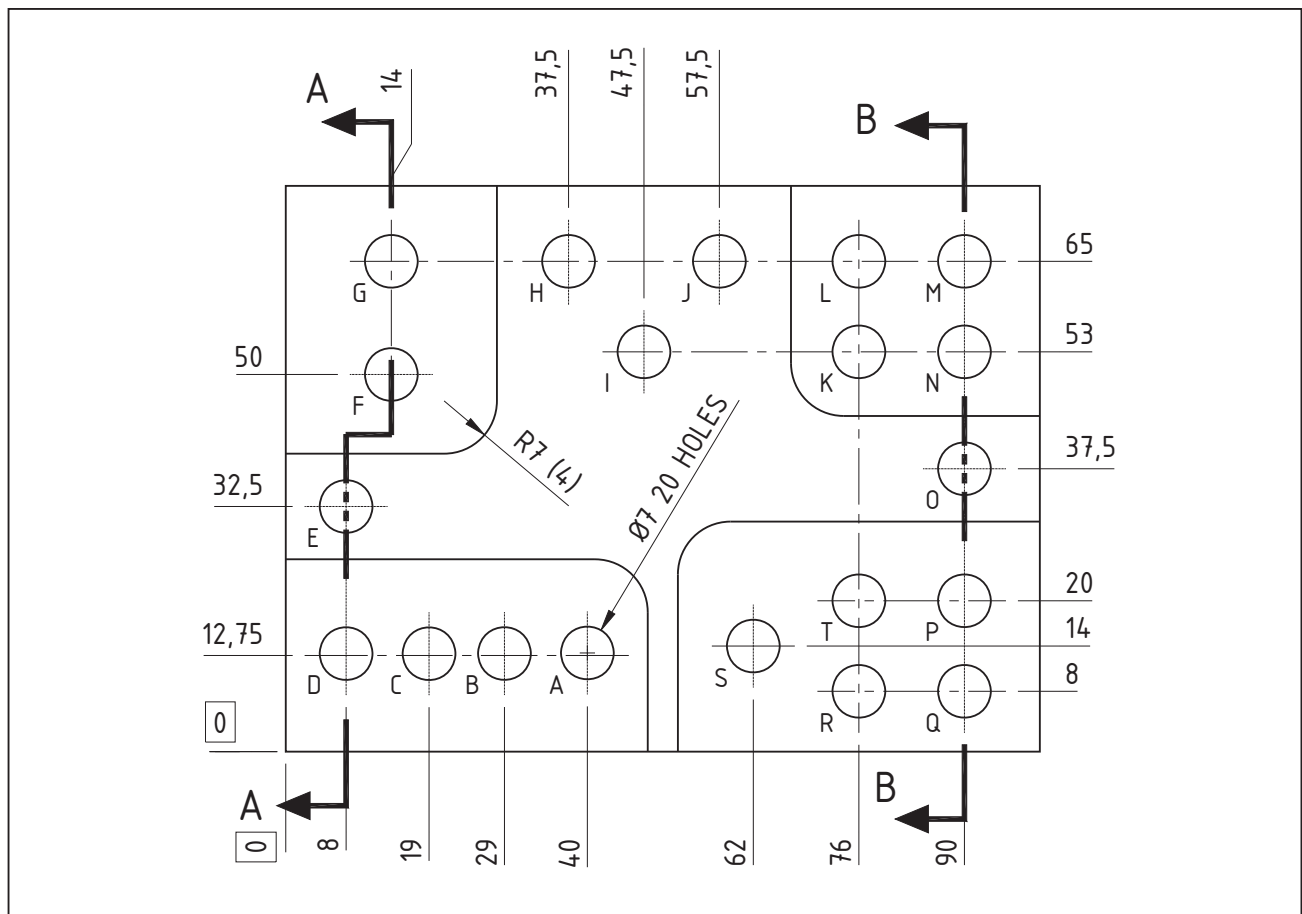
