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;TELESO_MPF
;$PATH=/_N_WKS_DIR/_N_F1KOCIAN_WPD
; Vypracoval: Petr Kocian
; SOUTEZ: NEJLEPSI PROGRAMATOR CNC STROJU 22.07. 2009
; PART NAME : TELESO
; MACH TYPE : Vertikalni frezovací centrum s 5 osami
; POST TYPE : Siemens 840D
N1 G0 G17 G40
; Operace c.1
; CELO NAHOTOVO-POUZE PRO UPNUTI
; WG#3 : CELO
; CS#1 : XY rovina X0. Y0. Z0.)
; TOOL 1
N2 T1 ; HP F90AT D50-4-22-22 / HP ADCR 220704PDFR-P LM IC28
M6
D1
T2
CU T2 D F
G0 G54 ; JEDEN NULOVY BOD (pouziti f. TRANS)
TRANS X0. Y0. Z0.
MSG("CELNI FREZOVANI")
M25 M27
G0 Z250.
G90 G0 X-127. Y0. A0. C0. S3820 M3 M8
M26 M28
G17
Z5.
G0 Z0.
G1 X50. F2292.
G1 Z4.
G0 Z10.
Z250.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.2
; VRTAK pr.14 8D
; WG#3 : CELO
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 2
N3 T2 ; DCM 140-112-16A-8D / IDI 140-SG IC908
M6
D1
T3
CU T2 D F
G0 G54
TRANS X0. Y0. Z0.
MSG("VRTANI S VYPLACHEM 40mm,1mm odskok")
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M25 M27
G0 Z250.
G90 G0 X0. Y0. A0. C0. F887. S2956 M3 M8
M26 M28
G17
Z3.
MCALL CYCLE83(3.,0.,3.,-103.548,0,0,40., ,0.1, ,1,0,3, , , ,)
G0 X0. Y0.
MCALL
Z250.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.3
; TK FREZA pr.20 / 3zuby
; WG#6 : UKOS_20ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
N4 T3 ; ECA-B-3 20-38C20-104 IC08
M6
D1
T4
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubovani ukosu 20st - po sroubovici")
M25 M27
G0 Z250.
G90 G0 X-0.207 Y-1.138 A0. C0. S11141 M3 M8
M26 M28
G17
Z1.
G1 Z2.5 F2005.
G3 X0. Y0. Z2.197 I-0.869 J0.746 F2005.
G3 X0. Y0. Z0.398 I-1.076 J-0.392
G3 X0. Y0. Z-1.402 I-1.076 J-0.392
G3 X0. Y0. Z-3.201 I-1.076 J-0.392
G3 X0. Y0. Z-5. I-1.076 J-0.392
G1 X-0.5 Y-1.491
G41 X-10.5 Y-1.991
G3 X0. Y-12.491 I10.5 J0.
G3 X0. Y-12.491 I0. J12.491
G3 X10.5 Y-1.991 I0. J10.5
G1 G40 X0.5 Y-1.491
X0.7 Y-0.582
Z-2.5
G3 X0. Y0. Z-3.359 I-0.006 J0.705
G3 X0. Y0. Z-4.466 I0.694 J0.122
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G3 X0. Y0. Z-5.573 I0.694 J0.122
G3 X0. Y0. Z-6.68 I0.694 J0.122
G3 X0. Y0. Z-7.786 I0.694 J0.122
G3 X0. Y0. Z-8.893 I0.694 J0.122
G3 X0. Y0. Z-10. I0.694 J0.122
G1 X-0.5 Y-0.609
G41 X-10.5 Y-1.109
G3 X0. Y-11.609 I10.5 J0.
G3 X0. Y-11.609 I0. J11.609
G3 X10.5 Y-1.109 I0. J10.5
G1 G40 X0.5 Y-0.609
X0.024 Y0.163
Z-7.5
G3 X0. Y0. Z-7.542 I0.236 J-0.117
G3 X0. Y0. Z-7.956 I0.26 J0.046
G3 X0. Y0. Z-8.371 I0.26 J0.046
G3 X0. Y0. Z-8.785 I0.26 J0.046
G3 X0. Y0. Z-9.199 I0.26 J0.046
G3 X0. Y0. Z-9.614 I0.26 J0.046
G3 X0. Y0. Z-10.028 I0.26 J0.046
G3 X0. Y0. Z-10.442 I0.26 J0.046
G3 X0. Y0. Z-10.857 I0.26 J0.046
G3 X0. Y0. Z-11.271 I0.26 J0.046
G3 X0. Y0. Z-11.685 I0.26 J0.046
G3 X0. Y0. Z-12.1 I0.26 J0.046
G3 X0. Y0. Z-12.514 I0.26 J0.046
G3 X0. Y0. Z-12.928 I0.26 J0.046
G3 X0. Y0. Z-13.343 I0.26 J0.046
G3 X0. Y0. Z-13.757 I0.26 J0.046
G3 X0. Y0. Z-14.171 I0.26 J0.046
G3 X0. Y0. Z-14.586 I0.26 J0.046
G3 X0. Y0. Z-15. I0.26 J0.046
G1 X-0.5 Y0.272
G41 X-10.5 Y-0.228
G3 X0. Y-10.728 I10.5 J0.
G3 X0. Y-10.728 I0. J10.728
G3 X10.5 Y-0.228 I0. J10.5
G1 G40 X0.5 Y0.272
G0 Z0.
TRANS X0 Y0 Z0
; Operace c.4
; frezovani pr.22 hl.20mm
; WG#6 : UKOS_20ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
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MSG("dokoncuje pr.22mm")
G90 G0 X0. Y0. A0. C0.
M26 M28
G17
Z1.
G1 Z-20. F1000.
G1 G41 X0.5 Y-10.5 F1000.
G3 X11. Y0. I0. J10.5
G3 X11. Y0. I-11. J0. F2005.
G3 X0.5 Y10.5 I-10.5 J0.
G1 G40 X0. Y0.
G0 Z-18.
TRANS X0 Y0 Z0
; Operace c.5
; zahloubeni 20/40
; WG#6 : UKOS_20ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("zahlubuje pr.20mm/hl.40mm")
G90 G0 X0. Y0. A0. C0. F2005.
M26 M28
G17
Z-18.
MCALL CYCLE85(-18.,-20.,2.,0,20.,0.7,2005.,2005.)
G0 X0. Y0.
MCALL
Z250.
TRANS X0 Y0 Z0
; Operace c.6
; Swarf frezovani - kapsa 20st
; WG#6 : UKOS_20ST
; CS#1 : XY rovina X0. Y8.682 Z0.76
; TOOL 3
CUT2DF
G0 G54
TOL_5(0.005)
FGROUP(X,Y,Z,A,C)
TRANS X0. Y8.682 Z0.76
MSG("dokoncuje ukos 20st - Swarf frezovani")
M25 M27
Z249.24
G90 G0 X0.674 Y-19.236 A-10. C-87.674
G17
Z148.922
G0 Y3.149 Z21.97
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**Z11.97**

**G1 Z1.97 F1000.**

X0.62 Y3.202 **Z0.477**

X0.512 Y3.285 **Z-2.225**

X0.393 Y3.351 **Z-4.926**

X0.267 Y3.398 **Z-7.628**

X0.135 Y3.427 **Z-10.33**

X0. Y3.438 **Z-13.032**

Y3.437 A-9.999 C-87.06 **F390.23**

Y3.438 A-10. C-86.445

Y3.436 A-9.999 C-85.481

Y3.438 A-10. C-84.516

Y3.436 A-9.999 C-83.548

Y3.438 A-10. C-82.58

Y3.436 A-9.999 C-81.615

Y3.438 A-10. C-80.65

Y3.436 A-9.999 C-79.681

Y3.438 A-10. C-78.713

Y3.436 A-9.999 C-77.747

Y3.438 A-10. C-76.781

Y3.436 A-9.999 C-75.812

Y3.438 A-10. C-74.843

Y3.436 A-9.999 C-73.876

Y3.438 A-10. C-72.909

Y3.436 A-9.999 C-71.94

Y3.438 A-10. C-70.97

Y3.436 A-9.999 C-70.003

Y3.438 A-10. C-69.036

Y3.436 A-9.999 C-68.066

Y3.438 A-10. C-67.096

Y3.436 A-9.999 C-66.128

Y3.438 A-10. C-65.16

Y3.436 A-9.999 C-64.189

Y3.438 A-10. C-63.219

Y3.436 A-9.999 C-62.25

Y3.438 A-10. C-61.282

Y3.436 A-9.999 C-60.311

Y3.438 A-10. C-59.34

Y3.436 A-9.999 C-58.371

Y3.438 A-10. C-57.402

Y3.436 A-9.999 C-56.431

Y3.438 A-10. C-55.459

Y3.436 A-9.999 C-54.49

Y3.438 A-10. C-53.52

Y3.436 A-9.999 C-52.548

Y3.438 A-10. C-51.577

Y3.436 A-9.999 C-50.607

Y3.438 A-10. C-49.636

Y3.436 A-9.999 C-48.664  
Y3.438 A-10. C-47.692  
Y3.436 A-9.999 C-47.  
C-46.307  
Y3.438 A-10. C-45.614  
Y3.436 A-9.999 C-44.919  
C-44.224  
Y3.438 A-10. C-43.53  
Y3.436 A-9.999 C-42.559  
Y3.438 A-10. C-41.588  
Y3.436 A-9.999 C-40.615  
Y3.438 A-10. C-39.642  
Y3.436 A-9.999 C-38.67  
Y3.438 A-10. C-37.699  
Y3.436 A-9.999 C-36.725  
Y3.438 A-10. C-35.752  
Y3.436 A-9.999 C-34.78  
Y3.438 A-10. C-33.808  
Y3.436 A-9.999 C-32.834  
Y3.438 A-10. C-31.861  
Y3.436 A-9.999 C-30.888  
Y3.438 A-10. C-29.916  
Y3.436 A-9.999 C-28.942  
Y3.438 A-10. C-27.968  
Y3.436 A-9.999 C-26.995  
Y3.438 A-10. C-26.022  
Y3.436 A-9.999 C-25.047  
Y3.438 A-10. C-24.073  
Y3.436 A-9.999 C-23.1  
Y3.438 A-10. C-22.126  
Y3.436 A-9.999 C-21.152  
Y3.438 A-10. C-20.177  
Y3.436 A-9.999 C-19.203  
Y3.438 A-10. C-18.229  
Y3.436 A-9.999 C-17.254  
Y3.438 A-10. C-16.28  
Y3.436 A-9.999 C-15.305  
Y3.438 A-10. C-14.331  
Y3.436 A-9.999 C-13.355  
Y3.438 A-10. C-12.38  
Y3.436 A-9.999 C-11.405  
Y3.438 A-10. C-10.43  
Y3.436 A-9.999 C-9.455  
Y3.438 A-10. C-8.48  
Y3.436 A-9.999 C-7.504  
Y3.438 A-10. C-6.529  
Y3.436 A-9.999 C-5.553  
Y3.438 A-10. C-4.577

