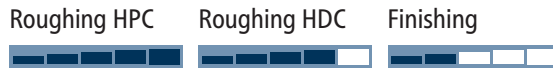
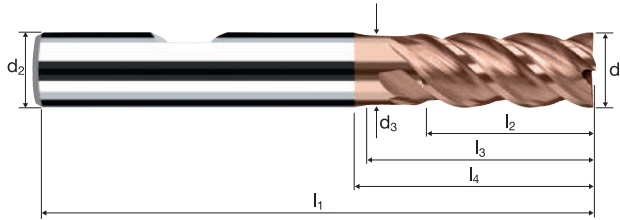
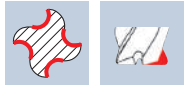
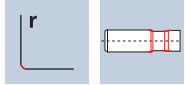


Cylindrical end mills SX

Smooth-edged, normal version, short neck



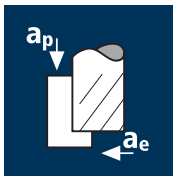
HM
MG10 λ 43°
 γ 3°



| | | | | | | | | | | | |
|-------------|--|--|--|--|--|--|--|--|-------------------|----------------|--|
| Rm < 850 | | | | | | | | | Inox Stainless | Ti Titanium | Nickel-Alloys Mangan-Steels Tool Steel |
|-------------|--|--|--|--|--|--|--|--|-------------------|----------------|--|

| Ø Code | d ₁ e8 | d ₂ h6 | d ₃ | l ₁ | l ₂ | l ₃ | l ₄ | r | α | z | Example: Order-N°. | | DURO-Si | |
|-----------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|-------|------|---|-----------------------|-------------|---------|-------|
| | | | | | | | | | | | Coating | Article-N°. | ø-Code | |
| | | | | | | | | | | | H | 8606 | 180 | H8606 |
| | | | | | | | | | | | | | | H8506 |
| 180 | 3.00 | 6.00 | 2.80 | 57 | 8.00 | 14.00 | 20.37 | 0.050 | 4.5° | 4 | | | | ● |
| 220 | 4.00 | 6.00 | 3.70 | 57 | 11.00 | 16.00 | 20.82 | 0.100 | 3.0° | 4 | | | | ● |
| 260 | 5.00 | 6.00 | 4.60 | 57 | 13.00 | 18.00 | 21.27 | 0.100 | 1.5° | 4 | | | | ● |
| 300 | 6.00 | 6.00 | 5.50 | 57 | 13.00 | 18.15 | 20.00 | 0.150 | 0.0° | 4 | | | | ● |
| 391 | 8.00 | 8.00 | 7.40 | 63 | 19.00 | 23.63 | 26.00 | 0.150 | 0.0° | 4 | | | | ● |
| 450 | 10.00 | 10.00 | 9.20 | 72 | 22.00 | 27.99 | 31.00 | 0.200 | 0.0° | 4 | | | | ● |
| 501 | 12.00 | 12.00 | 11.00 | 83 | 26.00 | 33.29 | 37.00 | 0.200 | 0.0° | 4 | | | | ● |
| 610 | 16.00 | 16.00 | 15.00 | 92 | 32.00 | 38.73 | 43.00 | 0.200 | 0.0° | 4 | | | | ● |
| 682 | 20.00 | 20.00 | 19.00 | 104 | 38.00 | 48.23 | 53.00 | 0.250 | 0.0° | 4 | | | | ● |
| | | | | | | | | | | | | | | |
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Application



Material

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



| 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] |
|---------|---|------------------------|---------------------|---------------------|---------------------|------------------------|-------------------------|--------------------------|
| 3.00 | 4 | 96 | 0.015 | 3.750 | 1.200 | 10185 | 610 | 2.8 |
| 4.00 | 4 | 96 | 0.020 | 5.000 | 1.600 | 7640 | 610 | 4.9 |
| 5.00 | 4 | 80 | 0.023 | 6.250 | 3.250 | 5095 | 470 | 9.5 |
| 6.00 | 4 | 80 | 0.027 | 9.000 | 3.900 | 4245 | 460 | 16.1 |
| 8.00 | 4 | 80 | 0.036 | 12.000 | 5.200 | 3185 | 460 | 28.6 |
| 10.00 | 4 | 80 | 0.045 | 15.000 | 6.500 | 2545 | 460 | 44.7 |
| 12.00 | 4 | 80 | 0.054 | 18.000 | 7.800 | 2120 | 460 | 64.4 |
| 16.00 | 4 | 80 | 0.064 | 20.000 | 10.400 | 1590 | 405 | 84.7 |
| 20.00 | 4 | 80 | 0.080 | 25.000 | 13.000 | 1275 | 405 | 132.4 |

