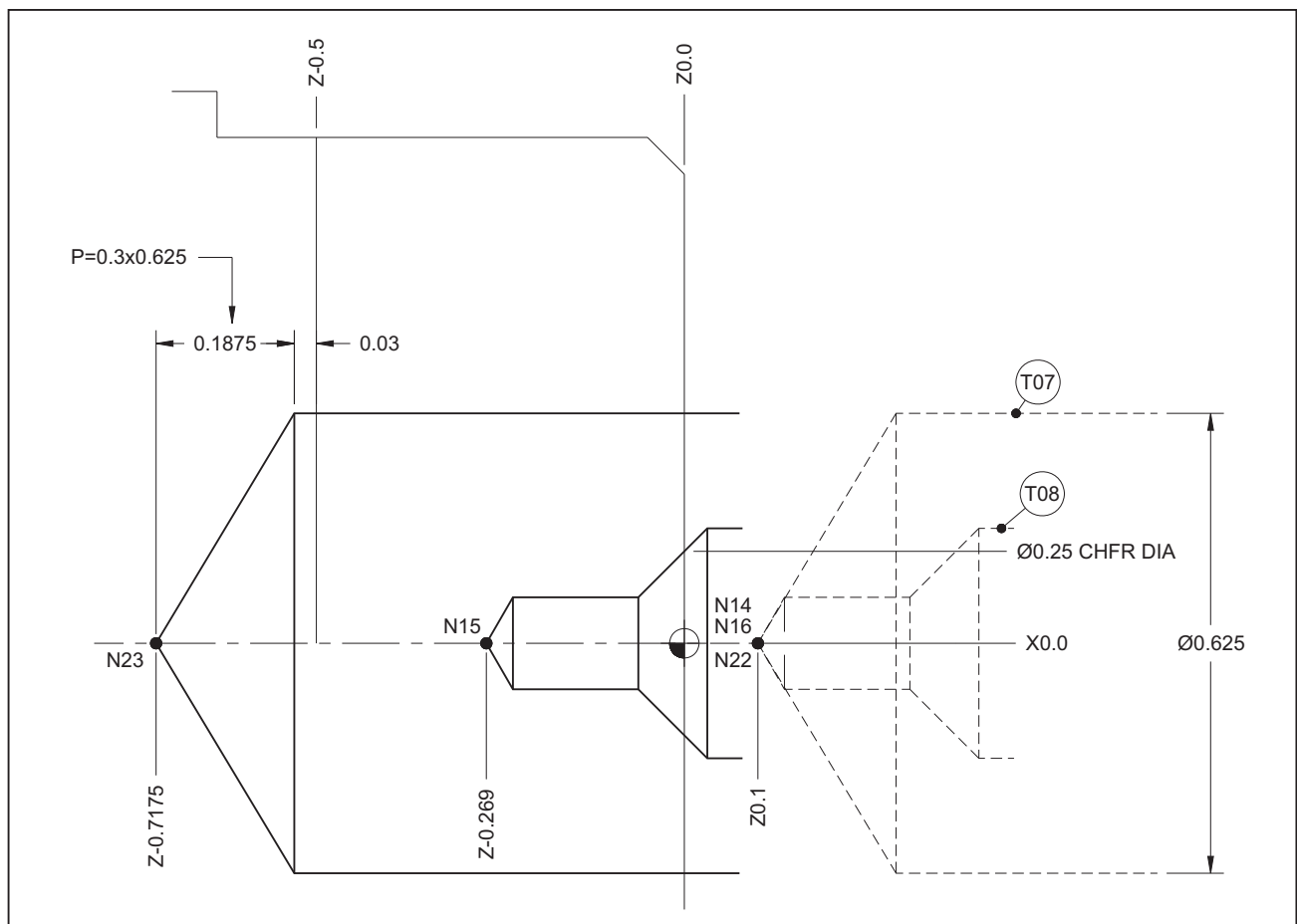


Simple Lathe Project - 2 of 4

The illustration shows the block numbers corresponding to those in the program. In the *Part 2* of the *Simple Lathe Project*, the operations include:

- ➡ CENTER DRILLING ... identified by blocks N14-N16
- ➡ DRILLING ... identified by blocks N22-N24 (r/min calculated from 150 fpm surface speed)

The center drill depth is programmed at Z-0.269 (in block N15), which is referenced on *page 196*, in the *CNC Programming Handbook*. Keep in mind that any Z-depth close to this value would most likely be correct as well.