Y3.436 A-9.999 C-3.602  
Y3.438 A-10. C-2.626  
Y3.436 A-9.999 C-1.65  
Y3.438 A-10. C-0.674  
Y3.436 A-9.999 C0.303  
Y3.438 A-10. C1.279  
Y3.436 A-9.999 C2.255  
Y3.438 A-10. C3.232  
Y3.436 A-9.999 C4.208  
Y3.438 A-10. C5.185  
Y3.436 A-9.999 C6.162  
Y3.438 A-10. C7.138  
Y3.436 A-9.999 C8.116  
Y3.438 A-10. C9.093  
Y3.436 A-9.999 C10.07  
Y3.438 A-10. C11.047  
Y3.436 A-9.999 C12.024  
Y3.438 A-10. C13.002  
Y3.436 A-9.999 C13.979  
Y3.438 A-10. C14.957  
Y3.436 A-9.999 C15.922  
Y3.438 A-10. C16.887  
Y3.436 A-9.999 C17.824  
Y3.438 A-10. C18.76  
Y3.436 A-9.999 C19.739  
Y3.438 A-10. C20.717  
Y3.436 A-9.999 C21.695  
Y3.438 A-10. C22.673  
Y3.436 A-9.999 C23.652  
Y3.438 A-10. C24.631  
Y3.436 A-9.999 C25.609  
Y3.438 A-10. C26.588  
Y3.436 A-9.999 C27.567  
Y3.438 A-10. C28.547  
Y3.436 A-9.999 C29.525  
Y3.438 A-10. C30.504  
Y3.436 A-9.999 C31.484  
Y3.438 A-10. C32.464  
Y3.436 A-9.999 C33.443  
Y3.438 A-10. C34.422  
Y3.436 A-9.999 C35.402  
Y3.438 A-10. C36.382  
Y3.436 A-9.999 C37.362  
Y3.438 A-10. C38.341  
Y3.436 A-9.999 C39.322  
Y3.438 A-10. C40.303  
Y3.436 A-9.999 C41.282  
Y3.438 A-10. C42.262

Y3.436 A-9.999 C43.244  
Y3.438 A-10. C44.225  
Y3.436 A-9.999 C45.205  
Y3.438 A-10. C46.185  
Y3.436 A-9.999 C47.167  
Y3.438 A-10. C48.149  
Y3.436 A-9.999 C49.129  
Y3.438 A-10. C50.11  
Y3.436 A-9.999 C51.092  
Y3.438 A-10. C52.075  
Y3.436 A-9.999 C53.056  
Y3.438 A-10. C54.036  
Y3.436 A-9.999 C55.019  
Y3.438 A-10. C56.002  
Y3.436 A-9.999 C56.984  
Y3.438 A-10. C57.965  
Y3.436 A-9.999 C58.949  
Y3.438 A-10. C59.932  
Y3.436 A-9.999 C60.914  
Y3.438 A-10. C61.896  
Y3.436 A-9.999 C62.88  
Y3.438 A-10. C63.864  
Y3.436 A-9.999 C64.846  
Y3.438 A-10. C65.828  
Y3.436 A-9.999 C66.813  
Y3.438 A-10. C67.798  
Y3.436 A-9.999 C68.781  
Y3.438 A-10. C69.763  
Y3.436 A-9.999 C70.438  
C71.114  
Y3.438 A-10. C71.789  
Y3.436 A-9.999 C72.462  
C73.136  
Y3.438 A-10. C73.809  
Y3.436 A-9.999 C74.795  
Y3.438 A-10. C75.782  
Y3.436 A-9.999 C76.765  
Y3.438 A-10. C77.749  
Y3.436 A-9.999 C78.736  
Y3.438 A-10. C79.723  
Y3.436 A-9.999 C80.707  
Y3.438 A-10. C81.691  
Y3.436 A-9.999 C82.679  
Y3.438 A-10. C83.667  
Y3.436 A-9.999 C84.652  
Y3.438 A-10. C85.636  
Y3.436 A-9.999 C86.625  
Y3.438 A-10. C87.614



Y3.436 A-9.999 C88.599  
Y3.438 A-10. C89.584  
Y3.436 A-9.999 C90.55  
Y3.438 A-10. C91.515  
Y3.436 A-9.999 C92.482  
Y3.438 A-10. C93.45  
Y3.436 A-9.999 C94.414  
Y3.438 A-10. C95.379  
Y3.436 A-9.999 C96.347  
Y3.438 A-10. C97.315  
Y3.436 A-9.999 C98.28  
Y3.438 A-10. C99.245  
Y3.436 A-9.999 C100.214  
Y3.438 A-10. C101.182  
Y3.436 A-9.999 C102.148  
Y3.438 A-10. C103.114  
Y3.436 A-9.999 C104.083  
Y3.438 A-10. C105.052  
Y3.436 A-9.999 C106.019  
Y3.438 A-10. C106.986  
Y3.436 A-9.999 C107.955  
Y3.438 A-10. C108.925  
Y3.435 A-9.998 C109.703  
C110.481  
Y3.438 A-10. C111.259  
Y3.436 A-9.999 C112.229  
Y3.438 A-10. C113.199  
Y3.436 A-9.999 C114.167  
Y3.438 A-10. C115.135  
Y3.436 A-9.999 C116.105  
Y3.438 A-10. C117.076  
Y3.436 A-9.999 C118.044  
Y3.438 A-10. C119.013  
Y3.436 A-9.999 C119.984  
Y3.438 A-10. C120.955  
Y3.436 A-9.999 C121.924  
Y3.438 A-10. C122.893  
Y3.436 A-9.999 C123.864  
Y3.438 A-10. C124.836  
Y3.436 A-9.999 C125.805  
Y3.438 A-10. C126.775  
Y3.436 A-9.999 C127.747  
Y3.438 A-10. C128.718  
Y3.436 A-9.999 C129.689  
Y3.438 A-10. C130.659  
Y3.436 A-9.999 C131.631  
Y3.438 A-10. C132.603  
Y3.436 A-9.999 C133.574

Y3.438 A-10. C134.544  
Y3.436 A-9.999 C135.517  
Y3.438 A-10. C136.489  
Y3.436 A-9.999 C137.461  
Y3.438 A-10. C138.432  
Y3.436 A-9.999 C139.405  
Y3.438 A-10. C140.377  
Y3.436 A-9.999 C141.349  
Y3.438 A-10. C142.321  
Y3.436 A-9.999 C143.294  
Y3.438 A-10. C144.267  
Y3.436 A-9.999 C145.239  
Y3.438 A-10. C146.211  
Y3.436 A-9.999 C147.185  
Y3.438 A-10. C148.158  
Y3.436 A-9.999 C149.131  
Y3.438 A-10. C150.104  
Y3.436 A-9.999 C151.078  
Y3.438 A-10. C152.051  
Y3.436 A-9.999 C153.025  
Y3.438 A-10. C153.998  
Y3.436 A-9.999 C154.972  
Y3.438 A-10. C155.946  
Y3.436 A-9.999 C156.92  
Y3.438 A-10. C157.893  
Y3.436 A-9.999 C158.868  
Y3.438 A-10. C159.842  
Y3.436 A-9.999 C160.816  
Y3.438 A-10. C161.79  
Y3.436 A-9.999 C162.765  
Y3.438 A-10. C163.74  
Y3.436 A-9.999 C164.417  
C165.095  
Y3.438 A-10. C165.773  
Y3.436 A-9.999 C166.748  
Y3.438 A-10. C167.723  
Y3.436 A-9.999 C168.698  
Y3.438 A-10. C169.673  
Y3.436 A-9.999 C170.649  
Y3.438 A-10. C171.624  
Y3.436 A-9.999 C172.599  
Y3.438 A-10. C173.575  
Y3.436 A-9.999 C174.55  
Y3.438 A-10. C175.526  
Y3.436 A-9.999 C176.502  
Y3.438 A-10. C177.478  
Y3.436 A-9.999 C178.454  
Y3.438 A-10. C179.43

Y3.436 A-9.999 C180.406  
Y3.438 A-10. C181.383  
Y3.436 A-9.999 C182.359  
Y3.438 A-10. C183.335  
Y3.436 A-9.999 C184.312  
Y3.438 A-10. C185.289  
Y3.436 A-9.999 C186.265  
Y3.438 A-10. C187.242  
Y3.436 A-9.999 C188.219  
Y3.438 A-10. C189.196  
Y3.436 A-9.999 C190.173  
Y3.438 A-10. C191.151  
Y3.436 A-9.999 C192.128  
Y3.438 A-10. C193.106  
Y3.436 A-9.999 C194.083  
Y3.438 A-10. C195.06  
Y3.436 A-9.999 C196.038  
Y3.438 A-10. C197.016  
Y3.436 A-9.999 C197.994  
Y3.438 A-10. C198.972  
Y3.436 A-9.999 C199.95  
Y3.438 A-10. C200.929  
Y3.436 A-9.999 C201.907  
Y3.438 A-10. C202.885  
Y3.436 A-9.999 C203.864  
Y3.438 A-10. C204.843  
Y3.436 A-9.999 C205.821  
Y3.438 A-10. C206.799  
Y3.436 A-9.999 C207.779  
Y3.438 A-10. C208.758  
Y3.436 A-9.999 C209.737  
Y3.438 A-10. C210.716  
Y3.436 A-9.999 C211.695  
Y3.438 A-10. C212.675  
Y3.436 A-9.999 C213.654  
Y3.438 A-10. C214.633  
Y3.436 A-9.999 C215.614  
Y3.438 A-10. C216.594  
Y3.436 A-9.999 C217.574  
Y3.438 A-10. C218.553  
Y3.436 A-9.999 C219.534  
Y3.438 A-10. C220.515  
Y3.436 A-9.999 C221.494  
Y3.438 A-10. C222.474  
Y3.436 A-9.999 C223.456  
Y3.438 A-10. C224.437  
Y3.436 A-9.999 C225.417  
Y3.438 A-10. C226.397

