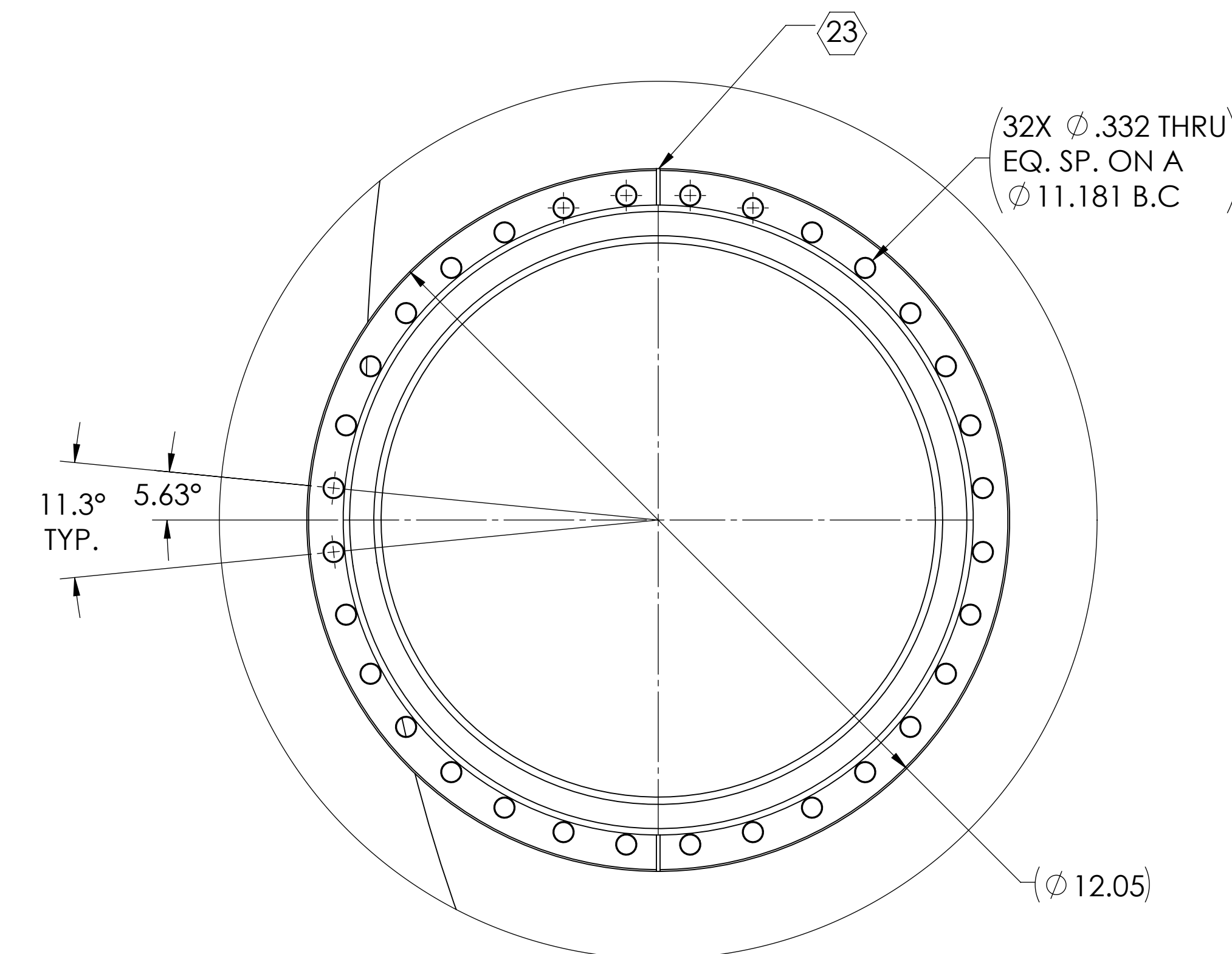


NOTES CONTINUED:  
 (5) SCRIBE, ENGRAVE (A VIBRATORY TOOL MAY BE USED), LASER MARK OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR "TYPE" IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS. UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. EXAMPLE: DXXXXXX-VY, TYPE-XX, S/N XXX  
 8. REMOVED NOTE  
 9. ALL MATERIAL IS TO BE VIRGIN MATERIAL (I.E. NO WELD REPAIRS, FLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY.  
 10. ALL MATERIAL TO BE 304L STAINLESS STEEL.  
 11. HEADS ARE ASME F&D.  
 12. FOR SURFACE FINISH REFER TO LIGO E1900079  
 (13) PORT LOCATIONS, DIMENSIONS TAKEN FROM OUTER SPHERICAL RADII OF ITEM NO. 1.1