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



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|------|
| 3.00 | 4 | 59 | 0.014 | 3.750 | 1.200 | 6260 | 340 | 1.5 |
| 4.00 | 4 | 59 | 0.020 | 5.000 | 1.600 | 4695 | 375 | 3.0 |
| 5.00 | 4 | 59 | 0.023 | 6.250 | 3.250 | 3755 | 340 | 6.9 |
| 6.00 | 4 | 59 | 0.027 | 9.000 | 3.900 | 3130 | 340 | 11.9 |
| 8.00 | 4 | 59 | 0.036 | 12.000 | 5.200 | 2350 | 340 | 21.1 |
| 10.00 | 4 | 59 | 0.045 | 15.000 | 6.500 | 1880 | 340 | 33.0 |
| 12.00 | 4 | 59 | 0.054 | 18.000 | 7.800 | 1565 | 340 | 47.5 |
| 16.00 | 4 | 59 | 0.064 | 20.000 | 10.400 | 1175 | 300 | 62.5 |
| 20.00 | 4 | 59 | 0.080 | 25.000 | 13.000 | 940 | 300 | 97.7 |

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



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|------|
| 3.00 | 4 | 48 | 0.014 | 3.750 | 1.200 | 5095 | 275 | 1.2 |
| 4.00 | 4 | 48 | 0.018 | 5.000 | 1.600 | 3820 | 275 | 2.2 |
| 5.00 | 4 | 44 | 0.020 | 6.250 | 3.250 | 2800 | 225 | 4.6 |
| 6.00 | 4 | 44 | 0.024 | 9.000 | 3.900 | 2335 | 225 | 7.9 |
| 8.00 | 4 | 44 | 0.032 | 12.000 | 5.200 | 1750 | 225 | 14.0 |
| 10.00 | 4 | 44 | 0.040 | 15.000 | 6.500 | 1400 | 225 | 21.8 |
| 12.00 | 4 | 44 | 0.048 | 18.000 | 7.800 | 1165 | 225 | 31.5 |
| 16.00 | 4 | 44 | 0.056 | 20.000 | 10.400 | 875 | 195 | 40.8 |
| 20.00 | 4 | 44 | 0.070 | 25.000 | 13.000 | 700 | 195 | 63.7 |

Inox martensitic
C < 0.3%
[Cr/1.4021]



| | | | | | | | | |
|-------|---|-----|-------|--------|--------|-------|------|-------|
| 3.00 | 4 | 122 | 0.020 | 3.750 | 1.200 | 12945 | 1010 | 4.5 |
| 4.00 | 4 | 122 | 0.026 | 5.000 | 1.600 | 9710 | 1010 | 8.1 |
| 5.00 | 4 | 102 | 0.030 | 6.250 | 3.250 | 6495 | 780 | 15.8 |
| 6.00 | 4 | 102 | 0.036 | 9.000 | 3.900 | 5410 | 780 | 27.4 |
| 8.00 | 4 | 102 | 0.048 | 12.000 | 5.200 | 4060 | 780 | 48.6 |
| 10.00 | 4 | 102 | 0.060 | 15.000 | 6.500 | 3245 | 780 | 76.0 |
| 12.00 | 4 | 102 | 0.072 | 18.000 | 7.800 | 2705 | 780 | 109.4 |
| 16.00 | 4 | 102 | 0.088 | 20.000 | 10.400 | 2030 | 715 | 148.6 |
| 20.00 | 4 | 102 | 0.110 | 25.000 | 13.000 | 1625 | 715 | 232.1 |