Y3.436 A-9.998 C227.155  
C227.913  
Y3.438 A-10. C228.67  
Y3.436 A-9.999 C229.651  
Y3.438 A-10. C230.631  
Y3.436 A-9.999 C231.614  
Y3.438 A-10. C232.596  
Y3.436 A-9.999 C233.577  
Y3.438 A-10. C234.558  
Y3.436 A-9.999 C235.541  
Y3.438 A-10. C236.524  
Y3.436 A-9.999 C237.506  
Y3.438 A-10. C238.487  
Y3.436 A-9.999 C239.471  
Y3.438 A-10. C240.454  
Y3.436 A-9.999 C241.436  
Y3.438 A-10. C242.418  
Y3.436 A-9.999 C243.402  
Y3.438 A-10. C244.386  
Y3.436 A-9.999 C245.369  
Y3.438 A-10. C246.351  
Y3.436 A-9.999 C247.336  
Y3.438 A-10. C248.321  
Y3.436 A-9.999 C249.303  
Y3.438 A-10. C250.286  
Y3.436 A-9.999 C251.272  
Y3.438 A-10. C252.257  
Y3.436 A-9.999 C253.24  
Y3.438 A-10. C254.224  
Y3.436 A-9.999 C255.21  
Y3.438 A-10. C256.196  
Y3.436 A-9.999 C257.18  
Y3.438 A-10. C258.164  
Y3.436 A-9.999 C259.151  
Y3.438 A-10. C260.138  
Y3.436 A-9.999 C261.122  
Y3.438 A-10. C262.106  
Y3.436 A-9.999 C263.094  
Y3.438 A-10. C264.082  
Y3.436 A-9.999 C265.067  
Y3.438 A-10. C266.052  
Y3.436 A-9.999 C267.04  
Y3.438 A-10. C268.029  
Y3.436 A-9.999 C269.015  
Y3.438 A-10. C270.  
Y3.435 A-9.998 C270.775  
C271.551  
Y3.438 A-10. C272.326

```
X-0.132 Y3.428 Z-10.33 F2005.
X-0.261 Y3.401 Z-7.628
X-0.385 Y3.354 Z-4.926
X-0.502 Y3.289 Z-2.224
X-0.608 Y3.207 Z0.478
X-0.661 Y3.155 Z1.97
G0 Z11.97
Z21.97
Y-19.23 Z148.923
Z249.24
G74 C1=0
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.7
; odjehlit pro upinaci sroub na pr. 14,5
; WG#6 : UKOS_20ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 4
N5 T4 ; MM ECF45-160-6T10 IC908
M6
D1
T1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("odjehlit 0.25x45")
M25 M27
G0 Z250.
G90 G0 X0. Y0. A0. C0. F2328. S12931 M3 M8
M26 M28
G17
Z5.
MCALL CYCLE82(5.,-40.,45.,0,5.75 ,0.5)
G0 X0. Y0.
MCALL
G0 Z250. M9 M5
MSG("programovy STOP")
M0; 2. FAZE UPNUTI
;VYFOUKEJ, UPNI SROUBEM
;
;MACKNI START
Z250.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.8
; dokoncuje ostruvek pr.114,tecny najez/vyjezd
```

```
; WG#7 : Hladina - WG
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
N6 T1 ; HP F90AT D50-4-22-22 / HP ADCR 220704PDFR-P LM IC28
M6
D1
T5
CU T2 DF
G0 G54
TRANS X0. Y0. Z0.
MSG("dokoncuje ostruvek pr.114mm")
M25 M27
G0 Z250.
G90 G0 X-13.621 Y-124.894 A0. C0. S3820 M3 M8
M26 M28
G17
Z5.
G1 Z-6.333 F3000.
G1 G41 X-1.628 Y-92.013 F2292.
G3 X-19.532 Y-53.549 I-28.184 J10.28
G2 X-19.532 Y-53.549 I19.532 J53.549
G3 X-57.995 Y-71.453 I-10.28 J-28.184
G1 G40 X-69.988 Y-104.334
X-13.621 Y-124.894
Z-15.667 F3000.
G41 X-1.628 Y-92.013 F2292.
G3 X-19.532 Y-53.549 I-28.184 J10.28
G2 X-19.532 Y-53.549 I19.532 J53.549
G3 X-57.995 Y-71.453 I-10.28 J-28.184
G1 G40 X-69.988 Y-104.334
X-13.621 Y-124.894
Z-25. F3000.
G41 X-1.628 Y-92.013 F2292.
G3 X-19.532 Y-53.549 I-28.184 J10.28
G2 X-19.532 Y-53.549 I19.532 J53.549
G3 X-57.995 Y-71.453 I-10.28 J-28.184
G1 G40 X-69.988 Y-104.334
G0 Z5.
TRANS X0 Y0 Z0
; Operace c.9
; hrubu je ostruvek 30st-sikmo 2,5D
; WG#7 : Hladina - WG
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
CU T2 DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubu je ostruvek 30st-sikmo 2,5D")
```

G90 G0 X0. Y-84.658 A0. C0.

M26 M28

G17

Z1.

G1 Z-4.833 F3000.

G1 G41 Y-24.658 F2292.

X-21.04

G2 X-24.658 Y-21.04 I0. J3.618

G1 Y21.04

G2 X-21.04 Y24.658 I3.618 J0.

G1 X21.04

G2 X24.658 Y21.04 I0. J-3.618

G1 Y-21.04

G2 X21.04 Y-24.658 I-3.618 J0.

G1 X0.

G40 Y-84.658

Y-87.449

Z-9.667 F3000.

G41 Y-27.449 F2292.

X-21.04

G2 X-27.449 Y-21.04 I0. J6.409

G1 Y21.04

G2 X-21.04 Y27.449 I6.409 J0.

G1 X21.04

G2 X27.449 Y21.04 I0. J-6.409

G1 Y-21.04

G2 X21.04 Y-27.449 I-6.409 J0.

G1 X0.

G40 Y-87.449

Y-90.239

Z-14.5 F3000.

G41 Y-30.239 F2292.

X-21.04

G2 X-30.239 Y-21.04 I0. J9.199

G1 Y21.04

G2 X-21.04 Y30.239 I9.199 J0.

G1 X21.04

G2 X30.239 Y21.04 I0. J-9.199

G1 Y-21.04

G2 X21.04 Y-30.239 I-9.199 J0.

G1 X0.

G40 Y-90.239

G0 Z1.

TRANS X0 Y0 Z0

; Operace c.10

; hrubuje ostruvek pr.104mm +0,5 i na cele

; WG#7 : Hladina - WG

; CS#1 : XY rovina X0. Y0. Z0.

```
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubuje ostruvek pr.104mm")
G90 G0 X-15.59 Y-81.014 A0. C0.
M26 M28
G17
Z5.
G1 Z-19.5 F3000.
G1 G41 X-9.921 Y-51.554 F2292.
G2 X-9.921 Y-51.554 I9.921 J51.554
G1 G40 X-15.59 Y-81.014
G0 Z20.
TRANS X0 Y0 Z0
; Operace c.11
; hrubuje zadni ukosy 0,5 az 1,5st
; WG#28 : Hladina - Z-55 /78,5
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubuje zadni ukosy 0,5-1,5st")
G90 G0 X-88. Y106.5 A0. C0.
M26 M28
G17
Z-23.
G0 Z-39.75
G1 G41 Y105.5 F2292.
G3 X-62. Y79.5 I26. J0.
G1 X62.
G3 X88. Y105.5 I0. J26.
G1 G40 Y106.5
G0 Z20.
X-88.
Z-37.75
Z-54.5
G1 G41 Y105.5
G3 X-62. Y79.5 I26. J0.
G1 X62.
G3 X88. Y105.5 I0. J26.
G1 G40 Y106.5
G0 Z20.
TRANS X0 Y0 Z0
; Operace c.12
; hrubuje ukos 45st/4x hloubka
; WG#8 : HRANA_45_5_PLOCH
```



```
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubuje ukos 45st")
G90 G0 X113.147 Y65.522 A0. C0.
M26 M28
G17
Z5.
G0 Z-28.25
G1 G41 X72.147 F2292.
Y-29.884
X29.884 Y-72.147
X-29.884
X-72.147 Y-29.884
Y67.522
G40 X-99.147
G0 Z5.
X116.397 Y65.522
Z-31.5
G1 G41 X75.397
Y-31.23
X31.23 Y-75.397
X-31.23
X-75.397 Y-31.23
Y67.522
G40 X-102.397
G0 Z5.
X119.647 Y65.522
Z-34.75
G1 G41 X78.647
Y-32.577
X32.577 Y-78.647
X-32.577
X-78.647 Y-32.577
Y67.522
G40 X-105.647
G0 Z5.
X122.897 Y65.522
Z-38.
G1 G41 X81.897
Y-33.758
G2 X81.781 Y-34.039 I-0.397 J0.
G1 X34.039 Y-81.781
G2 X33.758 Y-81.897 I-0.281 J0.281
G1 X-33.758
G2 X-34.039 Y-81.781 I0. J0.397
```

```
G1 X-81.781 Y-34.039
G2 X-81.897 Y-33.758 I0.281 J0.281
G1 Y67.522
G40 X-108.897
G0 Z5.
TRANS X0 Y0 Z0
; Operace c.13
; hrubuje steny 5x82mm+0,5
; WG#10 : DNO_Z-90
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("hrubuje steny 5x82mm+0,5")
G90 G0 X115.5 Y84.236 A0. C0.
M26 M28
G17
Z5.
G0 Z-50.875
G1 G41 X109.5 F2292.
G3 X82.5 Y57.236 I0. J-27.
G1 Y-33.841
G2 X82.266 Y-34.407 I-0.8 J0.
G1 X34.407 Y-82.266
G2 X33.841 Y-82.5 I-0.566 J0.566
G1 X-33.841
G2 X-34.407 Y-82.266 I0. J0.8
G1 X-82.266 Y-34.407
G2 X-82.5 Y-33.841 I0.566 J0.566
G1 Y57.236
G40 X-109.5 Y82.236
G0 Z5.
X115.5 Y84.236
Z-7.875
Z-63.75
G1 G41 X109.5
G3 X82.5 Y57.236 I0. J-27.
G1 Y-33.841
G2 X82.266 Y-34.407 I-0.8 J0.
G1 X34.407 Y-82.266
G2 X33.841 Y-82.5 I-0.566 J0.566
G1 X-33.841
G2 X-34.407 Y-82.266 I0. J0.8
G1 X-82.266 Y-34.407
G2 X-82.5 Y-33.841 I0.566 J0.566
G1 Y57.236
G40 X-109.5 Y82.236
```

```
G0 Z5.
X115.5 Y84.236
Z-20.75
Z-76.625
G1 G41 X109.5
G3 X82.5 Y57.236 I0. J-27.
G1 Y-33.841
G2 X82.266 Y-34.407 I-0.8 J0.
G1 X34.407 Y-82.266
G2 X33.841 Y-82.5 I-0.566 J0.566
G1 X-33.841
G2 X-34.407 Y-82.266 I0. J0.8
G1 X-82.266 Y-34.407
G2 X-82.5 Y-33.841 I0.566 J0.566
G1 Y57.236
G40 X-109.5 Y82.236
G0 Z5.
X115.5 Y84.236
Z-33.625
Z-89.5
G1 G41 X109.5
G3 X82.5 Y57.236 I0. J-27.
G1 Y-33.841
G2 X82.266 Y-34.407 I-0.8 J0.
G1 X34.407 Y-82.266
G2 X33.841 Y-82.5 I-0.566 J0.566
G1 X-33.841
G2 X-34.407 Y-82.266 I0. J0.8
G1 X-82.266 Y-34.407
G2 X-82.5 Y-33.841 I0.566 J0.566
G1 Y57.236
G40 X-109.5 Y82.236
G0 Z5.
Z250.
TRANS X0 Y0 Z0
; Operace c.14
; dokoncuje ukos 45st - celne 1. C90
; WG#24 : PLOCHA_45ST
; CS#4 : WG8, C3_1H X0. Y110.867 Z45.616
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y110.867 Z45.616
MSG("dokoncuje ukos 45st - celne 1.")
Z204.384
G90 G0 X99.989 Y-10. A-45. C90.
M26 M28
G17
```

```
Z10.
G1 Z0. F3000.
G1 X-59.519 F2292.
G0 Z30.
Z204.384
TRANS X0 Y0 Z0
; Operace c.15
; dokoncuje ukos 45st - celne 2. C135
; WG#24 : PLOCHA_45ST
; CS#28 : TpTrans Oto en 45 Stup. X0. Y110.867 Z45.616
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y110.867 Z45.616
MSG("dokoncuje ukos 45st - celne 2.")
Z204.384
G90 G0 X99.989 Y-10. A-45. C135.
M26 M28
G17
Z10.
G1 Z0. F3000.
G1 X-59.519 F2292.
G0 Z30.
Z204.384
TRANS X0 Y0 Z0
; Operace c.16
; dokoncuje ukos 45st - celne 3. C180
; WG#24 : PLOCHA_45ST
; CS#29 : TpTrans Oto en 90 Stup. X0. Y110.867 Z45.616
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y110.867 Z45.616
MSG("dokoncuje ukos 45st - celne 3.")
Z204.384
G90 G0 X99.989 Y-10. A-45. C180.
M26 M28
G17
Z10.
G1 Z0. F3000.
G1 X-59.519 F2292.
G0 Z30.
Z204.384
TRANS X0 Y0 Z0
; Operace c.17
; dokoncuje ukos 45st - celne 4. C225
; WG#24 : PLOCHA_45ST
; CS#30 : TpTrans Oto en 135 Stup. X0. Y110.867 Z45.616
```

```
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y110.867 Z45.616
MSG("dokoncuje ukos 45st - celne 4.")
Z204.384
G90 G0 X99.989 Y-10. A-45. C-135.
M26 M28
G17
Z10.
G1 Z0. F3000.
G1 X-59.519 F2292.
G0 Z30.
Z204.384
TRANS X0 Y0 Z0
; Operace c.18
; dokoncuje ukos 45st - celne 5. C270
; WG#24 : PLOCHA_45ST
; CS#31 : TpTrans Oto en 180 Stup. X0. Y110.867 Z45.616
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y110.867 Z45.616
MSG("dokoncuje ukos 45st - celne 5.")
Z204.384
G90 G0 X99.989 Y-10. A-45. C-90.
M26
G17
Z10.
G1 Z0. F3000.
G1 X-59.519 F2292.
G0 Z30.
Z204.384
TRANS X0 Y0 Z0
; Operace c.19
; dokoncuje dno u ostruvku 30st 60x60 boky-0.16
; WG#7 : Hladina - WG
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("dokoncuje dno u ostruvku 30st")
Z250.
G90 G0 X-79.84 Y-34.529 A0. C0.
M26 M28
G17
Z2.5
```

```
G1 Z-15. F2292.
G1 G41 X-59.84 F2292.
G3 X-29.84 Y-4.529 I0. J30.
G1 Y21.04
G2 X-21.04 Y29.84 I8.8 J0.
G1 X21.04
G2 X29.84 Y21.04 I0. J-8.8
G1 Y-21.04
G2 X21.04 Y-29.84 I-8.8 J0.
G1 X-21.04
G2 X-29.84 Y-21.04 I0. J8.8
G1 Y-4.529
G3 X-59.84 Y25.471 I-30. J0.
G1 G40 X-79.84
G0 Z2.5
Z250.
TRANS X0 Y0 Z0
; Operace c.20
; dokoncuje steny ostruvku 30st - Swarf frezovani
; WG#7 : Hladina - WG
; CS#1 : XY rovina X0. Y25. Z6.699
; TOOL 1
CUT2DF
G0 G54
TOL_5(0.005)
FGROUP(X,Y,Z,A,C)
TRANS X0. Y25. Z6.699
MSG("dokoncuje steny ostruvku 30st - Swarf frezovani")
M25 M27
Z243.301
G90 G0 X5. Y-108.48 A-30. C-180.
G17
Z110.574
G0 Y-48.486 Z6.661
Z-3.339
G1 Z-13.339 F2292.
X4.994 Y-48.235 Z-13.817
X4.951 Y-47.79 Z-14.672
X4.869 Y-47.351 Z-15.526
X4.749 Y-46.92 Z-16.38
X4.59 Y-46.502 Z-17.234
X4.394 Y-46.1 Z-18.088
X4.163 Y-45.717 Z-18.943
X3.899 Y-45.356 Z-19.797
X3.604 Y-45.02 Z-20.651
X3.28 Y-44.712 Z-21.505
X2.93 Y-44.434 Z-22.359
X2.557 Y-44.189 Z-23.214
```