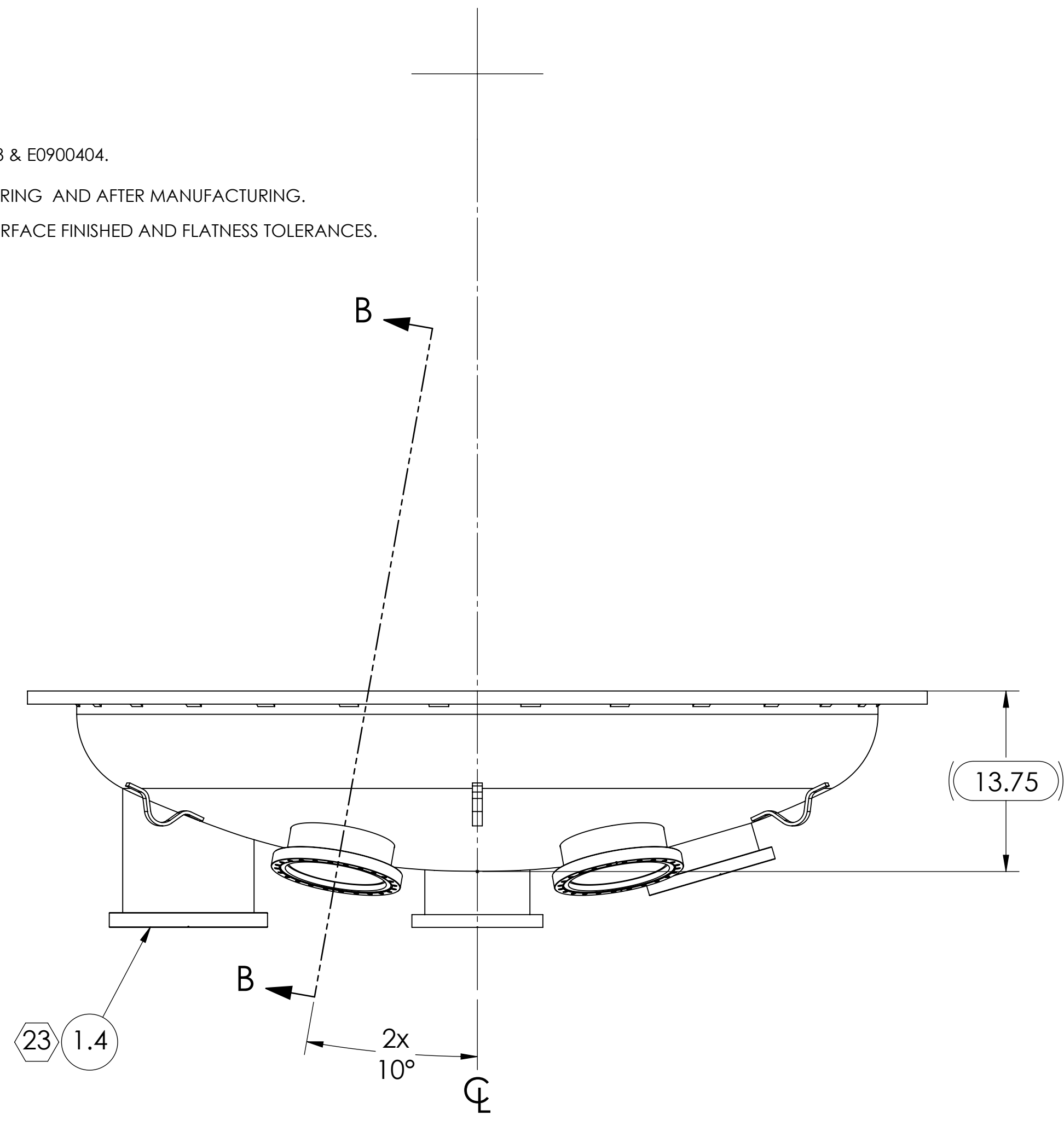
14. GRINDING TO INTERNAL VACUUM BOUNDARY SURFACES IS NOT ALLOWED. DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.  
 15. MACHINE TOOL LAY TO BE CONCENTRIC ON ALL SURFACES THAT REQUIRE A 32 RMS FINISH.  
 16. FLANGE BOLT HOLES TO STRADDLE NATURAL CENTERLINES OF VESSEL UNLESS NOTED.  
 17. FLANGE WILL BE USED IN UHV SERVICE.  
 (18) DO NOT MACHINE FLANGE OD.  
 19. WELD HEAD (ITEM 1.1) TO FLANGE (ITEM 1.2) PRIOR TO MACHINING (ITEM 1.1)  
 20. NO ABRASIVE STONES, CLOTHS OR GRINDING WHEELS MAY BE USED.  
 21. NO OIL BASED OR HYDROCARBON BASED CUTTING FLUIDS MAY BE USED.  
 (22) IF FIT UP GAPS OCCUR, INCREASE SIZE OF WELD TO MAINTAIN FULL WELD.  
 (23) FLANGE LEAK PORTS SHALL BE CENTERED AT 12 AND 6 O'CLOCK POSITIONS.  
 (24) FOR WELDING AND HELIUM LEAK TEST SPECIFICATIONS REFER TO LIGO E0900408 & E0900404.  
 25. CONFLAT FLANGES ARE TO BE PROTECTED WITH RIGID COVERS AT ALL TIMES DURING AND AFTER MANUFACTURING.  
 26. PACKAGE, HANDLE, AND SHIP IN SUCH A MANNER S TO MAINTAIN SPECIFIED SURFACE FINISH AND FLATNESS TOLERANCES.