(SIMPLE LATHE PROJECT - PART 2 OF 4)
 (TO BE USED IN ORDER OF PART 1 TO PART 4)
 (PROJECT ILLUSTRATES THE CONCEPT OF CNC LATHE PROGRAMMING)

(34-06 - PART 2 OF 4)
 (1.5 DIA ALUMINUM BAR - EXTEND BAR 1.0 OFF FRONT JAWS FACE)

(T03 - FACE & TURN - OD)	
N1 G20 G50 S2500 T0300	(INCHES - 2500 RPM MAX - T03)
N2 G96 S450 M03	(450 SFPM - SPINDLE CW)
N3 G00 X1.7 Z0 T0303 M08	(START FOR FACING-OFFSET 03-COOLANT)
N4 G01 X-0.07 F0.004	(FACE OFF TO BELOW CENTER LINE)
N5 G00 Z0.1	(CLEAR AWAY 0.1)
N6 G42 X1.075	(COMPENSATION RIGHT-START OF CHAMFER)
N7 G01 X1.375 Z-0.05 F0.003	(CUT CHAMFER 0.05 X 45 DEG)
N8 Z-0.635 F0.005	(CUT DIA 1.375)
N9 G00 U0.2	(CLEAR 0.1 ABOVE DIA)
N10 G40 X4.0 Z5.0 T0300	(COMP OFF-CLEAR TOOL CHG POS)
N11 M01	(OPTIONAL STOP)
	(BLANK LINE FOR CLARITY)
(T08 - NO.4 CENTER DRILL)	
N12 T0800	(TOOL CHANGE - T08)
N13 G97 S1200 M03	(1200 RPM - SPINDLE CW)
N14 G00 X0 Z0.1 T0808 M08	(START FOR CDRILL-OFFSET 08-COOLANT)
N15 G01 Z-0.269 F0.003	(FEED-IN TO CHFR DIA 0.25)
N16 G00 Z0.1	(RAPID OUT TO CLEAR)
N17 X4.0	(TOOL CHG X POSITION)
N18 Z5.0 T0800	(TOOL CHG Z POSITION - OFFSET OFF)
N19 M01	(OPTIONAL STOP)
	(BLANK LINE FOR CLARITY)
(T07 - 5/8 DIA DRILL)	
N20 T0700	(TOOL CHANGE - T07)
N21 G97 S917 M03	(917 RPM CW - 150X3.82/0.625 IS 917)
N22 G00 X0 Z0.1 T0707 M08	(START FOR DRILL-OFFSET 07-COOLANT)
N23 G01 Z-0.7175 F0.01	(FEED TO DEPTH - 0.5+0.03+0.3X0.625)
N24 G00 Z0.5	(RAPID OUT TO CLEAR)
N25 X4.0	(TOOL CHG X POS)
N26 Z3.0 T0700	(TOOL CHG Z POS-OFFSET OFF)
N27 M01	(OPTIONAL STOP)
	(BLANK LINE FOR CLARITY)
(T05 - 0.125 WIDE PART-OFF TOOL)	
N28 T0500	(TOOL CHANGE - T05)
N29 G97 S1750 M03	(1750 RPM - SPINDLE CW)
N30 G00 X1.7 Z0.1 T0505	(CLEAR POSITION AT FRONT)
N31 Z-0.625	(START POS AT END OF PART)
N32 G01 X-0.02 F0.0015	(PART-OFF TO 0.02 BELOW CENTERLINE)
N33 G00 X1.7	(RAPID TO CLEAR ABOVE PART)
N34 X4.0 Z5.0 T0500	(RAPID TO TOOL CHG POSITION)
N35 M30	(END OF PROGRAM)
%	(END OF FILE TRANSFER)