

SAMPLE CODE FOR MAZAK

3 AXIS VITTICAL MILL

```
(*ARMCASTING*)
()
N1 (STEP #1 ) (*****
(3.0 FACE MILL T1)
G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X-2.421
T1 T2 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X-2.421 Y19.1933 S900 M3
G43 H1 Z3.5
M8
Z.1
G1 Z0. F20.
X-1.264 Y17.8144 F45.
G3 X0. Y17.225 I1.264 J1.0606
G2 X1.6 Y15.625 I0. J-1.6
X0. Y14.025 I-1.6 J0.
X-1.6 Y15.625 I0. J1.6
X0. Y17.225 I1.6 J0.
G3 X1.264 Y17.8144 I0. J1.65
G1 X2.421 Y19.1933
G0 Z3.5
X3.65 Y1.6275 Z.5
Z.1
G1 Z0. F20.
G41 D1 X-6.8 F45.
G0 Z.5
X3.65 Y-1.1725
Z.1
G1 Z0. F20.
X-6.8 F45.
G0 Z.5
G40
G30 G91 Z0 M9
G30 G91 Y0 M6
N2 (STEP #2 ) (*****
(1.5 390 T2)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X3.1729 T2
T2 T35 M6
G0 G17 G20 G40 G49 G80 G90 G94
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M39
/9 M1
G0 G90 G54 X3.1729 Y.8091 S1973 M3
G43 H2 Z.5
M51
Z.1
G1 Z-.26 F20.
G41 D2 X2.8919 Y-.0459 F47.3
X2.3056 Y-1.8299
X1.9154 Y-2.3917
G40 X1.402 Y-3.1309
G0 Z.5
X3.1729 Y.8091
Z.1
G1 Z-.52 F20.
G41 D2 X2.8919 Y-.0459 F47.3
X2.3056 Y-1.8299
X1.9154 Y-2.3917
G40 X1.402 Y-3.1309
G0 Z.5
X3.1729 Y.8091
Z.1
G1 Z-.78 F20.
G41 D2 X2.8919 Y-.0459 F47.3
X2.3056 Y-1.8299
X1.9154 Y-2.3917
G40 X1.402 Y-3.1309
G0 Z.5
X3.1729 Y.8091
Z.1
G1 Z-1.04 F20.
G41 D2 X2.8919 Y-.0459 F47.3
X2.3056 Y-1.8299
X1.9154 Y-2.3917
G40 X1.402 Y-3.1309
G0 Z.5
X3.1729 Y.8091
Z.1
G1 Z-1.3 F20.
G41 D2 X2.8919 Y-.0459 F47.3
X2.3056 Y-1.8299
X1.9154 Y-2.3917
G40 X1.402 Y-3.1309
G0 Z.5
G30 G91 Z0 M9
G30 G91 Y0 M6
N35 (STEP #35) (*****)
(1.743 OTM T35)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X-3.625 T35
T35 T10 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39

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/9 M1
G0 G90 G54 X-3.625 Y.9408 S970 M3
G43 H35 Z3.5
M51
G98 G81 Z-1.3672 R.1 F6.7
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N10 (STEP #10 ) (*****
(1/2 ISCAR T10)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X1.9596 T10
T10 T21 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X1.9596 Y15.718 S3000 M3
G43 H10 Z3.5
M8
Z.1
G1 X2.138 Z.0907 F20.
X1.638 Z.0644
X2.138 Z.0382
X1.638 Z.012
X2.138 Z-.0142
X1.638 Z-.0404
X2.138 Z-.0666
X1.638 Z-.0928
X2.138 Z-.119
X1.638 Z-.1452
X2.138 Z-.1714
X1.638 Z-.1976
X2.138 Z-.2238
X1.638 Z-.25
X0. Y15.8025 F28.
G3 X-.1775 Y15.625 I0. J-.1775
X0. Y15.4475 I.1775 J0.
X.1775 Y15.625 I0. J.1775
X0. Y15.8025 I-.1775 J0.
G1 Y15.99
G3 X-.365 Y15.625 I0. J-.365
X0. Y15.26 I.365 J0.
X.365 Y15.625 I0. J.365
X0. Y15.99 I-.365 J0.
G1 Y16.365
G3 X-.74 Y15.625 I0. J-.74
X0. Y14.885 I.74 J0.