X2.162 Y-43.978 Z-24.068  
X1.751 Y-43.802 Z-24.922  
X1.326 Y-43.665 Z-25.776  
X0.89 Y-43.566 Z-26.63  
X0.447 Y-43.506 Z-27.484  
X0. Y-43.481 Z-28.339  
X-21.04  
X-20.742 Y-43.735 Z-28.483 A-29.998 C-180.805  
X-20.44 Y-43.986 Z-28.63 A-30. C-181.611  
X-20.131 Y-44.236 Z-28.772 A-29.997 C-182.425  
X-19.817 Y-44.481 Z-28.916 A-30. C-183.239  
X-19.504 Y-44.721 Z-29.052 A-29.998 C-184.044  
X-19.186 Y-44.956 Z-29.19 A-30. C-184.849  
X-18.861 Y-45.19 Z-29.323 A-29.998 C-185.662  
X-18.533 Y-45.42 Z-29.458 A-30. C-186.476  
X-18.204 Y-45.643 Z-29.585 A-29.998 C-187.28  
X-17.872 Y-45.862 Z-29.714 A-30. C-188.085  
X-17.533 Y-46.08 Z-29.837 A-29.998 C-188.897  
X-17.19 Y-46.293 Z-29.962 A-30. C-189.709  
X-16.848 Y-46.5 Z-30.079 A-29.998 C-190.513  
X-16.502 Y-46.702 Z-30.199 A-30. C-191.317  
X-16.15 Y-46.903 Z-30.312 A-29.998 C-192.129  
X-15.794 Y-47.098 Z-30.427 A-30. C-192.94  
X-15.439 Y-47.288 Z-30.534 A-29.998 C-193.743  
X-15.081 Y-47.473 Z-30.644 A-30. C-194.547  
X-14.717 Y-47.656 Z-30.747 A-29.998 C-195.357  
X-14.349 Y-47.834 Z-30.852 A-30. C-196.167  
X-14.042 Y-47.979 Z-30.933 A-29.998 C-196.841  
X-13.733 Y-48.119 Z-31.017 A-30. C-197.514  
X-13.42 Y-48.259 Z-31.095 A-29.998 C-198.191  
X-13.105 Y-48.394 Z-31.175 A-30. C-198.868  
X-12.787 Y-48.528 Z-31.251 A-29.998 C-199.549  
X-12.467 Y-48.657 Z-31.327 A-30. C-200.229  
X-12.143 Y-48.785 Z-31.399 A-29.998 C-200.914  
X-11.818 Y-48.909 Z-31.472 A-30. C-201.598  
X-11.434 Y-49.05 Z-31.551 A-29.998 C-202.401  
X-11.048 Y-49.186 Z-31.633 A-30. C-203.204  
X-10.658 Y-49.319 Z-31.707 A-29.998 C-204.011  
X-10.265 Y-49.446 Z-31.783 A-30. C-204.819  
X-9.873 Y-49.569 Z-31.851 A-29.998 C-205.621  
X-9.479 Y-49.686 Z-31.921 A-30. C-206.424  
X-9.081 Y-49.799 Z-31.984 A-29.998 C-207.23  
X-8.681 Y-49.907 Z-32.049 A-30. C-208.036  
X-8.282 Y-50.01 Z-32.106 A-29.998 C-208.839  
X-7.881 Y-50.108 Z-32.165 A-30. C-209.641  
X-7.477 Y-50.202 Z-32.216 A-29.998 C-210.446  
X-7.071 Y-50.29 Z-32.27 A-30. C-211.252  
X-6.666 Y-50.374 Z-32.315 A-29.998 C-212.054

X-6.26 Y-50.452 **Z-32.363** A-30. C-212.856  
X-5.851 Y-50.526 **Z-32.403** A-29.998 C-213.66  
X-5.441 Y-50.594 **Z-32.445** A-30. C-214.464  
X-5.031 Y-50.658 **Z-32.479** A-29.998 C-215.266  
X-4.62 Y-50.716 **Z-32.516** A-30. C-216.068  
X-4.207 Y-50.77 **Z-32.544** A-29.998 C-216.871  
X-3.794 Y-50.818 **Z-32.575** A-30. C-217.674  
X-3.381 Y-50.862 **Z-32.597** A-29.998 C-218.476  
X-2.967 Y-50.9 **Z-32.622** A-30. C-219.277  
X-2.552 Y-50.934 **Z-32.639** A-29.998 C-220.08  
X-2.137 Y-50.962 **Z-32.658** A-30. C-220.882  
X-1.781 Y-50.983 **Z-32.666** A-29.996 C-221.568  
X-1.425 Y-51. **Z-32.675** C-222.254  
X-1.069 Y-51.012 **Z-32.687** A-30. C-222.94  
X-0.713 Y-51.022 **Z-32.688** A-29.996 C-223.627  
X-0.357 Y-51.027 **Z-32.691** C-224.313  
X0. Y-51.028 **Z-32.696** A-30. C-225.  
X0.416 Y-51.026 **Z-32.692** A-29.998 C-225.801  
X0.831 Y-51.018 **Z-32.69** A-30. C-226.601  
X1.247 Y-51.006 **Z-32.681** A-29.998 C-227.402  
X1.662 Y-50.988 **Z-32.673** A-30. C-228.202  
X2.077 Y-50.966 **Z-32.657** A-29.998 C-229.002  
X2.491 Y-50.938 **Z-32.644** A-30. C-229.802  
X2.905 Y-50.906 **Z-32.623** A-29.998 C-230.602  
X3.317 Y-50.868 **Z-32.603** A-30. C-231.401  
X3.73 Y-50.826 **Z-32.576** A-29.998 C-232.201  
X4.142 Y-50.777 **Z-32.551** A-30. C-233.001  
X4.552 Y-50.726 **Z-32.518** A-29.998 C-233.8  
X4.961 Y-50.668 **Z-32.488** A-30. C-234.598  
X5.37 Y-50.606 **Z-32.449** A-29.998 C-235.398  
X5.778 Y-50.538 **Z-32.413** A-30. C-236.197  
X6.184 Y-50.466 **Z-32.369** A-29.998 C-236.995  
X6.588 Y-50.389 **Z-32.327** A-30. C-237.792  
X6.993 Y-50.307 **Z-32.277** A-29.998 C-238.592  
X7.395 Y-50.22 **Z-32.229** A-30. C-239.391  
X7.795 Y-50.129 **Z-32.174** A-29.998 C-240.188  
X8.194 Y-50.032 **Z-32.121** A-30. C-240.984  
X8.592 Y-49.931 **Z-32.06** A-29.998 C-241.783  
X8.988 Y-49.824 **Z-32.001** A-30. C-242.582  
X9.381 Y-49.715 **Z-31.935** A-29.998 C-243.378  
X9.772 Y-49.599 **Z-31.871** A-30. C-244.174  
X10.033 Y-49.52 **Z-31.824** A-29.999 C-244.705  
X10.292 Y-49.438 **Z-31.778** A-30. C-245.236  
X10.549 Y-49.355 **Z-31.729** A-29.999 C-245.766  
X10.806 Y-49.269 **Z-31.68** A-30. C-246.295  
X11.061 Y-49.182 **Z-31.629** A-29.999 C-246.823  
X11.315 Y-49.092 **Z-31.579** A-30. C-247.35  
X11.567 Y-49.002 **Z-31.525** A-29.999 C-247.876



