 | 1275 | 223 | 4 |
| 12.00 | 7 | 40 | 0.029 | 46.000 | 10.800 | 1060 | 215 | 4 |
| 16.00 | 8 | 40 | 0.030 | 53.000 | 14.400 | 795 | 191 | 4 |
| 20.00 | 8 | 40 | 0.037 | 63.000 | 18.000 | 635 | 188 | 4 |

Nickel-based alloys
precipitation hardened
R_m > 1000 N/mm²
[Inconel 718]



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|----|---|
| 6.00 | 6 | 20 | 0.009 | 22.000 | 5.400 | 1060 | 57 | 2 |
| 8.00 | 6 | 20 | 0.012 | 31.000 | 7.200 | 795 | 57 | 2 |
| 10.00 | 7 | 20 | 0.012 | 39.000 | 9.000 | 635 | 53 | 2 |
| 12.00 | 7 | 20 | 0.015 | 46.000 | 10.800 | 530 | 56 | 2 |
| 16.00 | 8 | 20 | 0.016 | 53.000 | 14.400 | 400 | 51 | 2 |
| 20.00 | 8 | 20 | 0.017 | 63.000 | 18.000 | 320 | 44 | 2 |

Application



Material

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



| d ₁ [mm] | z | v _c [m/min] | f _z [mm] | a _p [mm] | a _e [mm] | n [min ⁻¹] | v _f [mm/min] | Q [cm ² /min] |
|------------------------|---|---------------------------|------------------------|------------------------|------------------------|---------------------------|----------------------------|-----------------------------|
| 6.00 | 6 | 141 | 0.047 | 22.000 | 0.450 | 7470 | 2098 | 20.8 |
| 8.00 | 6 | 141 | 0.065 | 31.000 | 0.600 | 5600 | 2167 | 40.3 |
| 10.00 | 7 | 133 | 0.068 | 39.000 | 0.750 | 4220 | 2003 | 58.6 |
| 12.00 | 7 | 133 | 0.081 | 46.000 | 0.900 | 3520 | 2003 | 82.9 |
| 16.00 | 8 | 126 | 0.095 | 53.000 | 1.200 | 2510 | 1906 | 121.2 |
| 20.00 | 8 | 126 | 0.104 | 63.000 | 1.500 | 2005 | 1663 | 157.2 |

Inox medium
[Cr-Ni-Mo+/1.4539]
Duplex steel
[17-4 PH]



| | | | | | | | | |
|-------|---|-----|-------|--------|-------|------|------|-------|
| 6.00 | 6 | 103 | 0.047 | 22.000 | 0.450 | 5470 | 1536 | 15.2 |
| 8.00 | 6 | 103 | 0.065 | 31.000 | 0.600 | 4105 | 1589 | 29.5 |
| 10.00 | 7 | 97 | 0.068 | 39.000 | 0.750 | 3075 | 1459 | 42.7 |
| 12.00 | 7 | 97 | 0.081 | 46.000 | 0.900 | 2560 | 1457 | 60.3 |
| 16.00 | 8 | 92 | 0.095 | 53.000 | 1.200 | 1825 | 1386 | 88.1 |
| 20.00 | 8 | 92 | 0.104 | 63.000 | 1.500 | 1460 | 1211 | 114.5 |

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



| | | | | | | | | |
|-------|---|----|-------|--------|-------|------|------|------|
| 6.00 | 6 | 82 | 0.042 | 22.000 | 0.450 | 4345 | 1105 | 10.9 |
| 8.00 | 6 | 82 | 0.058 | 31.000 | 0.600 | 3255 | 1137 | 21.1 |
| 10.00 | 7 | 79 | 0.060 | 39.000 | 0.750 | 2500 | 1047 | 30.6 |
| 12.00 | 7 | 79 | 0.072 | 46.000 | 0.900 | 2085 | 1051 | 43.5 |
| 16.00 | 8 | 74 | 0.086 | 53.000 | 1.200 | 1465 | 1008 | 64.1 |
| 20.00 | 8 | 74 | 0.095 | 63.000 | 1.500 | 1175 | 897 | 84.7 |

Nickel-based alloys
precipitation hardened
R_m > 1000 N/mm²
[Inconel 718]



| | | | | | | | | |
|-------|---|----|-------|--------|-------|------|-----|------|
| 6.00 | 6 | 43 | 0.053 | 22.000 | 0.150 | 2305 | 739 | 2.4 |
| 8.00 | 6 | 43 | 0.071 | 31.000 | 0.200 | 1730 | 739 | 4.6 |
| 10.00 | 7 | 41 | 0.077 | 39.000 | 0.250 | 1310 | 704 | 6.9 |
| 12.00 | 7 | 41 | 0.089 | 46.000 | 0.300 | 1090 | 675 | 9.3 |
| 16.00 | 8 | 39 | 0.105 | 53.000 | 0.400 | 775 | 649 | 13.7 |
| 20.00 | 8 | 39 | 0.111 | 63.000 | 0.500 | 620 | 552 | 17.4 |