



X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

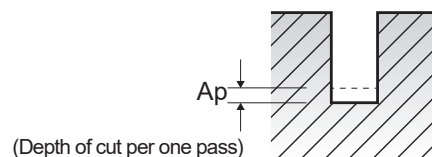
GM883 SERIES

2 FLUTE RIB PROCESSING

| ISO | VDI 3323 | Material Description | Parameter | Diameter (Ø) | | | | | | | | | |
|-------------|------------------------------------|----------------------|------------------------------------|--|--------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | | | | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | | |
| P | 1-4 | Non-alloy steel | SFM(Vc) | 135~175 | 170~215 | 200~260 | 235~305 | 235~220 | 245~305 | 245~305 | 240~290 | | |
| | | | IPT(fz) | .0001~.0002 | .0001~.0002 | .0002~.0003 | .0002~.0003 | .0002~.0005 | .0002~.0005 | .0002~.0006 | .0003~.0008 | | |
| | | | RPM | 32750~42450 | 32990~41720 | 32340~42050 | 32570~42280 | 28500~26680 | 26410~32880 | 23770~29590 | 19410~23450 | | |
| | | | IPM(FEED) | 8~18 | 8~18 | 10~24 | 10~24 | 12~26 | 12~30 | 12~34 | 12~37 | | |
| | | | Ap | 0.007~0.018 | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | |
| | | | SFM(Vc) | 95~120 | 120~150 | 145~180 | 170~210 | 170~210 | 170~220 | 170~215 | 170~215 | | |
| | 5 | Non-alloy steel | IPT(fz) | .0001~.0002 | .0001~.0002 | .0001~.0003 | .0001~.0003 | .0001~.0004 | .0002~.0005 | .0002~.0006 | .0003~.0007 | | |
| | | | RPM | 23040~29110 | 23290~29110 | 23450~29110 | 23560~29110 | 20620~25470 | 18330~23720 | 16500~20860 | 13750~17380 | | |
| | | | IPM(FEED) | 4~14 | 4~14 | 5~18 | 5~18 | 5~20 | 7~22 | 8~25 | 8~25 | | |
| | | | Ap | 0.007~0.018 | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | |
| | | | 6-7 | Low alloy steel | SFM(Vc) | 135~175 | 170~215 | 200~260 | 235~305 | 235~220 | 245~305 | 245~305 | 240~290 |
| | | | | | IPT(fz) | .0001~.0002 | .0001~.0002 | .0002~.0003 | .0002~.0003 | .0002~.0005 | .0002~.0005 | .0002~.0006 | .0003~.0008 |
| RPM | 32750~42450 | 32990~41720 | | | 32340~42050 | 32570~42280 | 28500~26680 | 26410~32880 | 23770~29590 | 19410~23450 | | | |
| IPM(FEED) | 8~18 | 8~18 | | | 10~24 | 10~24 | 12~26 | 12~30 | 12~34 | 12~37 | | | |
| Ap | 0.007~0.018 | 0.009~0.022 | | | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | | |
| SFM(Vc) | 95~120 | 120~150 | | | 145~180 | 170~210 | 170~210 | 170~220 | 170~215 | 170~215 | | | |
| 8-9 | Low alloy steel | IPT(fz) | .0001~.0002 | .0001~.0002 | .0001~.0003 | .0001~.0003 | .0001~.0004 | .0002~.0005 | .0002~.0006 | .0003~.0007 | | | |
| | | RPM | 23040~29110 | 23290~29110 | 23450~29110 | 23560~29110 | 20620~25470 | 18330~23720 | 16500~20860 | 13750~17380 | | | |
| | | IPM(FEED) | 4~14 | 4~14 | 5~18 | 5~18 | 5~20 | 7~22 | 8~25 | 8~25 | | | |
| | | Ap | 0.007~0.018 | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | | |
| | | 10 | High alloyed steel, and tool steel | SFM(Vc) | 135~175 | 170~215 | 200~260 | 235~305 | 235~220 | 245~305 | 245~305 | 240~290 | |
| | | | | IPT(fz) | .0001~.0002 | .0001~.0002 | .0002~.0003 | .0002~.0003 | .0002~.0005 | .0002~.0005 | .0002~.0006 | .0003~.0008 | |
| RPM | 32750~42450 | | | 32990~41720 | 32340~42050 | 32570~42280 | 28500~26680 | 26410~32880 | 23770~29590 | 19410~23450 | | | |