# -Y DOOR

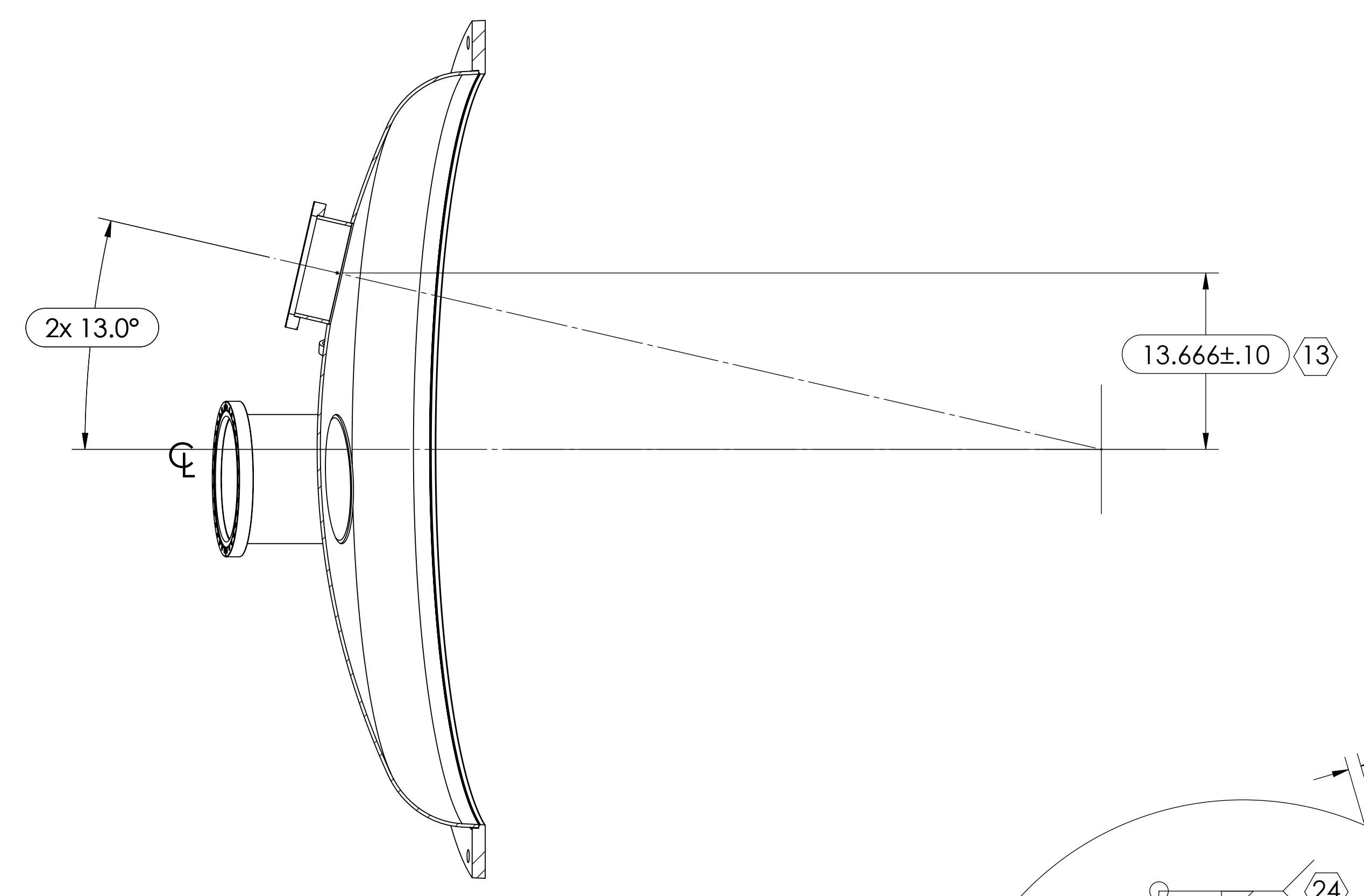
REV.	DATE	DCN #	DRAWING TREE #
v1	16 APR 2019	-	-
v5	06 NOV 2019	E1900311-v0	-
v6	05 DEC 2019	E1900311-v1	-



