# TNMG 332 NN/NX LT 10 & LT 1000

## Speeds & Feeds

| Material Group | | Gr. N° | VDI Group | Material Examples* | Hardness | D.O.C. [inch] | | Feed [inch/rev] | | Amax | $V_c$ [sfm] | | Suggested Starting Parameters | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | min | max | min | max | | min | max | D.O.C. | Feed | $V_c$ |
| Steel | Non-alloyed | 1 | 1 | C35, Ck45, 1020, 1045, 1060, 28Mn6 | 125 HB | 0.020 | 0.197 | 0.008 | 0.020 | 0.0028 | 590 | 1080 | 0.118 | 0.014 | 780 |
| | | | 2 | | 190 HB | | 0.197 | | 0.020 | 0.0028 | | 910 | | | 720 |
| | | | 3 | | 250 HB | | 0.197 | | 0.018 | 0.0023 | | 820 | | | 650 |
| | Low alloyed | 2 | 6 | 42CrMo4, St50, Ck60, 4140, 4340, 100Cr6 | 180 HB | 0.020 | 0.197 | 0.008 | 0.018 | 0.0019 | 390 | 910 | 0.118 | 0.013 | 650 |
| | | | 4,6 | | 230 HB | | 0.157 | 0.008 | 0.018 | 0.0019 | | 820 | | 0.013 | 590 |
| | | | 5,7 | | 280 HB | | 0.157 | 0.007 | 0.016 | 0.0019 | | 680 | | 0.012 | 490 |
| | | | 8 | | 350 HB | | 0.138 | 0.007 | 0.016 | 0.0016 | | 590 | | 0.012 | 420 |
| | High alloyed | 3 | 10 | X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19 | 220 HB | 0.020 | 0.157 | 0.007 | 0.016 | 0.0019 | 220 | 620 | 0.098 | 0.012 | 450 |
| | | | 10 | | 280 HB | | 0.157 | | 0.016 | 0.0019 | | 490 | | 0.012 | 390 |
| | | | 11 | | 320 HB | | 0.118 | | 0.014 | 0.0012 | | 420 | | 0.011 | 320 |
| | | | 11 | | 350 HB | | 0.118 | | 0.014 | 0.0012 | | 360 | | 0.011 | 290 |
| Stainless Steel | Austenitic | 4 | 14 | 304, 316, X5CrNi18-9 | 180 HB | 0.020 | 0.197 | 0.008 | 0.016 | 0.0019 | 550 | 880 | 0.118 | 0.014 | 620 |
| | | | 14 | | 240 HB | | 0.197 | | 0.016 | 0.0016 | 520 | 720 | | 0.013 | 550 |
| | Duplex | 5 | 14 | X2CrNiN23-4, S31500 | 290 HB | 0.020 | 0.157 | 0.007 | 0.014 | 0.0012 | 260 | 490 | 0.098 | 0.011 | 320 |
| | | | 14 | | 310 HB | | 0.157 | | 0.014 | | 220 | 450 | | | 290 |
| | Ferritic & Martensitic | 6 | 12 | 410, X6Cr17, 17-4 PH, 430 | 200 HB | 0.020 | 0.197 | 0.009 | 0.016 | 0.0016 | 550 | 820 | 0.118 | 0.013 | 620 |
| | | | 13 | | 42 HRc | | 0.157 | | 0.016 | | 390 | 620 | 0.098 | 0.000 | 420 |
| Cast Iron | Grey | 7 | 15 | GG20, GG40, EN-GJL-250, No30B | 150 HB | 0.020 | 0.197 | 0.006 | 0.024 | 0.0031 | 550 | 820 | 0.118 | 0.014 | 650 |
| | | | 15 | | 200 HB | | 0.197 | | 0.024 | 0.0028 | 520 | 750 | | | 590 |
| | | | 16 | | 250 HB | | 0.197 | | 0.022 | 0.0028 | 490 | 680 | | | 520 |
| | Malleable & Nodular | 8 | 17,19 | GGG40, GGG70, 50005 | 150 HB | 0.020 | 0.197 | 0.006 | 0.020 | 0.0023 | 390 | 820 | 0.118 | 0.012 | 590 |
| | | | 17,19 | | 200 HB | | 0.197 | | 0.020 | 0.0020 | | 750 | | | 520 |
| | | | 18,20 | | 250 HB | | 0.197 | | 0.020 | 0.0019 | | 620 | | | 450 |
| High Temp.Alloys | Fe, Ni & Co based | 9 | 31,32 | Incoloy 800 | 240 HB | 0.020 | 0.118 | 0.008 | 0.014 | 0.0011 | 80 | 140 | 0.079 | 0.011 | 100 |
| | | | 33 | Inconel 700 | 250 HB | | 0.118 | | 0.014 | | 80 | 140 | | | 90 |
| | | | 34 | Stellite 21 | 350 HB | | 0.118 | | 0.014 | | 70 | 130 | | | 90 |
| | Ti based | 10 | 36 | TiAl6V4 | - | 0.020 | 0.157 | 0.008 | 0.016 | 0.0012 | 140 | 210 | 0.079 | 0.013 | 180 |
| | | | 37 | T40 | - | | 0.118 | | 0.014 | 0.0011 | 110 | 180 | | 0.012 | 140 |
| Hardened Mat. | Steel | 11 | 38 | X100CrMo13, 440C, G-X260NiCr42 | 45 HRc | 0.020 | 0.098 | 0.004 | 0.012 | 0.0009 | 160 | 320 | 0.079 | 0.010 | 260 |
| | | | 38 | | 50 HRc | | 0.079 | | 0.010 | 0.0006 | 130 | 290 | 0.059 | 0.008 | 220 |
| | | | 38 | | 55 HRc | | 0.059 | | 0.008 | 0.0005 | 130 | 260 | 0.039 | 0.007 | 190 |
| | Chilled Cast Iron | | 40 | Ni-Hard 2 | 400 HB | 0.020 | 0.079 | 0.004 | 0.010 | 0.0006 | 130 | 190 | 0.059 | 0.007 | 160 |
| | White Cast Iron | | 41 | G-X300CrMo15 | 55 HRc | 0.020 | 0.059 | 0.004 | 0.008 | 0.0005 | 90 | 160 | 0.039 | 0.006 | 130 |
| NF | Al (>8%Si) | 12 | 25 | AlSi12 | 130 HB | 0.020 | 0.236 | 0.008 | 0.024 | 0.0028 | 650 | 1310 | 0.118 | 0.016 | 910 |

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