X11.818 Y-48.909 **Z-31.472** A-30. C-248.402  
X12.197 Y-48.764 **Z-31.386** A-29.998 C-249.2  
X12.574 Y-48.614 **Z-31.302** A-30. C-249.998  
X12.947 Y-48.462 **Z-31.212** A-29.998 C-250.792  
X13.316 Y-48.304 **Z-31.123** A-30. C-251.585  
X13.686 Y-48.141 **Z-31.027** A-29.998 C-252.383  
X14.052 Y-47.974 **Z-30.933** A-30. C-253.181  
X14.414 Y-47.804 **Z-30.832** A-29.998 C-253.974  
X14.772 Y-47.628 **Z-30.733** A-30. C-254.766  
X15.13 Y-47.449 **Z-30.627** A-29.998 C-255.564  
X15.486 Y-47.263 **Z-30.523** A-30. C-256.361  
X15.835 Y-47.077 **Z-30.412** A-29.998 C-257.153  
X16.182 Y-46.885 **Z-30.304** A-30. C-257.944  
X16.527 Y-46.688 **Z-30.188** A-29.998 C-258.742  
X16.87 Y-46.486 **Z-30.074** A-30. C-259.539  
X17.207 Y-46.283 **Z-29.954** A-29.998 C-260.329  
X17.54 Y-46.075 **Z-29.836** A-30. C-261.12  
X17.873 Y-45.862 **Z-29.711** A-29.998 C-261.917  
X18.202 Y-45.644 **Z-29.588** A-30. C-262.714  
X18.524 Y-45.426 **Z-29.459** A-29.998 C-263.503  
X18.843 Y-45.202 **Z-29.333** A-30. C-264.293  
X19.133 Y-44.995 **Z-29.211** A-29.998 C-265.017  
X19.419 Y-44.784 **Z-29.091** A-30. C-265.74  
X19.7 Y-44.572 **Z-28.967** A-29.998 C-266.457  
X19.977 Y-44.357 **Z-28.845** A-30. C-267.174  
X20.249 Y-44.141 **Z-28.718** A-29.998 C-267.884  
X20.517 Y-43.922 **Z-28.594** A-30. C-268.594  
X20.78 Y-43.703 **Z-28.465** A-29.998 C-269.297  
X21.04 Y-43.481 **Z-28.339** A-30. C-270.  
X-21.04  
X-20.742 Y-43.735 **Z-28.483** A-29.998 C-270.805  
X-20.44 Y-43.986 **Z-28.63** A-30. C-271.611  
X-20.131 Y-44.236 **Z-28.772** A-29.997 C-272.425  
X-19.817 Y-44.481 **Z-28.916** A-30. C-273.239  
X-19.504 Y-44.721 **Z-29.052** A-29.998 C-274.044  
X-19.186 Y-44.956 **Z-29.19** A-30. C-274.849  
X-18.861 Y-45.19 **Z-29.323** A-29.998 C-275.662  
X-18.533 Y-45.42 **Z-29.458** A-30. C-276.476  
X-18.204 Y-45.643 **Z-29.585** A-29.998 C-277.28  
X-17.872 Y-45.862 **Z-29.714** A-30. C-278.085  
X-17.533 Y-46.08 **Z-29.837** A-29.998 C-278.897  
X-17.19 Y-46.293 **Z-29.962** A-30. C-279.709  
X-16.848 Y-46.5 **Z-30.079** A-29.998 C-280.513  
X-16.502 Y-46.702 **Z-30.199** A-30. C-281.317  
X-16.15 Y-46.903 **Z-30.312** A-29.998 C-282.129  
X-15.794 Y-47.098 **Z-30.427** A-30. C-282.94  
X-15.439 Y-47.288 **Z-30.534** A-29.998 C-283.743  
X-15.081 Y-47.473 **Z-30.644** A-30. C-284.547

X-14.717 Y-47.656 **Z-30.747** A-29.998 C-285.357  
X-14.349 Y-47.834 **Z-30.852** A-30. C-286.167  
X-14.042 Y-47.979 **Z-30.933** A-29.998 C-286.841  
X-13.733 Y-48.119 **Z-31.017** A-30. C-287.514  
X-13.42 Y-48.259 **Z-31.095** A-29.998 C-288.191  
X-13.105 Y-48.394 **Z-31.175** A-30. C-288.868  
X-12.787 Y-48.528 **Z-31.251** A-29.998 C-289.549  
X-12.467 Y-48.657 **Z-31.327** A-30. C-290.229  
X-12.143 Y-48.785 **Z-31.399** A-29.998 C-290.914  
X-11.818 Y-48.909 **Z-31.472** A-30. C-291.598  
X-11.434 Y-49.05 **Z-31.551** A-29.998 C-292.401  
X-11.048 Y-49.186 **Z-31.633** A-30. C-293.204  
X-10.658 Y-49.319 **Z-31.707** A-29.998 C-294.011  
X-10.265 Y-49.446 **Z-31.783** A-30. C-294.819  
X-9.873 Y-49.569 **Z-31.851** A-29.998 C-295.621  
X-9.479 Y-49.686 **Z-31.921** A-30. C-296.424  
X-9.081 Y-49.799 **Z-31.984** A-29.998 C-297.23  
X-8.681 Y-49.907 **Z-32.049** A-30. C-298.036  
X-8.282 Y-50.01 **Z-32.106** A-29.998 C-298.839  
X-7.881 Y-50.108 **Z-32.165** A-30. C-299.641  
X-7.477 Y-50.202 **Z-32.216** A-29.998 C-300.446  
X-7.071 Y-50.29 **Z-32.27** A-30. C-301.252  
X-6.666 Y-50.374 **Z-32.315** A-29.998 C-302.054  
X-6.26 Y-50.452 **Z-32.363** A-30. C-302.856  
X-5.851 Y-50.526 **Z-32.403** A-29.998 C-303.66  
X-5.441 Y-50.594 **Z-32.445** A-30. C-304.464  
X-5.031 Y-50.658 **Z-32.479** A-29.998 C-305.266  
X-4.62 Y-50.716 **Z-32.516** A-30. C-306.068  
X-4.207 Y-50.77 **Z-32.544** A-29.998 C-306.871  
X-3.794 Y-50.818 **Z-32.575** A-30. C-307.674  
X-3.381 Y-50.862 **Z-32.597** A-29.998 C-308.476  
X-2.967 Y-50.9 **Z-32.622** A-30. C-309.277  
X-2.552 Y-50.934 **Z-32.639** A-29.998 C-310.08  
X-2.137 Y-50.962 **Z-32.658** A-30. C-310.882  
X-1.781 Y-50.983 **Z-32.666** A-29.996 C-311.568  
X-1.425 Y-51. **Z-32.675** C-312.254  
X-1.069 Y-51.012 **Z-32.687** A-30. C-312.94  
X-0.713 Y-51.022 **Z-32.688** A-29.996 C-313.627  
X-0.357 Y-51.027 **Z-32.691** C-314.313  
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X0.416 Y-51.026 **Z-32.692** A-29.998 C-315.801  
X0.831 Y-51.018 **Z-32.69** A-30. C-316.601  
X1.247 Y-51.006 **Z-32.681** A-29.998 C-317.402  
X1.662 Y-50.988 **Z-32.673** A-30. C-318.202  
X2.077 Y-50.966 **Z-32.657** A-29.998 C-319.002  
X2.491 Y-50.938 **Z-32.644** A-30. C-319.802  
X2.905 Y-50.906 **Z-32.623** A-29.998 C-320.602  
X3.317 Y-50.868 **Z-32.603** A-30. C-321.401

X3.73 Y-50.826 **Z-32.576** A-29.998 C-322.201  
X4.142 Y-50.777 **Z-32.551** A-30. C-323.001  
X4.552 Y-50.726 **Z-32.518** A-29.998 C-323.8  
X4.961 Y-50.668 **Z-32.488** A-30. C-324.598  
X5.37 Y-50.606 **Z-32.449** A-29.998 C-325.398  
X5.778 Y-50.538 **Z-32.413** A-30. C-326.197  
X6.184 Y-50.466 **Z-32.369** A-29.998 C-326.995  
X6.588 Y-50.389 **Z-32.327** A-30. C-327.792  
X6.993 Y-50.307 **Z-32.277** A-29.998 C-328.592  
X7.395 Y-50.22 **Z-32.229** A-30. C-329.391  
X7.795 Y-50.129 **Z-32.174** A-29.998 C-330.188  
X8.194 Y-50.032 **Z-32.121** A-30. C-330.984  
X8.592 Y-49.931 **Z-32.06** A-29.998 C-331.783  
X8.988 Y-49.824 **Z-32.001** A-30. C-332.582  
X9.381 Y-49.715 **Z-31.935** A-29.998 C-333.378  
X9.772 Y-49.599 **Z-31.871** A-30. C-334.174  
X10.033 Y-49.52 **Z-31.824** A-29.999 C-334.705  
X10.292 Y-49.438 **Z-31.778** A-30. C-335.236  
X10.549 Y-49.355 **Z-31.729** A-29.999 C-335.766  
X10.806 Y-49.269 **Z-31.68** A-30. C-336.295  
X11.061 Y-49.182 **Z-31.629** A-29.999 C-336.823  
X11.315 Y-49.092 **Z-31.579** A-30. C-337.35  
X11.567 Y-49.002 **Z-31.525** A-29.999 C-337.876  
X11.818 Y-48.909 **Z-31.472** A-30. C-338.402  
X12.197 Y-48.764 **Z-31.386** A-29.998 C-339.2  
X12.574 Y-48.614 **Z-31.302** A-30. C-339.998  
X12.947 Y-48.462 **Z-31.212** A-29.998 C-340.792  
X13.316 Y-48.304 **Z-31.123** A-30. C-341.585  
X13.686 Y-48.141 **Z-31.027** A-29.998 C-342.383  
X14.052 Y-47.974 **Z-30.933** A-30. C-343.181  
X14.414 Y-47.804 **Z-30.832** A-29.998 C-343.974  
X14.772 Y-47.628 **Z-30.733** A-30. C-344.766  
X15.13 Y-47.449 **Z-30.627** A-29.998 C-345.564  
X15.486 Y-47.263 **Z-30.523** A-30. C-346.361  
X15.835 Y-47.077 **Z-30.412** A-29.998 C-347.153  
X16.182 Y-46.885 **Z-30.304** A-30. C-347.944  
X16.527 Y-46.688 **Z-30.188** A-29.998 C-348.742  
X16.87 Y-46.486 **Z-30.074** A-30. C-349.539  
X17.207 Y-46.283 **Z-29.954** A-29.998 C-350.329  
X17.54 Y-46.075 **Z-29.836** A-30. C-351.12  
X17.873 Y-45.862 **Z-29.711** A-29.998 C-351.917  
X18.202 Y-45.644 **Z-29.588** A-30. C-352.714  
X18.524 Y-45.426 **Z-29.459** A-29.998 C-353.503  
X18.843 Y-45.202 **Z-29.333** A-30. C-354.293  
X19.133 Y-44.995 **Z-29.211** A-29.998 C-355.017  
X19.419 Y-44.784 **Z-29.091** A-30. C-355.74  
X19.7 Y-44.572 **Z-28.967** A-29.998 C-356.457  
X19.977 Y-44.357 **Z-28.845** A-30. C-357.174