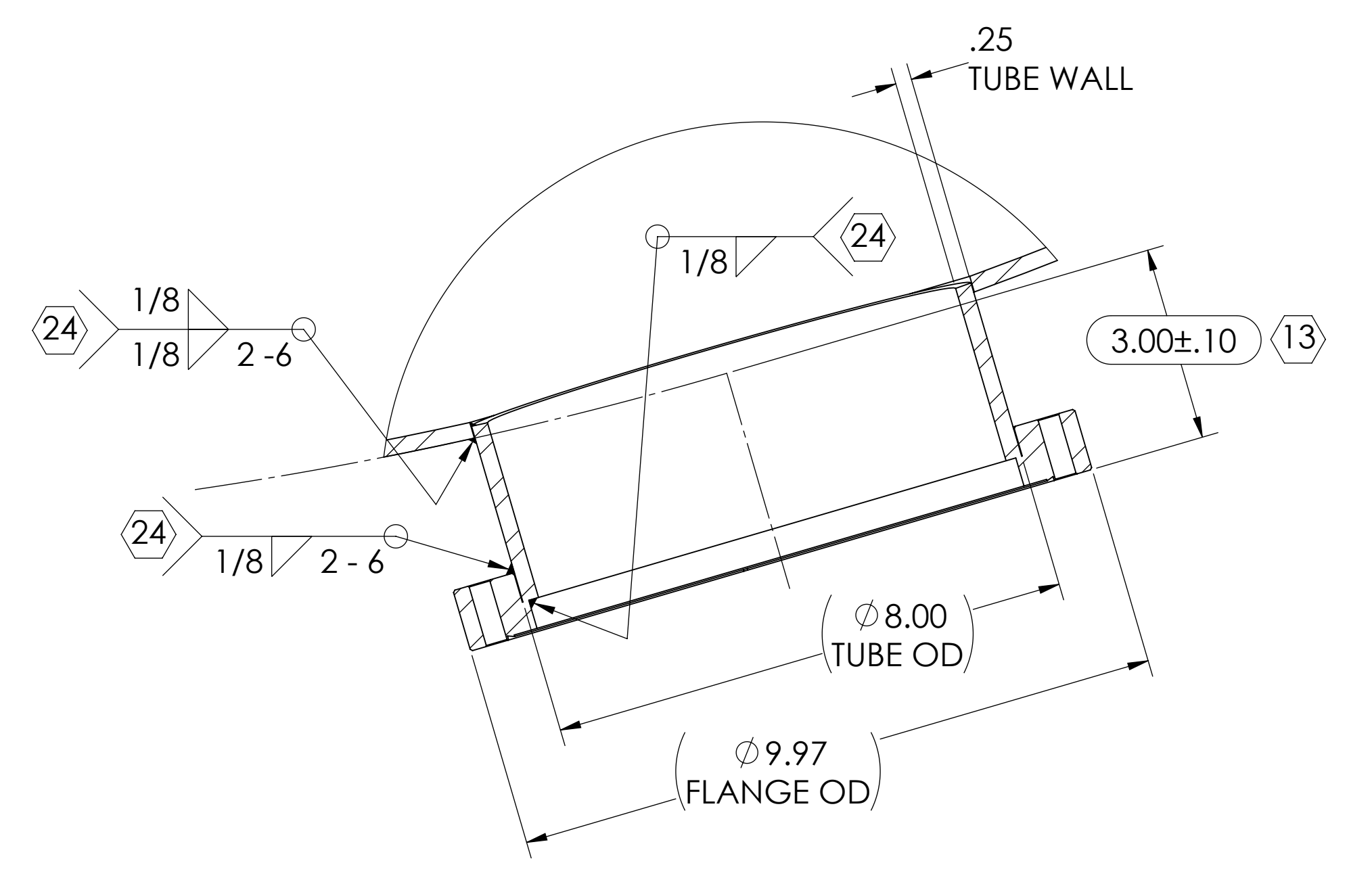
**DETAIL E**  
SCALE 1 : 2



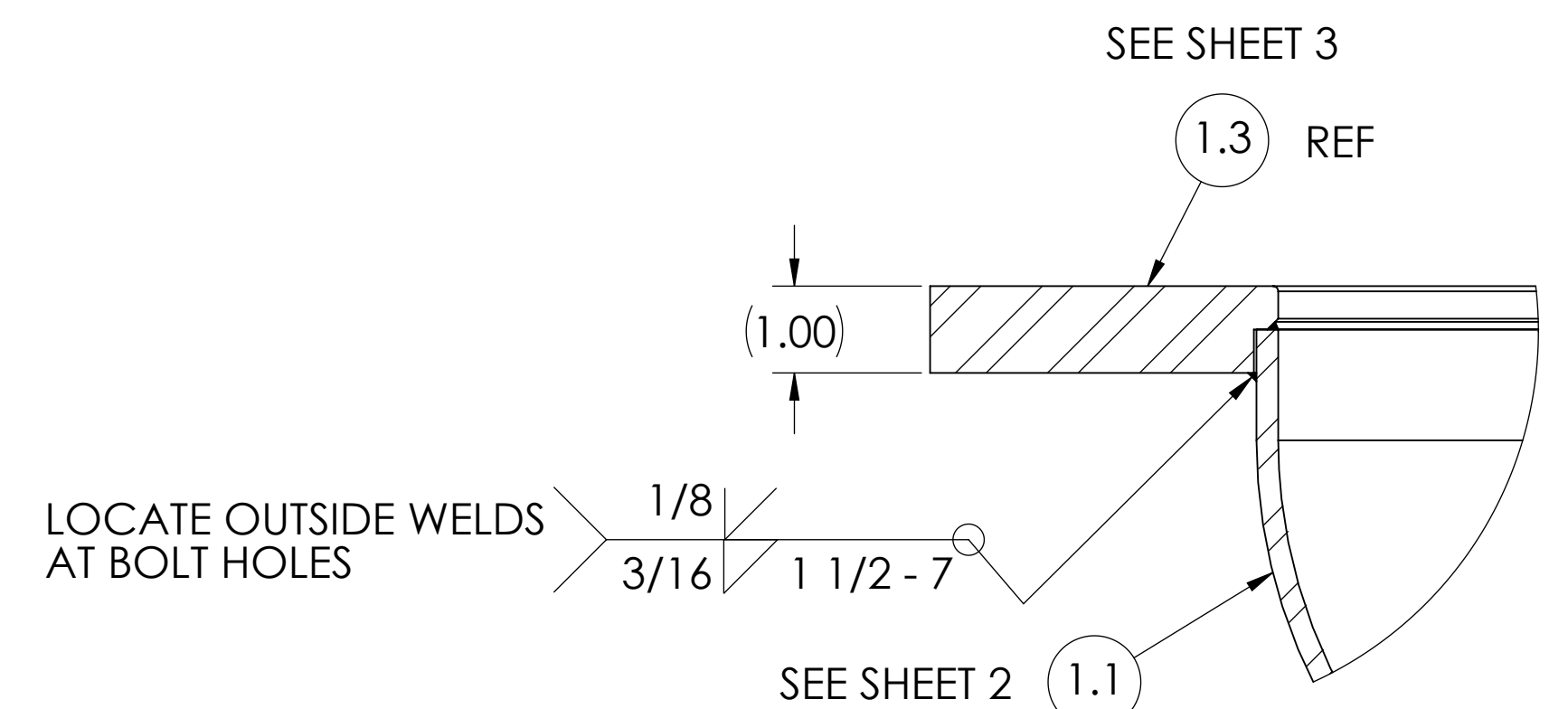
**SECTION A-A**