| IPM(FEED) | 8~18 | | | 8~18 | 10~24 | 10~24 | 12~26 | 12~30 | 12~34 | 12~37 | | | |
| Ap | 0.007~0.018 | | | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | | |
| SFM(Vc) | 95~120 | | | 120~150 | 145~180 | 170~210 | 170~210 | 170~220 | 170~215 | 170~215 | | | |
| 11.1 - 11.2 | High alloyed steel, and tool steel | IPT(fz) | .0001~.0002 | .0001~.0002 | .0001~.0003 | .0001~.0003 | .0001~.0004 | .0002~.0005 | .0002~.0006 | .0003~.0007 | | | |
| | | RPM | 23040~29110 | 23290~29110 | 23450~29110 | 23560~29110 | 20620~25470 | 18330~23720 | 16500~20860 | 13750~17380 | | | |
| | | IPM(FEED) | 4~14 | 4~14 | 5~18 | 5~18 | 5~20 | 7~22 | 8~25 | 8~25 | | | |
| | | Ap | 0.007~0.018 | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | | |
| | | K | 15-20 | Grey cast iron Nodular cast iron Malleable cast iron | SFM(Vc) | 135~175 | 170~215 | 200~260 | 235~305 | 235~220 | 245~305 | 245~305 | 240~290 |
| | | | | | IPT(fz) | .0001~.0002 | .0001~.0002 | .0002~.0003 | .0002~.0003 | .0002~.0005 | .0002~.0005 | .0002~.0006 | .0003~.0008 |
| RPM | 32750~42450 | | | | 32990~41720 | 32340~42050 | 32570~42280 | 28500~26680 | 26410~32880 | 23770~29590 | 19410~23450 | | |
| IPM(FEED) | 8~18 | | | | 8~18 | 10~24 | 10~24 | 12~26 | 12~30 | 12~34 | 12~37 | | |
| Ap | 0.007~0.018 | | | | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | |
| SFM(Vc) | 60~75 | | | | 75~90 | 95~110 | 110~130 | 110~130 | 105~120 | 110~135 | 110~135 | | |
| H | 38.1 - 38.2 | Hardened steel | IPT(fz) | .00004~.0001 | .00004~.0001 | .0001~.0001 | .0001~.0001 | .00005~.0001 | .0001~.0002 | .0001~.0002 | .0002~.0002 | | |
| | | | RPM | 14550~18190 | 14550~17470 | 15360~17790 | 15250~18020 | 13340~15770 | 11320~12940 | 10670~13100 | 8890~10920 | | |
| | | | IPM(FEED) | 1~4 | 1~4 | 2~5 | 2~5 | 2~5 | 2~5 | 3~5 | 3~5 | | |
| | | | Ap | 0.004~0.008 | 0.004~0.009 | 0.005~0.011 | 0.006~0.013 | 0.007~0.015 | 0.008~0.016 | 0.009~0.018 | 0.010~0.022 | | |
| | | | 40 | Chilled Cast Iron | SFM(Vc) | 95~120 | 120~150 | 145~180 | 170~210 | 170~210 | 170~220 | 170~215 | 170~215 |
| | | | | | IPT(fz) | .0001~.0002 | .0001~.0002 | .0001~.0003 | .0001~.0003 | .0001~.0004 | .0002~.0005 | .0002~.0006 | .0003~.0007 |
| | RPM | 23040~29110 | | | 23290~29110 | 23450~29110 | 23560~29110 | 20620~25470 | 18330~23720 | 16500~20860 | 13750~17380 | | |
| | IPM(FEED) | 4~14 | | | 4~14 | 5~18 | 5~18 | 5~20 | 7~22 | 8~25 | 8~25 | | |
| | Ap | 0.007~0.018 | | | 0.009~0.022 | 0.011~0.026 | 0.012~0.031 | 0.014~0.035 | 0.030~0.060 | 0.045~0.090 | 0.055~0.100 | | |
| | SFM(Vc) | 60~75 | | | 75~90 | 95~110 | 110~130 | 110~130 | 105~120 | 110~135 | 110~135 | | |
| | 41 | Hardened Cast Iron | IPT(fz) | .00004~.0001 | .00004~.0001 | .0001~.0001 | .0001~.0001 | .00005~.0001 | .0001~.0002 | .0001~.0002 | .0002~.0002 | | |
| | | | RPM | 14550~18190 | 14550~17470 | 15360~17790 | 15250~18020 | 13340~15770 | 11320~12940 | 10670~13100 | 8890~10920 | | |
| IPM(FEED) | | | 1~4 | 1~4 | 2~5 | 2~5 | 2~5 | 2~5 | 3~5 | 3~5 | | | |
| Ap | | | 0.004~0.008 | 0.004~0.009 | 0.005~0.011 | 0.006~0.013 | 0.007~0.015 | 0.008~0.016 | 0.009~0.018 | 0.010~0.022 | | | |