X.74 Y15.625 I0. J.74
X0. Y16.365 I-.74 J0.
G1 Y16.74
G3 X-1.115 Y15.625 I0. J-1.115
X0. Y14.51 I1.115 J0.
X1.115 Y15.625 I0. J1.115
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X0. Y16.74 I-1.115 J0.
G1 Y17.115
G3 X-1.49 Y15.625 I0. J-1.49
X0. Y14.135 I1.49 J0.
X1.49 Y15.625 I0. J1.49
X0. Y17.115 I-1.49 J0.
G1 Y17.49
G3 X-1.865 Y15.625 I0. J-1.865
X0. Y13.76 I1.865 J0.
X1.865 Y15.625 I0. J1.865
X0. Y17.49 I-1.865 J0.
G1 Y17.865
G3 X-2.24 Y15.625 I0. J-2.24
X0. Y13.385 I2.24 J0.
X2.24 Y15.625 I0. J2.24
X0. Y17.865 I-2.24 J0.
G0 Z.5
X1.9596 Y15.718
Z.1
G1 Z-.15 F20.
X2.138 Z-.1593
X1.638 Z-.1856
X2.138 Z-.2118
X1.638 Z-.238
X2.138 Z-.2642
X1.638 Z-.2904
X2.138 Z-.3166
X1.638 Z-.3428
X2.138 Z-.369
X1.638 Z-.3952
X2.138 Z-.4214
X1.638 Z-.4476
X2.138 Z-.4738
X1.638 Z-.5
X0. Y15.8025 F28.
G3 X-.1775 Y15.625 I0. J-.1775
X0. Y15.4475 I.1775 J0.
X.1775 Y15.625 I0. J.1775
X0. Y15.8025 I-.1775 J0.
G1 Y15.99
G3 X-.365 Y15.625 I0. J-.365
X0. Y15.26 I.365 J0.
X.365 Y15.625 I0. J.365
X0. Y15.99 I-.365 J0.
G1 Y16.365
G3 X-.74 Y15.625 I0. J-.74
X0. Y14.885 I.74 J0.
X.74 Y15.625 I0. J.74
X0. Y16.365 I-.74 J0.
G1 Y16.74
G3 X-1.115 Y15.625 I0. J-1.115
X0. Y14.51 I1.115 J0.
X1.115 Y15.625 I0. J1.115
X0. Y16.74 I-1.115 J0.

G1 Y17.115
G3 X-1.49 Y15.625 I0. J-1.49
X0. Y14.135 I1.49 J0.
X1.49 Y15.625 I0. J1.49
X0. Y17.115 I-1.49 J0.
G1 Y17.49
G3 X-1.865 Y15.625 I0. J-1.865
X0. Y13.76 I1.865 J0.
X1.865 Y15.625 I0. J1.865
X0. Y17.49 I-1.865 J0.
G1 Y17.865
G3 X-2.24 Y15.625 I0. J-2.24
X0. Y13.385 I2.24 J0.
X2.24 Y15.625 I0. J2.24
X0. Y17.865 I-2.24 J0.
G0 Z.5
Y17.875
Z.1
G1 Z-.5 F20.
G3 X-2.25 Y15.625 I0. J-2.25 F28.
X0. Y13.375 I2.25 J0.
X2.25 Y15.625 I0. J2.25
G41 D10 X0. Y17.875 I-2.25 J0.
G0 Z3.5
X-3.925 Y.5858 Z.5
Z.1
G1 Z-.2796 F20.
Y.4858 F28.
G3 X-3.625 Y.1858 I.3 J0.
X-2.87 Y.9408 I0. J.755
X-3.625 Y1.6958 I-.755 J0.
X-4.38 Y.9408 I0. J-.755
X-3.625 Y.1858 I.755 J0.
X-3.5729 Y.1904 I0. J.3
G1 G40 X-3.4498 Y.2121
G0 Z.5
X-3.925 Y.5858
Z.1
G1 Z-.5591 F20.
G41 D10 Y.4858 F28.
G3 X-3.625 Y.1858 I.3 J0.
X-2.87 Y.9408 I0. J.755
X-3.625 Y1.6958 I-.755 J0.
X-4.38 Y.9408 I0. J-.755
X-3.625 Y.1858 I.755 J0.