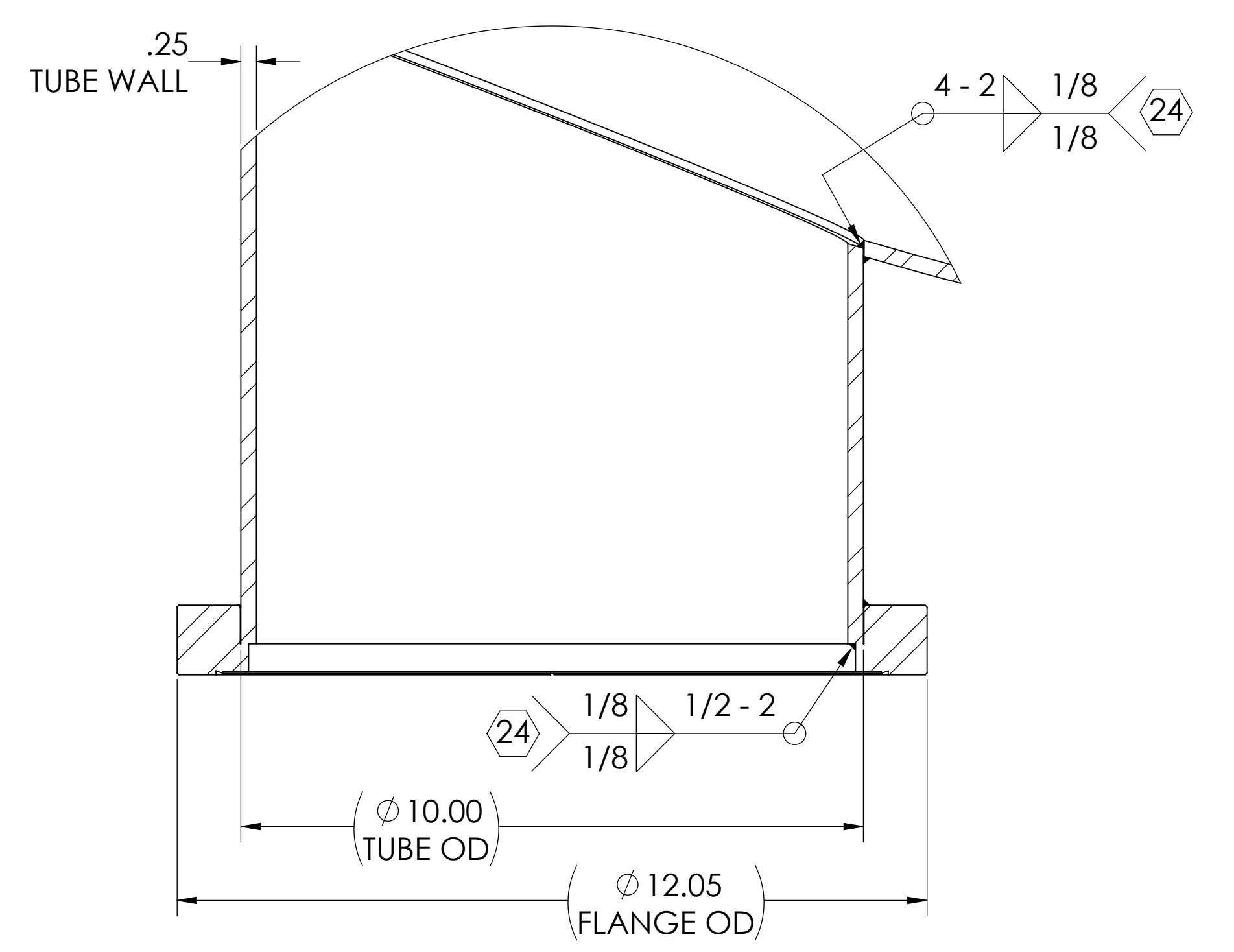
**SECTION B-B**  
(ROTATED 80.0° CW)



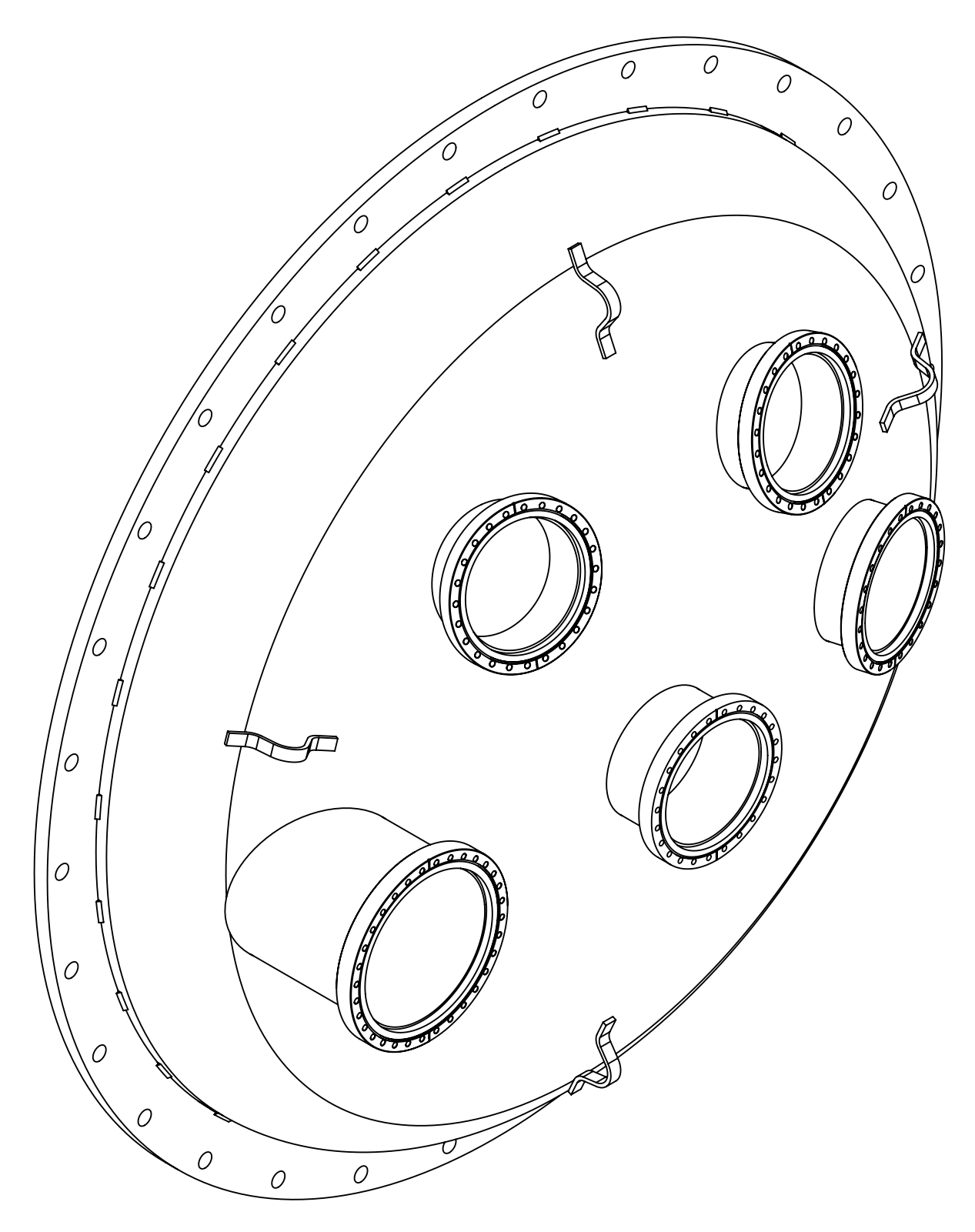
**DETAIL D**  
SCALE 1 : 2  
3 PL.