X20.249 Y-44.141 **Z-28.718** A-29.998 C-357.884  
X20.517 Y-43.922 **Z-28.594** A-30. C-358.594  
X20.78 Y-43.703 **Z-28.465** A-29.998 C-359.297  
X21.04 Y-43.481 **Z-28.339** A-30. C-360.  
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X-20.742 Y-43.735 **Z-28.483** A-29.998 C-360.805  
X-20.44 Y-43.986 **Z-28.63** A-30. C-361.611  
X-20.131 Y-44.236 **Z-28.772** A-29.997 C-362.425  
X-19.817 Y-44.481 **Z-28.916** A-30. C-363.239  
X-19.504 Y-44.721 **Z-29.052** A-29.998 C-364.044  
X-19.186 Y-44.956 **Z-29.19** A-30. C-364.849  
X-18.861 Y-45.19 **Z-29.323** A-29.998 C-365.662  
X-18.533 Y-45.42 **Z-29.458** A-30. C-366.476  
X-18.204 Y-45.643 **Z-29.585** A-29.998 C-367.28  
X-17.872 Y-45.862 **Z-29.714** A-30. C-368.085  
X-17.533 Y-46.08 **Z-29.837** A-29.998 C-368.897  
X-17.19 Y-46.293 **Z-29.962** A-30. C-369.709  
X-16.848 Y-46.5 **Z-30.079** A-29.998 C-370.513  
X-16.502 Y-46.702 **Z-30.199** A-30. C-371.317  
X-16.15 Y-46.903 **Z-30.312** A-29.998 C-372.129  
X-15.794 Y-47.098 **Z-30.427** A-30. C-372.94  
X-15.439 Y-47.288 **Z-30.534** A-29.998 C-373.743  
X-15.081 Y-47.473 **Z-30.644** A-30. C-374.547  
X-14.717 Y-47.656 **Z-30.747** A-29.998 C-375.357  
X-14.349 Y-47.834 **Z-30.852** A-30. C-376.167  
X-14.042 Y-47.979 **Z-30.933** A-29.998 C-376.841  
X-13.733 Y-48.119 **Z-31.017** A-30. C-377.514  
X-13.42 Y-48.259 **Z-31.095** A-29.998 C-378.191  
X-13.105 Y-48.394 **Z-31.175** A-30. C-378.868  
X-12.787 Y-48.528 **Z-31.251** A-29.998 C-379.549  
X-12.467 Y-48.657 **Z-31.327** A-30. C-380.229  
X-12.143 Y-48.785 **Z-31.399** A-29.998 C-380.914  
X-11.818 Y-48.909 **Z-31.472** A-30. C-381.598  
X-11.434 Y-49.05 **Z-31.551** A-29.998 C-382.401  
X-11.048 Y-49.186 **Z-31.633** A-30. C-383.204  
X-10.658 Y-49.319 **Z-31.707** A-29.998 C-384.011  
X-10.265 Y-49.446 **Z-31.783** A-30. C-384.819  
X-9.873 Y-49.569 **Z-31.851** A-29.998 C-385.621  
X-9.479 Y-49.686 **Z-31.921** A-30. C-386.424  
X-9.081 Y-49.799 **Z-31.984** A-29.998 C-387.23  
X-8.681 Y-49.907 **Z-32.049** A-30. C-388.036  
X-8.282 Y-50.01 **Z-32.106** A-29.998 C-388.839  
X-7.881 Y-50.108 **Z-32.165** A-30. C-389.641  
X-7.477 Y-50.202 **Z-32.216** A-29.998 C-390.446  
X-7.071 Y-50.29 **Z-32.27** A-30. C-391.252  
X-6.666 Y-50.374 **Z-32.315** A-29.998 C-392.054  
X-6.26 Y-50.452 **Z-32.363** A-30. C-392.856  
X-5.851 Y-50.526 **Z-32.403** A-29.998 C-393.66

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X-4.62 Y-50.716 **Z-32.516** A-30. C-396.068  
X-4.207 Y-50.77 **Z-32.544** A-29.998 C-396.871  
X-3.794 Y-50.818 **Z-32.575** A-30. C-397.674  
X-3.381 Y-50.862 **Z-32.597** A-29.998 C-398.476  
X-2.967 Y-50.9 **Z-32.622** A-30. C-399.277  
X-2.552 Y-50.934 **Z-32.639** A-29.998 C-400.08  
X-2.137 Y-50.962 **Z-32.658** A-30. C-400.882  
X-1.781 Y-50.983 **Z-32.666** A-29.996 C-401.568  
X-1.425 Y-51. **Z-32.675** C-402.254  
X-1.069 Y-51.012 **Z-32.687** A-30. C-402.94  
X-0.713 Y-51.022 **Z-32.688** A-29.996 C-403.627  
X-0.357 Y-51.027 **Z-32.691** C-404.313  
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X0.416 Y-51.026 **Z-32.692** A-29.998 C-405.801  
X0.831 Y-51.018 **Z-32.69** A-30. C-406.601  
X1.247 Y-51.006 **Z-32.681** A-29.998 C-407.402  
X1.662 Y-50.988 **Z-32.673** A-30. C-408.202  
X2.077 Y-50.966 **Z-32.657** A-29.998 C-409.002  
X2.491 Y-50.938 **Z-32.644** A-30. C-409.802  
X2.905 Y-50.906 **Z-32.623** A-29.998 C-410.602  
X3.317 Y-50.868 **Z-32.603** A-30. C-411.401  
X3.73 Y-50.826 **Z-32.576** A-29.998 C-412.201  
X4.142 Y-50.777 **Z-32.551** A-30. C-413.001  
X4.552 Y-50.726 **Z-32.518** A-29.998 C-413.8  
X4.961 Y-50.668 **Z-32.488** A-30. C-414.598  
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X5.778 Y-50.538 **Z-32.413** A-30. C-416.197  
X6.184 Y-50.466 **Z-32.369** A-29.998 C-416.995  
X6.588 Y-50.389 **Z-32.327** A-30. C-417.792  
X6.993 Y-50.307 **Z-32.277** A-29.998 C-418.592  
X7.395 Y-50.22 **Z-32.229** A-30. C-419.391  
X7.795 Y-50.129 **Z-32.174** A-29.998 C-420.188  
X8.194 Y-50.032 **Z-32.121** A-30. C-420.984  
X8.592 Y-49.931 **Z-32.06** A-29.998 C-421.783  
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X9.772 Y-49.599 **Z-31.871** A-30. C-424.174  
X10.033 Y-49.52 **Z-31.824** A-29.999 C-424.705  
X10.292 Y-49.438 **Z-31.778** A-30. C-425.236  
X10.549 Y-49.355 **Z-31.729** A-29.999 C-425.766  
X10.806 Y-49.269 **Z-31.68** A-30. C-426.295  
X11.061 Y-49.182 **Z-31.629** A-29.999 C-426.823  
X11.315 Y-49.092 **Z-31.579** A-30. C-427.35  
X11.567 Y-49.002 **Z-31.525** A-29.999 C-427.876  
X11.818 Y-48.909 **Z-31.472** A-30. C-428.402  
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X12.574 Y-48.614 **Z-31.302** A-30. C-429.998  
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X13.316 Y-48.304 **Z-31.123** A-30. C-431.585  
X13.686 Y-48.141 **Z-31.027** A-29.998 C-432.383  
X14.052 Y-47.974 **Z-30.933** A-30. C-433.181  
X14.414 Y-47.804 **Z-30.832** A-29.998 C-433.974  
X14.772 Y-47.628 **Z-30.733** A-30. C-434.766  
X15.13 Y-47.449 **Z-30.627** A-29.998 C-435.564  
X15.486 Y-47.263 **Z-30.523** A-30. C-436.361  
X15.835 Y-47.077 **Z-30.412** A-29.998 C-437.153  
X16.182 Y-46.885 **Z-30.304** A-30. C-437.944  
X16.527 Y-46.688 **Z-30.188** A-29.998 C-438.742  
X16.87 Y-46.486 **Z-30.074** A-30. C-439.539  
X17.207 Y-46.283 **Z-29.954** A-29.998 C-440.329  
X17.54 Y-46.075 **Z-29.836** A-30. C-441.12  
X17.873 Y-45.862 **Z-29.711** A-29.998 C-441.917  
X18.202 Y-45.644 **Z-29.588** A-30. C-442.714  
X18.524 Y-45.426 **Z-29.459** A-29.998 C-443.503  
X18.843 Y-45.202 **Z-29.333** A-30. C-444.293  
X19.133 Y-44.995 **Z-29.211** A-29.998 C-445.017  
X19.419 Y-44.784 **Z-29.091** A-30. C-445.74  
X19.7 Y-44.572 **Z-28.967** A-29.998 C-446.457  
X19.977 Y-44.357 **Z-28.845** A-30. C-447.174  
X20.249 Y-44.141 **Z-28.718** A-29.998 C-447.884  
X20.517 Y-43.922 **Z-28.594** A-30. C-448.594  
X20.78 Y-43.703 **Z-28.465** A-29.998 C-449.297  
X21.04 Y-43.481 **Z-28.339** A-30. C-450.  
X-21.04  
X-20.742 Y-43.735 **Z-28.483** A-29.998 C-450.805  
X-20.44 Y-43.986 **Z-28.63** A-30. C-451.611  
X-20.131 Y-44.236 **Z-28.772** A-29.997 C-452.425  
X-19.817 Y-44.481 **Z-28.916** A-30. C-453.239  
X-19.504 Y-44.721 **Z-29.052** A-29.998 C-454.044  
X-19.186 Y-44.956 **Z-29.19** A-30. C-454.849  
X-18.861 Y-45.19 **Z-29.323** A-29.998 C-455.662  
X-18.533 Y-45.42 **Z-29.458** A-30. C-456.476  
X-18.204 Y-45.643 **Z-29.585** A-29.998 C-457.28  
X-17.872 Y-45.862 **Z-29.714** A-30. C-458.085  
X-17.533 Y-46.08 **Z-29.837** A-29.998 C-458.897  
X-17.19 Y-46.293 **Z-29.962** A-30. C-459.709  
X-16.848 Y-46.5 **Z-30.079** A-29.998 C-460.513  
X-16.502 Y-46.702 **Z-30.199** A-30. C-461.317  
X-16.15 Y-46.903 **Z-30.312** A-29.998 C-462.129  
X-15.794 Y-47.098 **Z-30.427** A-30. C-462.94  
X-15.439 Y-47.288 **Z-30.534** A-29.998 C-463.743  
X-15.081 Y-47.473 **Z-30.644** A-30. C-464.547  
X-14.717 Y-47.656 **Z-30.747** A-29.998 C-465.357  
X-14.349 Y-47.834 **Z-30.852** A-30. C-466.167