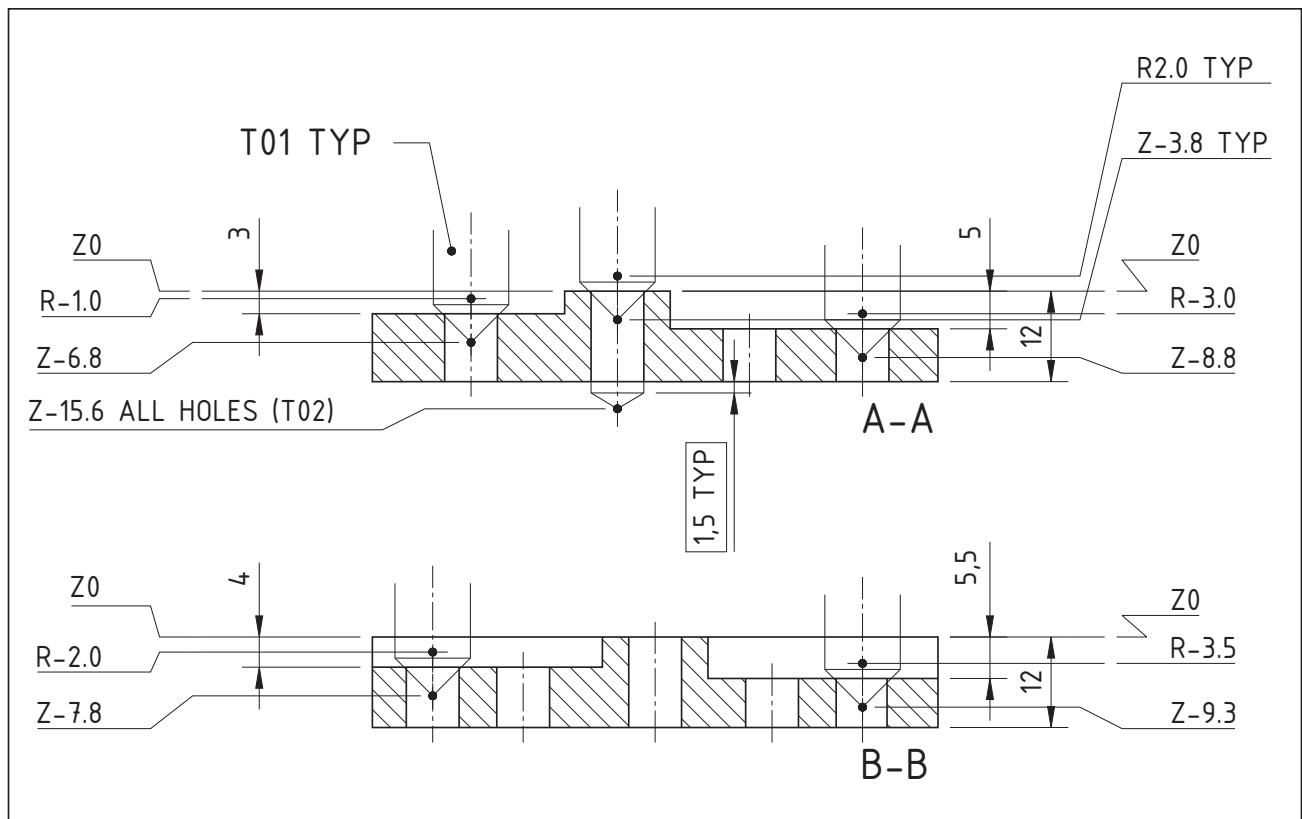