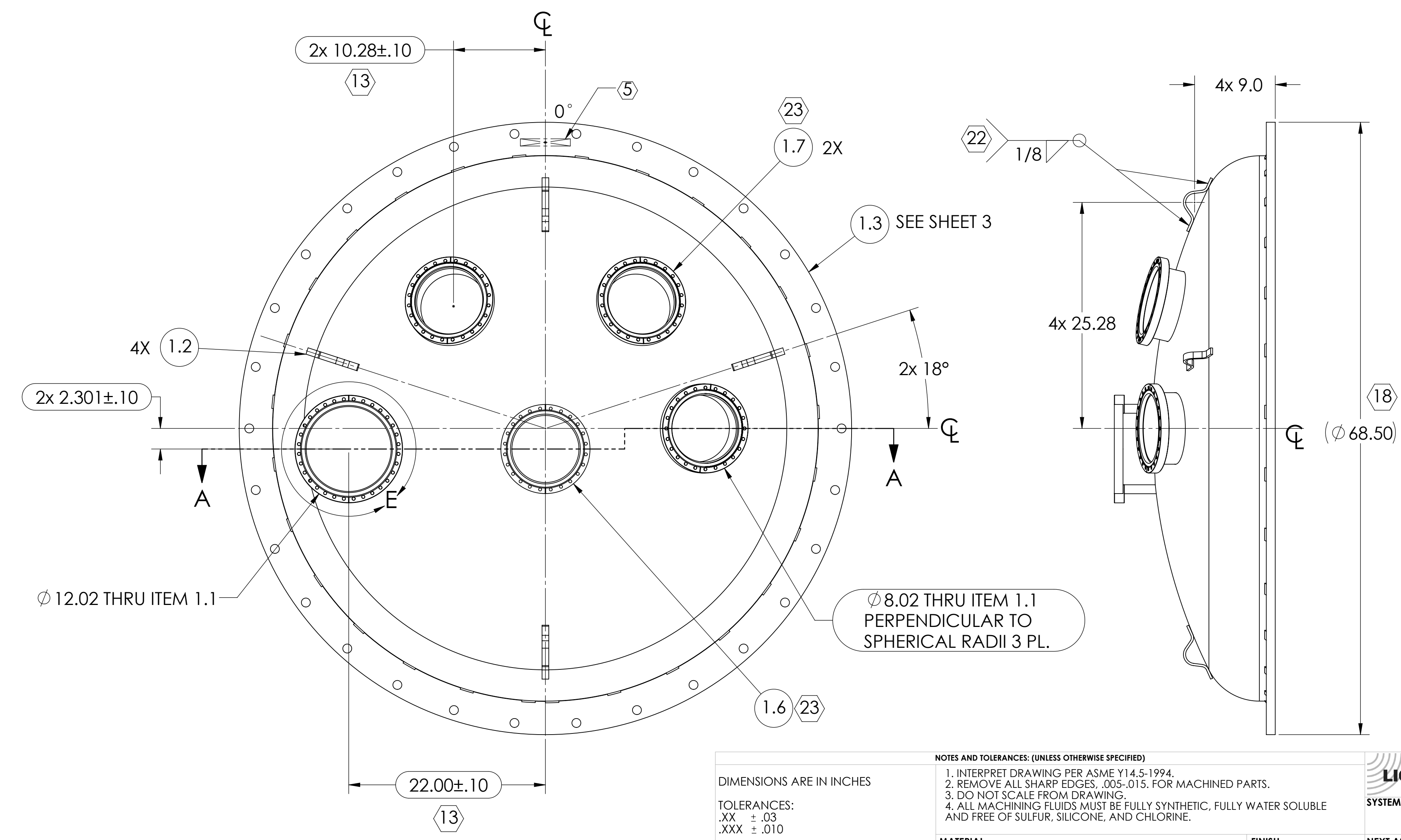
**DETAIL C**  
SCALE 1 : 2



**DETAIL K**  
SCALE 1 : 2



**ISO VIEW**



NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)  
 1. INTERPRET DRAWING PER ASME Y14.5-1994.  
 2. REMOVE ALL SHARP EDGES, .005-.015, FOR MACHINED PARTS.  
 3. DO NOT SCALE FROM DRAWING.  
 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