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



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|-------|
| 3.00 | 4 | 70 | 0.009 | 2.250 | 3.000 | 7425 | 265 | 1.8 |
| 4.00 | 4 | 70 | 0.012 | 3.000 | 4.000 | 5570 | 265 | 3.2 |
| 5.00 | 4 | 70 | 0.015 | 6.250 | 5.000 | 4455 | 265 | 8.3 |
| 6.00 | 4 | 70 | 0.022 | 9.000 | 6.000 | 3715 | 320 | 17.3 |
| 8.00 | 4 | 70 | 0.029 | 12.000 | 8.000 | 2785 | 320 | 30.8 |
| 10.00 | 4 | 70 | 0.036 | 15.000 | 10.000 | 2230 | 320 | 48.1 |
| 12.00 | 4 | 70 | 0.043 | 18.000 | 12.000 | 1855 | 320 | 69.3 |
| 16.00 | 4 | 70 | 0.051 | 20.000 | 16.000 | 1395 | 285 | 91.3 |
| 20.00 | 4 | 70 | 0.064 | 25.000 | 20.000 | 1115 | 285 | 142.6 |

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



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|-------|
| 3.00 | 4 | 47 | 0.008 | 2.250 | 3.000 | 4985 | 160 | 1.1 |
| 4.00 | 4 | 47 | 0.012 | 3.000 | 4.000 | 3740 | 180 | 2.2 |
| 5.00 | 4 | 52 | 0.015 | 6.250 | 5.000 | 3310 | 195 | 6.1 |
| 6.00 | 4 | 52 | 0.022 | 9.000 | 6.000 | 2760 | 240 | 12.9 |
| 8.00 | 4 | 52 | 0.029 | 12.000 | 8.000 | 2070 | 240 | 22.9 |
| 10.00 | 4 | 52 | 0.036 | 15.000 | 10.000 | 1655 | 240 | 35.8 |
| 12.00 | 4 | 52 | 0.043 | 18.000 | 12.000 | 1380 | 240 | 51.5 |
| 16.00 | 4 | 52 | 0.051 | 20.000 | 16.000 | 1035 | 210 | 67.8 |
| 20.00 | 4 | 52 | 0.064 | 25.000 | 20.000 | 830 | 210 | 105.9 |

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



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|------|
| 3.00 | 4 | 39 | 0.008 | 2.250 | 3.000 | 4140 | 135 | 0.9 |
| 4.00 | 4 | 39 | 0.011 | 3.000 | 4.000 | 3105 | 135 | 1.6 |
| 5.00 | 4 | 39 | 0.013 | 6.250 | 5.000 | 2485 | 130 | 4.0 |
| 6.00 | 4 | 39 | 0.019 | 9.000 | 6.000 | 2070 | 160 | 8.6 |
| 8.00 | 4 | 39 | 0.026 | 12.000 | 8.000 | 1550 | 160 | 15.3 |
| 10.00 | 4 | 39 | 0.032 | 15.000 | 10.000 | 1240 | 160 | 23.8 |
| 12.00 | 4 | 39 | 0.038 | 18.000 | 12.000 | 1035 | 160 | 34.3 |
| 16.00 | 4 | 39 | 0.045 | 20.000 | 16.000 | 775 | 140 | 44.5 |
| 20.00 | 4 | 39 | 0.056 | 25.000 | 20.000 | 620 | 140 | 69.5 |

Inox martensitic
C < 0.3%
[Cr/1.4021]



| | | | | | | | | |
|-------|---|----|-------|--------|--------|------|-----|-------|
| 3.00 | 4 | 89 | 0.009 | 2.250 | 3.000 | 9445 | 340 | 2.3 |
| 4.00 | 4 | 89 | 0.012 | 3.000 | 4.000 | 7080 | 340 | 4.1 |
| 5.00 | 4 | 89 | 0.015 | 5.000 | 5.000 | 5665 | 340 | 8.5 |
| 6.00 | 4 | 89 | 0.022 | 7.500 | 6.000 | 4720 | 410 | 18.4 |
| 8.00 | 4 | 89 | 0.029 | 10.000 | 8.000 | 3540 | 410 | 32.6 |
| 10.00 | 4 | 89 | 0.036 | 12.500 | 10.000 | 2835 | 410 | 51.0 |
| 12.00 | 4 | 89 | 0.043 | 15.000 | 12.000 | 2360 | 410 | 73.4 |
| 16.00 | 4 | 89 | 0.053 | 16.000 | 16.000 | 1770 | 375 | 95.7 |
| 20.00 | 4 | 89 | 0.066 | 20.000 | 20.000 | 1415 | 375 | 149.6 |