### Corner Holes - Variable Depth

In this solution for the project 26-12, the first illustration shows the absolute XY locations of the 20 holes, which are the same as in the original project. The second illustration shows the solution to the R-level and the Z-depth for holes in all four corners as well as at the top of part.

The following program illustrates the use of G98 and G99 commands. Keep in mind that although written at the beginning of the fixed cycle block, both commands become active *after* the hole is completed.





➡ Drawing sections A-A and B-B use different calculations - watch how G98/G99 is used in the completed program:

(26-12 - CORNER HOLES - VARIABLE DEPTH)

(X0Y0 AT THE LOWER LEFT CORNER - Z0 AT THE TOP OF THE FINISHED PART)

(T01 - 10 MM DIA - 90 DEG SPOT DRILL)

(SPOT DRILLING IN THE HOLE ORDER FROM HOLE A TO T)

N1 G21	(METRIC MODE)
N2 G17 G40 G80 T01	(STANDARD CANCELLATIONS - T01 READY)
N3 M06	(TOOL CHANGE - T01 TO SPINDLE)
N4 G90 G54 G00 X40.0 Y12.75 S3000 M03 T02	(HOLE A LOCATION XY)
N5 G43 Z5.0 H01 M08	(INITIAL LEVEL AT Z5.0)
N6 G99 G82 R-1.0 Z-6.8 P100 F150.0	(HOLE A WITH CHFR 0.3X45)
N7 X29.0	(HOLE B WITH CHFR 0.3X45)
N8 X19.0	(HOLE C WITH CHFR 0.3X45)
N9 G98 X8.0	(HOLE D WITH CHFR 0.3X45)
N10 G99 Y32.5 R2.0 Z-3.8	(HOLE E WITH CHFR 0.3X45)
N11 X14.0 Y50.0 R-3.0 Z-8.8	(HOLE F WITH CHFR 0.3X45)
N12 G98 Y65.0	(HOLE G WITH CHFR 0.3X45)
N13 G99 X37.5 R2.0 Z-3.8	(HOLE H WITH CHFR 0.3X45)
N14 X47.5 Y53.0	(HOLE I WITH CHFR 0.3X45)
N15 X57.5 Y 65.0	(HOLE J WITH CHFR 0.3X45)
N16 X76.0 Y53.0 R-3.5 Z-9.3	(HOLE K WITH CHFR 0.3X45)
N17 Y65.0	(HOLE L WITH CHFR 0.3X45)
N18 X90.0	(HOLE M WITH CHFR 0.3X45)
N19 G98 Y53.0	(HOLE N WITH CHFR 0.3X45)
N20 G99 Y37.5 R2.0 Z-3.8	(HOLE O WITH CHFR 0.3X45)
N21 Y20.0 R-2.0 Z-7.8	(HOLE P WITH CHFR 0.3X45)
N22 Y8.0	(HOLE Q WITH CHFR 0.3X45)
N23 X76.0	(HOLE R WITH CHFR 0.3X45)
N24 X62.0 Y14.0	(HOLE S WITH CHFR 0.3X45)
N25 G98 X76.0 Y20.0	(HOLE T WITH CHFR 0.3X45)
N26 G80 M09	(CYCLE CANCEL - COOLANT OFF)
N27 G28 Z5.0 M05	(RETURN TO HOME POSITION - Z-AXIS ONLY)
N28 M01	(OPTIONAL STOP)

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(T02 - 7 MM DIA DRILL)
(DRILLING IN THE HOLE ORDER FROM HOLE T TO A)
N29 T02 (T02 READY)
N30 M06 (TOOL CHANGE - T02 TO SPINDLE)
N31 G90 G54 G00 X76.0 Y20.0 S2500 M03 T01 (HOLE T LOCATION XY)
N32 G43 Z5.0 H02 M08 (INITIAL LEVEL AT Z5.0)
N33 G99 G81 R-2.0 Z-15.6 F200.0 (HOLE T THROUGH WITH 1.5 MM CLEARANCE)
N34 X62.0 Y14.0 (HOLE S THROUGH WITH 1.5 MM CLEARANCE)
N35 X76.0 Y8.0 (HOLE R THROUGH WITH 1.5 MM CLEARANCE)
N36 X90.0 (HOLE Q THROUGH WITH 1.5 MM CLEARANCE)
N37 G98 Y20.0 (HOLE P THROUGH WITH 1.5 MM CLEARANCE)
N38 G99 Y37.5 R2.0 (HOLE O THROUGH WITH 1.5 MM CLEARANCE)
N39 Y53.0 R-3.5 (HOLE N THROUGH WITH 1.5 MM CLEARANCE)
N40 Y65.0 (HOLE M THROUGH WITH 1.5 MM CLEARANCE)
N41 X76.0 (HOLE L THROUGH WITH 1.5 MM CLEARANCE)
N42 G98 Y53.0 (HOLE K THROUGH WITH 1.5 MM CLEARANCE)
N43 G99 X57.5 Y65.0 R2.0 (HOLE J THROUGH WITH 1.5 MM CLEARANCE)
N44 X47.5 Y53.0 (HOLE I THROUGH WITH 1.5 MM CLEARANCE)
N45 X37.5 Y65.0 (HOLE H THROUGH WITH 1.5 MM CLEARANCE)
N46 X14.0 R-3.0 (HOLE G THROUGH WITH 1.5 MM CLEARANCE)
N47 G98 Y50.0 (HOLE F THROUGH WITH 1.5 MM CLEARANCE)
N48 G99 X8.0 Y32.5 R2.0 (HOLE E THROUGH WITH 1.5 MM CLEARANCE)
N49 Y12.75 R-1.0 (HOLE D THROUGH WITH 1.5 MM CLEARANCE)
N50 X19.0 (HOLE C THROUGH WITH 1.5 MM CLEARANCE)
N51 X29.0 (HOLE B THROUGH WITH 1.5 MM CLEARANCE)
N52 G98 X40.0 (HOLE A THROUGH WITH 1.5 MM CLEARANCE)
N53 G80 M09 (CYCLE CANCEL - COOLANT OFF)
N54 G28 X40.0 Y12.75 Z5.0 M05 (RETURN TO HOME POSITION - XYZ)
N55 M30 (END OF PROGRAM)
% (END OF FILE TRANSFER)

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