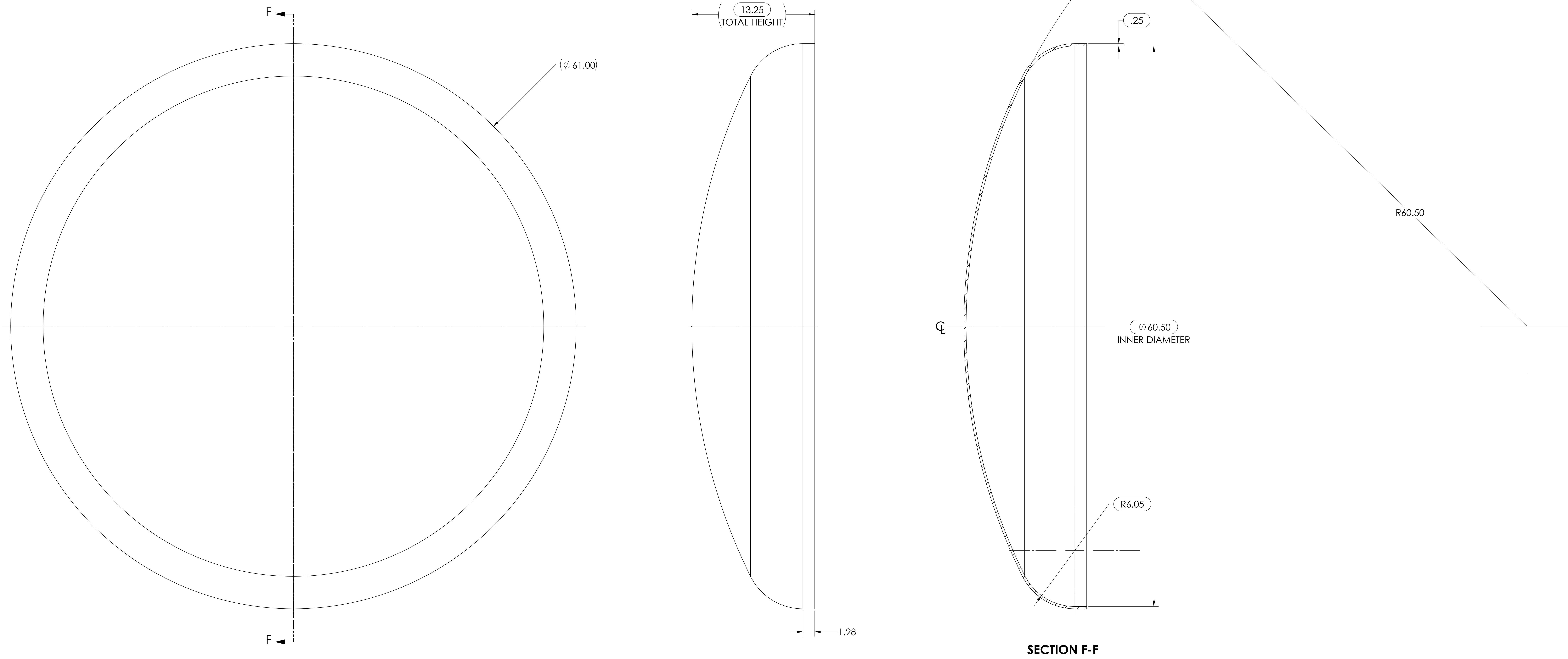
TOLERANCES:  
 .XX ± .03  
 .XXX ± .010  
 ANGULAR ± 0.5°

MATERIAL: 304L SSSL  
 FINISH: AS NOTED μinch

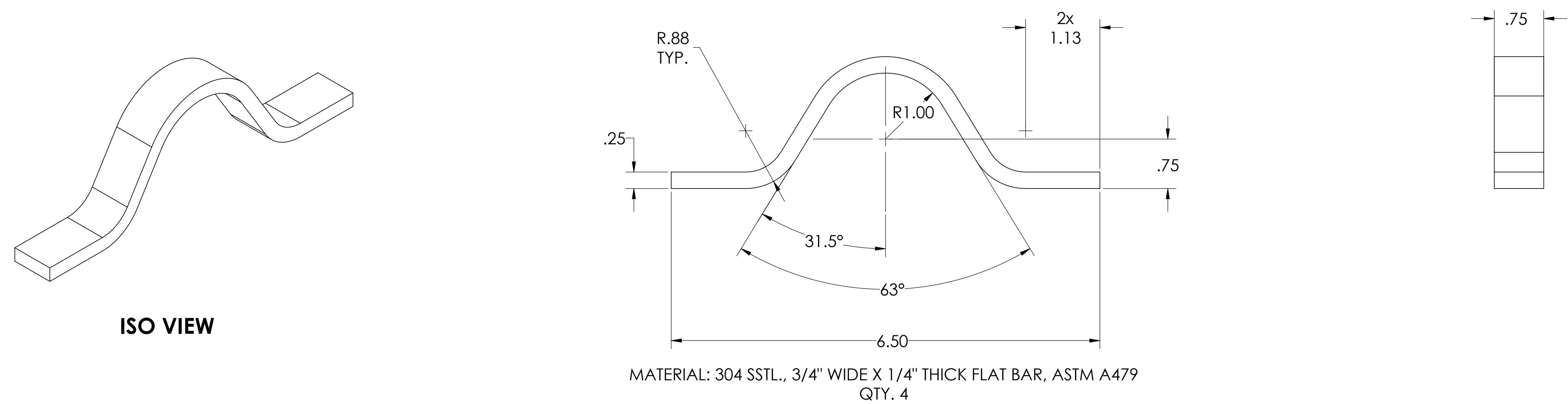
ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.	SPARE	TOTAL
1.7	BY VENDOR	8in HALF NIPPLE X .25 WALL, 10" CF (SPARE)	304 SSSL	2		0
1.6	BY VENDOR	8in HALF NIPPLE X .25 WALL, 10" CF (TMDS)	304 SSSL	1		0
1.5	BY VENDOR	8in HALF NIPPLE X .25 WALL, 10" CF (CO2P)	304 SSSL	1		0
1.4	BY VENDOR	10in HALF NIPPLE X .25 WALL, 12" CF (A+)	304 SSSL	1		0
1.3	D1900117-103	A+, 68.5in FLANGE, (FLAT FACED)	304 SSSL	1		0
1.2	D1900117-102	A+, LIFTING LUG	304 SSSL	4		0
1.1	D1900117-101	A+, TORISPHERICAL VESSEL HEAD (KLOPPER)	304 SSSL	1		0
1	D1900117	A+, BSC3, 60.5in DOOR (TYPE I)	304 SSSL	1		0

