

| Material Group | Group No | Material Examples* | Brinell hardness | d.o.c [mm] | | feed [mm/rev] | | A max [mm ²] | V _c [m/min] | | Optimal cutting conditions | | | | | | |
|-----------------------------|----------|-----------------------------------------------------------------------|---------------------|------------|------|---------------|------|--------------------------|------------------------|------------|----------------------------|------|------|------|------|-----|------|
| | | | | min | max | min | max | | min | max | d.o.c | feed | | | | | |
| Low Carbon Steel | 1 | Ck15, Ck45 1020, 1045 | 150 | 0.50 | 5.0 | 0.27 | 0.68 | 2.3 | 180 | 330 | 4.0 | 0.50 | | | | | |
| | | | 180 | | 5.0 | | 0.68 | | | 2.3 | | | 280 | | | | |
| | | | 210 | | 5.0 | | 0.60 | | | 2.0 | | | 250 | | | | |
| Alloy Steel | 2 | 42 CrMo 4 St 50-2 Ck60 1060 4140 | 180 | 0.50 | 5.0 | 0.27 | 0.60 | 2.0 | 120 | 280 | 4.0 | 0.45 | | | | | |
| | | | 230 | | 5.0 | | 0.60 | | | 1.5 | | | 250 | | | | |
| | | | 280 | | 5.0 | 0.53 | 1.5 | 210 | | | | | | | | | |
| | | | 320 | | 4.0 | 0.53 | 1.3 | 180 | | | | | | | | | |
| High Alloy Steel | 3 | X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42 | 220 | 0.50 | 5.0 | 0.23 | 0.60 | 1.5 | 70 | 190 | 4.0 | 0.40 | | | | | |
| | | | 280 | | 5.0 | | 0.60 | | | 1.5 | | | 150 | | | | |
| | | | 320 | | 4.0 | | 0.53 | | | 1.2 | | | 130 | | | | |
| | | | 350 | | 4.0 | | 0.53 | | | 1.2 | | | 100 | | | | |
| | | | 400 | 3.5 | 0.45 | 0.9 | 50 | 90 | | 3.4 | | | 0.36 | | | | |
| | | | 480 | 0.50 | 3.0 | 0.14 | 0.35 | 0.7 | | 40 | | | 80 | 2.9 | 0.30 | | |
| | | | 550 | 2.5 | 0.28 | 0.5 | 30 | 70 | | 2.5 | | | 0.25 | | | | |
| Austenitic Stainless Steel | 4 | X5 CrNi 18 9 304 | 210 to 250 | 0.50 | 5.0 | 0.26 | 0.52 | 1.3 | 170 | 270 | 4.0 | 0.40 | | | | | |
| | | | 230 to 270 | | 5.0 | 0.23 | 0.46 | | | | | | 1.1 | 160 | 210 | 4.0 | 0.36 |
| | | | ----- | | 5.0 | 0.23 | 0.46 | | | | | | 0.8 | 70 | 150 | 4.0 | 0.32 |
| Ferritic Stainless Steel | 7 | X8 Cr 7 430 | Annealed | 0.50 | 5.0 | 0.29 | 0.46 | 1.1 | 170 | 250 | 4.0 | 0.35 | | | | | |
| Martensitic Stainless Steel | 8 | X15 Cr 13 410 | Annealed Treated | 0.50 | 5.0 | 0.29 | 0.46 | 1.1 | 170 120 | 250 190 | 4.0 | 0.35 | | | | | |
| Grey Cast Iron | 9 | GG 20 GG 25 GG 30 | 140 to 230 | 0.50 | 5.0 | 0.20 | 0.90 | 2.3 | 170 | 250 | 4.0 | 0.60 | | | | | |
| | | | 2.0 | | | | | 230 | | | | | | | | | |
| | | | 2.0 | | | | | 210 | | | | | | | | | |
| Nodular Cast Iron | 10 | GGG 40 GGG 50 GGG 70 G-X260NiCr42 | 210 | 0.50 | 5.0 | 0.20 | 0.70 | 1.7 | 120 | 230 | 4.0 | 0.50 | | | | | |
| | | | 260 | | | | | 1.5 | | 190 | | | | | | | |
| | | | 310 | | | | | 1.4 | | 150 | | | | | | | |
| | | | 450 | 0.50 | 1.8 | 0.06 | 0.15 | 0.2 | 30 | 50 | 1.2 | 0.12 | | | | | |
| Nickel Based Alloys | 11 | Inconel 625 Inconel 718 Hastelloy C | ----- | 0.50 | 5.0 | 0.26 | 0.46 | 1.1 | 25 | 35 | 3.0 | 0.38 | | | | | |
| | | | 1.1 | | | | | 28 | | 40 | | | | | | | |
| | | | 1.2 | | | | | 40 | | 65 | | | | | | | |
| Titanium Based Alloys | 12 | TiAl 6 V4 T40 | ----- | 0.50 | 5.0 | 0.23 | 0.46 | 35 | 60 | 3.0 | 0.38 | | | | | | |
| | | | 0.39 | | | | 0.9 | | 28 | | | 40 | 3.0 | 0.32 | | | |

Insert designation Super Finishing Finishing Semi Finishing Roughing Interrupted Cut

WNMG 080408 NR



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