X-14.042 Y-47.979 **Z-30.933** A-29.998 C-466.841  
X-13.733 Y-48.119 **Z-31.017** A-30. C-467.514  
X-13.42 Y-48.259 **Z-31.095** A-29.998 C-468.191  
X-13.105 Y-48.394 **Z-31.175** A-30. C-468.868  
X-12.787 Y-48.528 **Z-31.251** A-29.998 C-469.549  
X-12.467 Y-48.657 **Z-31.327** A-30. C-470.229  
X-12.143 Y-48.785 **Z-31.399** A-29.998 C-470.914  
X-11.818 Y-48.909 **Z-31.472** A-30. C-471.598  
X-11.434 Y-49.05 **Z-31.551** A-29.998 C-472.401  
X-11.048 Y-49.186 **Z-31.633** A-30. C-473.204  
X-10.658 Y-49.319 **Z-31.707** A-29.998 C-474.011  
X-10.265 Y-49.446 **Z-31.783** A-30. C-474.819  
X-9.873 Y-49.569 **Z-31.851** A-29.998 C-475.621  
X-9.479 Y-49.686 **Z-31.921** A-30. C-476.424  
X-9.081 Y-49.799 **Z-31.984** A-29.998 C-477.23  
X-8.681 Y-49.907 **Z-32.049** A-30. C-478.036  
X-8.282 Y-50.01 **Z-32.106** A-29.998 C-478.839  
X-7.881 Y-50.108 **Z-32.165** A-30. C-479.641  
X-7.477 Y-50.202 **Z-32.216** A-29.998 C-480.446  
X-7.071 Y-50.29 **Z-32.27** A-30. C-481.252  
X-6.666 Y-50.374 **Z-32.315** A-29.998 C-482.054  
X-6.26 Y-50.452 **Z-32.363** A-30. C-482.856  
X-5.851 Y-50.526 **Z-32.403** A-29.998 C-483.66  
X-5.441 Y-50.594 **Z-32.445** A-30. C-484.464  
X-5.031 Y-50.658 **Z-32.479** A-29.998 C-485.266  
X-4.62 Y-50.716 **Z-32.516** A-30. C-486.068  
X-4.207 Y-50.77 **Z-32.544** A-29.998 C-486.871  
X-3.794 Y-50.818 **Z-32.575** A-30. C-487.674  
X-3.381 Y-50.862 **Z-32.597** A-29.998 C-488.476  
X-2.967 Y-50.9 **Z-32.622** A-30. C-489.277  
X-2.552 Y-50.934 **Z-32.639** A-29.998 C-490.08  
X-2.137 Y-50.962 **Z-32.658** A-30. C-490.882  
X-1.781 Y-50.983 **Z-32.666** A-29.996 C-491.568  
X-1.425 Y-51. **Z-32.675** C-492.254  
X-1.069 Y-51.012 **Z-32.687** A-30. C-492.94  
X-0.713 Y-51.022 **Z-32.688** A-29.996 C-493.627  
X-0.357 Y-51.027 **Z-32.691** C-494.313  
X0. Y-51.028 **Z-32.696** A-30. C-495.  
X0.416 Y-51.026 **Z-32.692** A-29.998 C-495.801  
X0.831 Y-51.018 **Z-32.69** A-30. C-496.601  
X1.247 Y-51.006 **Z-32.681** A-29.998 C-497.402  
X1.662 Y-50.988 **Z-32.673** A-30. C-498.202  
X2.077 Y-50.966 **Z-32.657** A-29.998 C-499.002  
X2.491 Y-50.938 **Z-32.644** A-30. C-499.802  
X2.905 Y-50.906 **Z-32.623** A-29.998 C-500.602  
X3.317 Y-50.868 **Z-32.603** A-30. C-501.401  
X3.73 Y-50.826 **Z-32.576** A-29.998 C-502.201  
X4.142 Y-50.777 **Z-32.551** A-30. C-503.001

X4.552 Y-50.726 **Z-32.518** A-29.998 C-503.8  
X4.961 Y-50.668 **Z-32.488** A-30. C-504.598  
X5.37 Y-50.606 **Z-32.449** A-29.998 C-505.398  
X5.778 Y-50.538 **Z-32.413** A-30. C-506.197  
X6.184 Y-50.466 **Z-32.369** A-29.998 C-506.995  
X6.588 Y-50.389 **Z-32.327** A-30. C-507.792  
X6.993 Y-50.307 **Z-32.277** A-29.998 C-508.592  
X7.395 Y-50.22 **Z-32.229** A-30. C-509.391  
X7.795 Y-50.129 **Z-32.174** A-29.998 C-510.188  
X8.194 Y-50.032 **Z-32.121** A-30. C-510.984  
X8.592 Y-49.931 **Z-32.06** A-29.998 C-511.783  
X8.988 Y-49.824 **Z-32.001** A-30. C-512.582  
X9.381 Y-49.715 **Z-31.935** A-29.998 C-513.378  
X9.772 Y-49.599 **Z-31.871** A-30. C-514.174  
X10.033 Y-49.52 **Z-31.824** A-29.999 C-514.705  
X10.292 Y-49.438 **Z-31.778** A-30. C-515.236  
X10.549 Y-49.355 **Z-31.729** A-29.999 C-515.766  
X10.806 Y-49.269 **Z-31.68** A-30. C-516.295  
X11.061 Y-49.182 **Z-31.629** A-29.999 C-516.823  
X11.315 Y-49.092 **Z-31.579** A-30. C-517.35  
X11.567 Y-49.002 **Z-31.525** A-29.999 C-517.876  
X11.818 Y-48.909 **Z-31.472** A-30. C-518.402  
X12.197 Y-48.764 **Z-31.386** A-29.998 C-519.2  
X12.574 Y-48.614 **Z-31.302** A-30. C-519.998  
X12.947 Y-48.462 **Z-31.212** A-29.998 C-520.792  
X13.316 Y-48.304 **Z-31.123** A-30. C-521.585  
X13.686 Y-48.141 **Z-31.027** A-29.998 C-522.383  
X14.052 Y-47.974 **Z-30.933** A-30. C-523.181  
X14.414 Y-47.804 **Z-30.832** A-29.998 C-523.974  
X14.772 Y-47.628 **Z-30.733** A-30. C-524.766  
X15.13 Y-47.449 **Z-30.627** A-29.998 C-525.564  
X15.486 Y-47.263 **Z-30.523** A-30. C-526.361  
X15.835 Y-47.077 **Z-30.412** A-29.998 C-527.153  
X16.182 Y-46.885 **Z-30.304** A-30. C-527.944  
X16.527 Y-46.688 **Z-30.188** A-29.998 C-528.742  
X16.87 Y-46.486 **Z-30.074** A-30. C-529.539  
X17.207 Y-46.283 **Z-29.954** A-29.998 C-530.329  
X17.54 Y-46.075 **Z-29.836** A-30. C-531.12  
X17.873 Y-45.862 **Z-29.711** A-29.998 C-531.917  
X18.202 Y-45.644 **Z-29.588** A-30. C-532.714  
X18.524 Y-45.426 **Z-29.459** A-29.998 C-533.503  
X18.843 Y-45.202 **Z-29.333** A-30. C-534.293  
X19.133 Y-44.995 **Z-29.211** A-29.998 C-535.017  
X19.419 Y-44.784 **Z-29.091** A-30. C-535.74  
X19.7 Y-44.572 **Z-28.967** A-29.998 C-536.457  
X19.977 Y-44.357 **Z-28.845** A-30. C-537.174  
X20.249 Y-44.141 **Z-28.718** A-29.998 C-537.884  
X20.517 Y-43.922 **Z-28.594** A-30. C-538.594



X20.78 Y-43.703 Z-28.465 A-29.998 C-539.297  
X21.04 Y-43.481 Z-28.339 A-30. C-540.  
X0.  
X-0.447 Y-43.506 Z-27.484  
X-0.89 Y-43.566 Z-26.63  
X-1.326 Y-43.665 Z-25.776  
X-1.751 Y-43.802 Z-24.922  
X-2.162 Y-43.978 Z-24.068  
X-2.557 Y-44.189 Z-23.214  
X-2.93 Y-44.434 Z-22.359  
X-3.28 Y-44.712 Z-21.505  
X-3.604 Y-45.02 Z-20.651  
X-3.899 Y-45.356 Z-19.797  
X-4.163 Y-45.717 Z-18.943  
X-4.394 Y-46.1 Z-18.088  
X-4.59 Y-46.502 Z-17.234  
X-4.749 Y-46.92 Z-16.38  
X-4.869 Y-47.351 Z-15.526  
X-4.951 Y-47.79 Z-14.672  
X-4.994 Y-48.235 Z-13.817  
X-5. Y-48.486 Z-13.339  
G0 Z-3.339  
Z6.661  
Y-108.48 Z110.574  
Z243.301  
G74 C1=0  
M26 M28  
M9 M5  
TRANS X0 Y0 Z0  
M1  
; Operace c.21  
; vrta pr.13.6 na ukosu 45st 5x  
; WG#9 : OTVORY\_45ST  
; CS#1 : XY rovina X0. Y35.355 Z14.645  
; TOOL 5  
N7 T5 ; DCM 135-040-16A-3D / IDI 136-SG IC908  
M6  
D1  
T6  
CU T2 DF  
G0 G54  
TOL\_5(0.005)  
FGROUP(X,Y,Z,A,C)  
TRANS X0. Y35.355 Z14.645  
MSG("vrta pr.13.6 na ukosu 45st 5x")  
M25 M27  
G0 Z235.355  
G90 G0 X0. Y75.511 A-45. C90. S3511 M3 M8

```
G17
Z70.971
G0 Z32.971
G1 Z-3.029 F1053.
G4X0.1
G0 Z32.971
Z70.971 C135.
Z32.971
G1 Z-3.029
G4X0.1
G0 Z32.971
Z70.971 C180.
Z32.971
G1 Z-3.029
G4X0.1
G0 Z32.971
Z70.971 C225.
Z32.971
G1 Z-3.029
G4X0.1
G0 Z32.971
Z70.971 C270.
Z32.971
G1 Z-3.029
G4X0.1
G0 Z32.971
Z235.355
G74 C1=0
TRANS X0 Y0 Z0
; Operace c.22
; vrta pr.13.6 na stenach-82 5x
; WG#1 : Hladina - WG
; CS#1 : XY rovina X0. Y50. Z50.
; TOOL 5
CUT2DF
G0 G54
TOL_5(0.005)
FGROUP(X,Y,Z,A,C)
TRANS X0. Y50. Z50.
MSG("vrta pr.13.6 na stenach-82 5x")
M25 M27
Z200.
G90 G0 X0. Y72. A-90. C-90.
G17
Z122.
G0 Z84.
G1 Z48. F1053.
G0 Z84.
```

```
Z122. C-135.
Z84.
G1 Z48.
G0 Z84.
Z122. C-180.
Z84.
G1 Z48.
G0 Z84.
Z122. C-225.
Z84.
G1 Z48.
G0 Z84.
Z122. C-270.
Z84.
G1 Z48.
G0 Z84.
Z200.
G74 C1=0
M26 M28
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.23
; vyvrtavat pr.14 na stenach-82 5x
; WG#1 : Hladina - WG
; CS#1 : XY rovina X0. Y50. Z50.
; TOOL 6
N8 T6 ; IHAXF 12-14/16 - TPGX 090202T ID5
M6
D1
T3
CUT2DF
G0 G54
TOL_5(0.005)
FGROUP(X,Y,Z,A,C)
TRANS X0. Y50. Z50.
MSG("vyvrtavat pr.14 na stenach-82 5x")
M25 M27
G0 Z200.
G90 G0 X0. Y72. A-90. C90. S6821 M3 M8
G17
Z122.
G0 Z84.
G1 Z51.8 F409.
M5
M19
G1 G91 X-0.1 Y0.1;INC odjeti od povrchu
G0 G90 Z87. ;ABS.
```

```
Z122. C135. M3
Z84.
G1 Z51.8
M5
M19
G1 G91 X-0.1 Y0.1
G0 G90 Z87.
Z122. C180. M3
Z84.
G1 Z51.8
M5
M19
G1 G91 X-0.1 Y0.1
G0 G90 Z87.
Z122. C225. M3
Z84.
G1 Z51.8
M5
M19
G1 G91 X-0.1 Y0.1
G0 G90 Z87.
Z122. C270. M3
Z84.
G1 Z51.8
M5
M19
G1 G91 X-0.1 Y0.1
G0 G90 Z87.
Z200. M3;
G74 C1=0
TRANS X0 Y0 Z0
; Operace c.24
; vyvrtavat pr.14 na ukosu-45st 5x
; WG#9 : OTVORY_45ST
; CS#1 : XY rovina X0. Y35.355 Z14.645
; TOOL 6
CUT2DF
G0 G54
TOL_5(0.005)
FGROUP(X,Y,Z,A,C)
TRANS X0. Y35.355 Z14.645
MSG("vyvrtavat pr.14 na ukosu-45st 5x")
M25 M27
Z235.355
G90 G0 X0. Y75.511 A-45. C-90.
G17
Z80.971
G0 Z32.971
```

G1 Z0.771 F409.