X-3.5729 Y.1904 I0. J.3
G1 G40 X-3.4498 Y.2121
G0 Z.5
X-3.925 Y.5858
Z.1
G1 Z-.8387 F20.
G41 D10 Y.4858 F28.
G3 X-3.625 Y.1858 I.3 J0.
X-2.87 Y.9408 I0. J.755

X-3.625 Y1.6958 I-.755 J0.
X-4.38 Y.9408 I0. J-.755
X-3.625 Y.1858 I.755 J0.
X-3.5729 Y.1904 I0. J.3
G1 G40 X-3.4498 Y.2121
G0 Z.5
G30 G91 Z0 M9
G30 G91 Y0 M6
N21 (STEP #21) (*****)
(.257 DELTA T21)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X1. T21
T21 T22 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X1. Y-1.732 S4000 M3
G43 H21 Z.5
M51
G98 G81 Z-.9 R.1 F28.
X-1.
X-1.4142 Y1.4142
X1.4142
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N22 (STEP #22) (*****)
(5/16-18 TAP T22)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X1. T22
T22 T41 M6
G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X1. Y-1.732
G43 H22 Z.5
M51
G84 S270
G98 G84 G95 Z-.75 R.1 F.0556
X-1.
X-1.4142 Y1.4142
X1.4142
G80
G94
G30 G91 Z0 M9
G30 G91 Y0 M6
N41 (STEP #41) (*****)
(3.385 TWIN BORE T41)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T41
T41 T37 M6

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G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X0. Y0. S500 M3
G43 H41 Z.5
M51
G98 G82 Z-1.35 R.1 F12.5 P250
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N37 (STEP #37 ) (*****
(2.8 TWIN BORE T37)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T37
T37 T42 M6
G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X0. Y0. S400 M3
G43 H37 Z.5
M51
G98 G82 Z-4.375 R2.175 F7. P250
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N42 (STEP #42 ) (*****
(3.515 TWIN BORE T42)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T42
T42 T49 M6
G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X0. Y0. S500 M3
G43 H42 Z.5
M51
G98 G82 Z-.895 R.1 F12.5 P250
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N49 (STEP #49 ) (*****
(2.047 BORE T49)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X-3.625 T49
T49 T43 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X-3.625 Y.9408 S1200 M3
G43 H49 Z.5
M51
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G98 G76 Z-.8387 R.1 Q.02 F2.5 P200
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N43 (STEP #43 ) (***** )
(2.835 BORE T43)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T43
T43 T44 M6
G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X0. Y0. S400 M3
G43 H43 Z.5
M51
G98 G76 Z4.375 R-1.175 F1.2 P200
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N44 (STEP #44 ) (***** )
(3.544 BORE T44)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T44
T44 T7 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X0. Y0. S1250 M3
G43 H44 Z.5
M51
G98 G76 Z-.892 R.1 F3.5 P200
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N7 (STEP #7 ) (***** )
(1/2 GUHRING T7)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X0. T7
T7 T39 M6
G0 G17 G20 G40 G49 G80 G90 G94
M39
/9 M1
G0 G90 G54 X0. Y15.625 S3246 M3
G43 H7 Z.5
M51
G98 G81 Z-1.141 R.1 F45.
Y17.625
X-1.7321 Y16.625
Y14.625
X0. Y13.625
X1.732 Y14.625

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Y16.625
G80
G30 G91 Z0 M9
G30 G91 Y0 M6
N39 (STEP #39 ) (***** )
(1.0 SLOTTING T39)
G0 G30 G91 Z0
G30 G91 Y0
G0 G90 G54 X-3.825 T39
T39 T1 M6
G0 G17 G20 G40 G49 G80 G90 G94
M38
/9 M1
G0 G90 G54 X-3.825 Y.6089 S400 M3
G43 H39 Z.5
M8
Z.1
G1 Z-.13 F20.
G41 D39 X-3.925 Y.4357 F2.5
G3 X-3.625 Y.3553 I.3 J.5196
X-3.0395 Y.9408 I0. J.5855
X-3.625 Y1.5263 I-.5855 J0.
X-4.2105 Y.9408 I0. J-.5855
X-3.625 Y.3553 I.5855 J0.
X-3.325 Y.4357 I0. J.6
G1 G40 X-3.425 Y.6089
G0 Z.5
G30 G91 Z0 M9
G30 G91 Y0
/7 M30
%
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