SFM = Surface Feet per Minute
 RPM = Revolutions Per Minute
 IPT = Inches Per Tooth
 IPM = Inches Per Minute
 Ap : mm (Axial Depth of Cut)
 Ae : Inch (Radial Depth of Cut)

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YG X-POWER PRO END MILLS

RECOMMENDED CUTTING CONDITIONS

HSS

CBN END MILLS

i-Xmill END MILLS

i-SMART MODULAR END MILLS

X5070 END MILLS

4G MILL END MILLS

X-POWER PRO END MILLS

TitaNox-POWER END MILLS

JET-POWER END MILLS

V7 PLUS A END MILLS

V7 MILL INOX

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

STANDARD CARBIDE

ONLY ONE COATED PM60 END MILLS

SINE-POWER

TANK-POWER END MILLS

STANDARD COBALT & HSS

TECHNICAL DATA

GM883 SERIES 2 FLUTE RIB PROCESSING

| VDI 3323 | Parameter | Diameter (Ø) | | | | | | | | | |
|-------------|-----------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 1.4 | 1.5 | 1.6 | 1.8 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 | 6.0 |
| 1-4 | SFM(Vc) | 240~305 | 235~300 | 240~310 | 255~320 | 260~315 | 255~325 | 260~325 | 260~325 | 260~325 | 260~325 |
| | IPT(fz) | .0003~.0009 | .0004~.001 | .0004~.001 | .0004~.0011 | .0005~.0012 | .0006~.0015 | .0007~.0018 | .0009~.0024 | .0011~.0029 | .0014~.0035 |
| | RPM | 16630~21140 | 15200~19410 | 14550~18800 | 13750~17250 | 12610~15280 | 9900~12610 | 8410~10510 | 6310~7880 | 5050~6310 | 4210~5260 |
| | IPM(FEED) | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~0.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 5 | SFM(Vc) | 175~210 | 170~220 | 175~220 | 180~225 | 180~225 | 180~230 | 180~225 | 180~230 | 180~225 | 180~230 |
| | IPT(fz) | .0003~.0009 | .0004~.0009 | .0004~.0009 | .0004~.001 | .0005~.0011 | .0006~.0014 | .0007~.0017 | .0009~.0022 | .0011~.0028 | .0014~.0033 |
| | RPM | 12130~14550 | 11000~14230 | 10610~13340 | 9700~12130 | 8730~10920 | 6990~8930 | 5820~7280 | 4370~5580 | 3490~4370 | 2830~3720 |
| | IPM(FEED) | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 6-7 | SFM(Vc) | 240~305 | 235~300 | 240~310 | 255~320 | 260~315 | 255~325 | 260~325 | 260~325 | 260~325 | 260~325 |
| | IPT(fz) | .0003~.0009 | .0004~.001 | .0004~.001 | .0004~.0011 | .0005~.0012 | .0006~.0015 | .0007~.0018 | .0009~.0024 | .0011~.0029 | .0014~.0035 |
| | RPM | 16630~21140 | 15200~19410 | 14550~18800 | 13750~17250 | 12610~15280 | 9900~12610 | 8410~10510 | 6310~7880 | 5050~6310 | 4210~5260 |
| | IPM(FEED) | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~0.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 8-9 | SFM(Vc) | 175~210 | 170~220 | 175~220 | 180~225 | 180~225 | 180~230 | 180~225 | 180~230 | 180~225 | 180~230 |
| | IPT(fz) | .0003~.0009 | .0004~.0009 | .0004~.0009 | .0004~.001 | .0005~.0011 | .0006~.0014 | .0007~.0017 | .0009~.0022 | .0011~.0028 | .0014~.0033 |
| | RPM | 12130~14550 | 11000~14230 | 10610~13340 | 9700~12130 | 8730~10920 | 6990~8930 | 5820~7280 | 4370~5580 | 3490~4370 | 2830~3720 |
| | IPM(FEED) | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 10 | SFM(Vc) | 240~305 | 235~300 | 240~310 | 255~320 | 260~315 | 255~325 | 260~325 | 260~325 | 260~325 | 260~325 |
| | IPT(fz) | .0003~.0009 | .0004~.001 | .0004~.001 | .0004~.0011 | .0005~.0012 | .0006~.0015 | .0007~.0018 | .0009~.0024 | .0011~.0029 | .0014~.0035 |
| | RPM | 16630~21140 | 15200~19410 | 14550~18800 | 13750~17250 | 12610~15280 | 9900~12610 | 8410~10510 | 6310~7880 | 5050~6310 | 4210~5260 |