M5

M19

G1 G91 X-0.1 Y0.1

G0 G90 Z32.971

Z80.971 C-135. M3

Z32.971

G1 Z0.771

M5

M19

G1 G91 X-0.1 Y0.1

G0 G90 Z32.971

Z80.971 C-180. M3

Z32.971

G1 Z0.771

M5

M19

G1 G91 X-0.1 Y0.1

G0 G90 Z32.971

Z80.971 C-225. M3

Z32.971

G1 Z0.771

M5

M19

G1 G91 X-0.1 Y0.1

G0 G90 Z32.971

Z80.971 C-270. M3

Z32.971

G1 Z0.771

M5

M19

G1 G91 X-0.1 Y0.1

G0 G90 Z32.971

Z235.355

G74 C1=0

M9 M5

TRANS X0 Y0 Z0

M1

; Operace c.25

; dokoncuje ostruvek pr.104 -Ra1,6 - tecny najezd/vyjezd

; WG#7 : Hladina - WG

; CS#1 : XY rovina X0. Y0. Z0.

; TOOL 3

N9 T3 ; ECA-B-3 20-38C20-104 IC08

M6

D1

T7

CUT2DF

```
G0 G54
TRANS X0. Y0. Z0.
MSG("dokoncuje ostruvek pr.104 -Ra1,6")
M25 M27
G0 Z250.
G90 G0 X-68.9 Y-18.631 A0. C0. S11141 M3 M8
M26 M28
G17
Z2.5
G0 Z-20.
G1 G41 X-67.651 Y-18.588 F2005.
G3 X-51.969 Y-1.789 I-0.559 J16.24
G2 X-51.969 Y-1.789 I51.969 J1.789
G3 X-68.769 Y13.893 I-16.24 J-0.559
G1 G40 X-70.018 Y13.85
G0 Z20.
TRANS X0 Y0 Z0
; Operace c.26
; dokoncuje steny 82-0,2mm hl.72
; WG#13 : BOK-0.2
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("dokoncuje steny 82-0,2mm hl.72")
G90 G0 X116.8 Y103.966 A0. C0.
M26 M28
G17
Z-30.
G1 Z-72. F2005.
G1 G41 X96.8 F2005.
G3 X81.8 Y88.966 I0. J-15.
G1 Y-33.883
X33.883 Y-81.8
X-33.883
X-81.8 Y-33.883
Y74.693
G3 X-96.8 Y89.693 I-15. J0.
G1 G40 X-116.8
G0 Z-10.
TRANS X0 Y0 Z0
; Operace c.27
; dokoncuje steny 82mm hl.90
; WG#10 : DNO_Z-90
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
```

```
G0 G54
TRANS X0. Y0. Z0.
MSG("dokoncuje steny 82mm hl.90")
G90 G0 X117. Y72.236 A0. C0.
M26 M28
G17
Z-30.
G0 Z-90.
G1 G41 X97. F2005.
G3 X82. Y57.236 I0. J-15.
G1 Y-33.966
X33.966 Y-82.
X-33.966
X-82. Y-33.966
Y57.236
G3 X-97. Y72.236 I-15. J0.
G1 G40 X-117.
G0 Z-24.
TRANS X0 Y0 Z0
; Operace c.28
; DOKONCIT ZADNI CAST Y70 Z-35 - a
; WG#21 : Hladina - Z-35 ROVNE
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("DOKONCIT ZADNI CAST Y70 Z-35 -a")
G90 G0 X-82.414 Y82. A0. C0.
M26 M28
G17
Z-24.
G0 Z-35.
G1 G41 Y81. F2005.
G3 X-71.414 Y70. I11. J0.
G1 X71.414
G3 X82.414 Y81. I0. J11.
G1 G40 Y82.
G0 Z-24.
TRANS X0 Y0 Z0
; Operace c.29
; DOKONCIT ZADNI CAST 0.5ST Y70 Z-40 - b
; WG#22 : Hladina - Z-40 - 0.5ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
```

```
MSG("DOKONCIT ZADNI CAST 0.5ST Y70 Z-40 -b")
G90 G0 X-81.077 Y83.331 A0. C0.
M26 M28
G17
Z-24.
G0 Z-40.
G1 G41 X-81.085 Y82.331 F2005.
G3 X-70.182 Y71.236 I11. J-0.096
G1 X71.414 Y70.
G3 X82.51 Y80.904 I0.096 J11.
G1 G40 X82.519 Y81.904
G0 Z-24.
TRANS X0 Y0 Z0
; Operace c.30
; DOKONCIT ZADNI CAST 1.0ST Y70 Z-45 - c
; WG#23 : Hladina - Z-45 - 1.0ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("DOKONCIT ZADNI CAST 1.0ST Y70 Z-45 -c")
G90 G0 X-79.717 Y84.64 A0. C0.
M26 M28
G17
Z-24.
G1 Z-45. F2005.
G1 G41 X-79.734 Y83.64 F2005.
G3 X-68.928 Y72.45 I10.998 J-0.192
G1 X71.414 Y70.
G3 X82.605 Y80.806 I0.192 J10.998
G1 G40 X82.622 Y81.806
G0 Z-24.
TRANS X0 Y0 Z0
; Operace c.31
; DOKONCIT ZADNI CAST Z-55 Y78.5 1.5st - e
; WG#25 : Hladina - WG_5
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("DOKONCIT ZADNI CAST Z-55 Y78.5 1.5st -e")
G90 G0 X-72.632 Y90.784 A0. C0.
M26 M28
G17
Z-24.
G0 Z-55.
```



```
G1 G41 X-72.658 Y89.784 F2005.
G3 X-61.95 Y78.5 I10.996 J-0.288
G1 X65.973 Y75.15
G3 X77.257 Y85.859 I0.288 J10.996
G1 G40 X77.283 Y86.858
G0 Z-24.
TRANS X0 Y0 Z0
; Operace c.32
; DOKONCIT ZADNI UKOS Z-50 1.5ST/0.5st - d
; WG#27 : Hladina - Z-50 - 1.5ST Z- 0.5ST
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 3
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("DOKONCIT ZADNI UKOS Z-50 1.5ST/0.5st -d")
G90 G0 X-78.335 Y85.925 A0. C0.
M26 M28
G17
Z-24.
G0 Z-51.214
G1 G41 X-78.361 Y84.926 F2005.
G3 X-67.653 Y73.642 I10.996 J-0.288
G1 X71.414 Y70. Z-50.
G3 X82.698 Y80.708 I0.288 J10.996
G1 G40 X82.725 Y81.708
G0 Z200.
Z250.
TRANS X0 Y0 Z0
; Operace c.33
; hrubuje zadni cast R75
; WG#12 : Hladina - WG
; CS#7 : ZADEK_A-90 X75.295 Y81.495 Z50.
; TOOL 3
CUT2DF
G0 G54
TRANS X75.295 Y81.495 Z50.
MSG("hrubuje zadni cast R75")
Z200.
G90 G0 X4.567 Y55.995 A-90. C0.
M26 M28
G17
Z150.
G0 Z78.5
G1 G41 X3.748 Y56.569 F2005.
G3 X-11.572 Y53.87 I-6.311 J-9.01
G2 X-75.295 Y20.705 I-63.722 J44.635
G2 X-139.017 Y53.87 I0. J77.8
```

```
G3 X-154.337 Y56.569 I-9.01 J-6.311
G1 G40 X-155.156 Y55.995
G0 Z150.
TRANS X0 Y0 Z0
; Operace c.34
; dokoncuje zadni cast R75
; WG#12 : Hladina - WG
; CS#7 : ZADEK_A-90 X75.295 Y81.495 Z50.
; TOOL 3
CUT2DF
G0 G54
TRANS X75.295 Y81.495 Z50.
MSG("dokoncuje zadni cast R75")
G90 G0 X4.175 Y61.429 A-90. C0.
M26 M28
G17
Z105.
G0 Z78.5
G1 G41 X3.329 Y61.963 F2005.
G3 X-11.842 Y58.521 I-5.864 J-9.306
G2 X-75.295 Y23.505 I-63.453 J39.985
G2 X-138.747 Y58.521 I0. J75.
G3 X-153.918 Y61.963 I-9.306 J-5.864
G1 G40 X-154.764 Y61.429
G0 Z150.
Z200.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.35
; vrtak pr.3,4 pod zavit M4
; WG#15 : X,Y,Z pro M4
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 7
N10 T7 ; SCD 034-014-060 AP3 IC908
M6
D1
T4
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("vrta pr.3,4 pod zavit M4")
M25 M27
G0 Z250.
G90 G0 X0. Y-40. A0. C0. F1123. S11234 M3 M8
M26 M28
G17
Z-14.
```

```
MCALL CYCLE82(-14.,-15.,1.,0,12.619 ,0.1)
G0 X0. Y-40.
MCALL
Z250.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.36
; zahloubit pr.4.5 pod zavít M4
; WG#15 : X,Y,Z pro M4
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 4
N11 T4 ; MM ECF45-160-6T10 IC908
M6
D1
T8
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("zahloubit pr.4.5 pod zavít M4")
M25 M27
G0 Z250.
G90 G0 X0. Y-40. A0. C0. F2328. S12931 M3 M8
M26 M28
G17
Z-14.
MCALL CYCLE82(-14.,-15.,1.,0,0.75 ,0.1)
G0 X0. Y-40.
MCALL
TRANS X0 Y0 Z0
; Operace c.37
; NAJEDNOU odjehlít pr.104-114 - tecny naježd/vyježd
; WG#16 : SRAZENI_114-104
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 4
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("NAJEDNOU odjehlít pr.104-114")
G90 G0 X9.132 Y-61.48 A0. C0.
M26 M28
G17
Z-14.
G0 Z-21.
G1 G41 X9.128 Y-59.481 F2328.
G3 X0.109 Y-50.5 I-9. J-0.019
G2 X0.109 Y-50.5 I-0.109 J50.5
G3 X-8.872 Y-59.519 I0.019 J-9.
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```
G1 G40 X-8.868 Y-61.519
G0 Z-14.
Z250.
M9 M5
TRANS X0 Y0 Z0
M1
; Operace c.38
; Rezat M4 - pevny cyklus
; WG#15 : X,Y,Z pro M4
; CS#1 : XY rovina X0. Y0. Z0.
; TOOL 8
N12 T8 ; TP5 M4x0.7-6H-CCN-HEV
M6
D1
T1
CUT2DF
G0 G54
TRANS X0. Y0. Z0.
MSG("rezat M4 - pevny cyklus")
M25 M27
G0 Z250.
G90 G0 X0. Y-40. A0. C0. F560. S800 M3 M8
M26 M28
G17
Z-12.
MCALL CYCLE84(-12.,-15.,3.,0,10.1,0.5,3, ,0.7,0,800.,800.)
G0 X0. Y-40.
MCALL
Z250.
M9 M5
TRANS X0 Y0 Z0
M30
%
```