| | IPM(FEED) | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~0.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 11.1 - 11.2 | SFM(Vc) | 175~210 | 170~220 | 175~220 | 180~225 | 180~225 | 180~230 | 180~225 | 180~230 | 180~225 | 180~230 |
| | IPT(fz) | .0003~.0009 | .0004~.0009 | .0004~.0009 | .0004~.001 | .0005~.0011 | .0006~.0014 | .0007~.0017 | .0009~.0022 | .0011~.0028 | .0014~.0033 |
| | RPM | 12130~14550 | 11000~14230 | 10610~13340 | 9700~12130 | 8730~10920 | 6990~8930 | 5820~7280 | 4370~5580 | 3490~4370 | 2830~3720 |
| | IPM(FEED) | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 15 20 | SFM(Vc) | 240~305 | 235~300 | 240~310 | 255~320 | 260~315 | 255~325 | 260~325 | 260~325 | 260~325 | 260~325 |
| | IPT(fz) | .0003~.0009 | .0004~.001 | .0004~.001 | .0004~.0011 | .0005~.0012 | .0006~.0015 | .0007~.0018 | .0009~.0024 | .0011~.0029 | .0014~.0035 |
| | RPM | 16630~21140 | 15200~19410 | 14550~18800 | 13750~17250 | 12610~15280 | 9900~12610 | 8410~10510 | 6310~7880 | 5050~6310 | 4210~5260 |
| | IPM(FEED) | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 | 12~37 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~0.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 38.1 - 38.2 | SFM(Vc) | 110~135 | 110~135 | 110~140 | 110~140 | 115~145 | 115~145 | 115~145 | 115~145 | 115~140 | 115~170 |
| | IPT(fz) | .0002~.0003 | .0002~.0003 | .0002~.0003 | .0002~.0004 | .0003~.0004 | .0003~.0005 | .0004~.0006 | .0005~.0008 | .0006~.001 | .0008~.001 |
| | RPM | 7620~9360 | 7120~8730 | 6670~8490 | 5930~7550 | 5580~7040 | 4460~5630 | 3720~4690 | 2790~3520 | 2230~2720 | 1860~2750 |
| | IPM(FEED) | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 |
| | Ap | 0.012~0.025 | 0.014~0.028 | 0.015~0.030 | 0.016~0.032 | 0.018~0.035 | 0.022~0.045 | 0.028~0.055 | 0.036~0.072 | 0.045~0.090 | 0.054~0.108 |
| 40 | SFM(Vc) | 175~210 | 170~220 | 175~220 | 180~225 | 180~225 | 180~230 | 180~225 | 180~230 | 180~225 | 180~230 |
| | IPT(fz) | .0003~.0009 | .0004~.0009 | .0004~.0009 | .0004~.001 | .0005~.0011 | .0006~.0014 | .0007~.0017 | .0009~.0022 | .0011~.0028 | .0014~.0033 |
| | RPM | 12130~14550 | 11000~14230 | 10610~13340 | 9700~12130 | 8730~10920 | 6990~8930 | 5820~7280 | 4370~5580 | 3490~4370 | 2830~3720 |
| | IPM(FEED) | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 | 8~25 |
| | Ap | 0.062~0.125 | 0.070~0.135 | 0.075~0.145 | 0.080~.160 | 0.090~0.180 | 0.112~0.235 | 0.135~0.270 | 0.180~0.360 | 0.225~0.450 | 0.270~0.540 |
| 41 | SFM(Vc) | 110~135 | 110~135 | 110~140 | 110~140 | 115~145 | 115~145 | 115~145 | 115~145 | 115~140 | 115~170 |
| | IPT(fz) | .0002~.0003 | .0002~.0003 | .0002~.0003 | .0002~.0004 | .0003~.0004 | .0003~.0005 | .0004~.0006 | .0005~.0008 | .0006~.001 | .0008~.001 |
| | RPM | 7620~9360 | 7120~8730 | 6670~8490 | 5930~7550 | 5580~7040 | 4460~5630 | 3720~4690 | 2790~3520 | 2230~2720 | 1860~2750 |
| | IPM(FEED) | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 | 3~5 |
| | Ap | 0.012~0.025 | 0.014~0.028 | 0.015~0.030 | 0.016~0.032 | 0.018~0.035 | 0.022~0.045 | 0.028~0.055 | 0.036~0.072 | 0.045~0.090 | 0.054~0.108 |

SFM = Surface Feet per Minute
 RPM = Revolutions Per Minute
 IPT = Inches Per Tooth
 IPM = Inches Per Minute
 Ap : mm (Axial Depth of Cut)
 Ae : inch (Radial Depth of Cut)