PARTS LIST		PART NAME	
		A+, BSC3, 60.5in DOOR (TYPE I)	
DESIGNER	ESANCHEZ	DATE	04 APR 2019
DRAFTER	ESANCHEZ	SIZE	DWG. NO.
CHECKER	SEE DCC	SCALE	1:8
APPROVAL	SEE DCC	PROJECTION	

# -101 DETAIL (VESSEL HEAD)

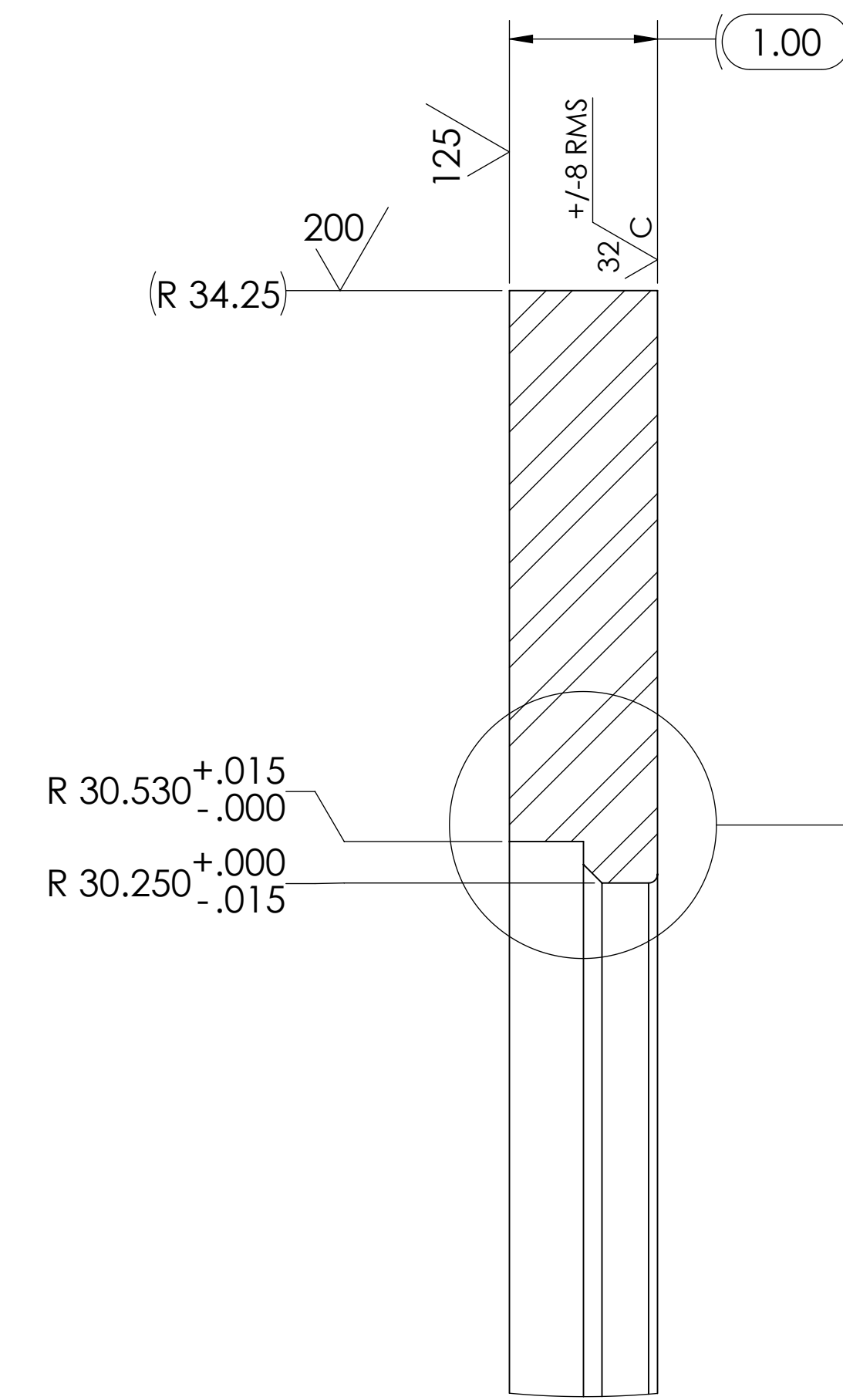
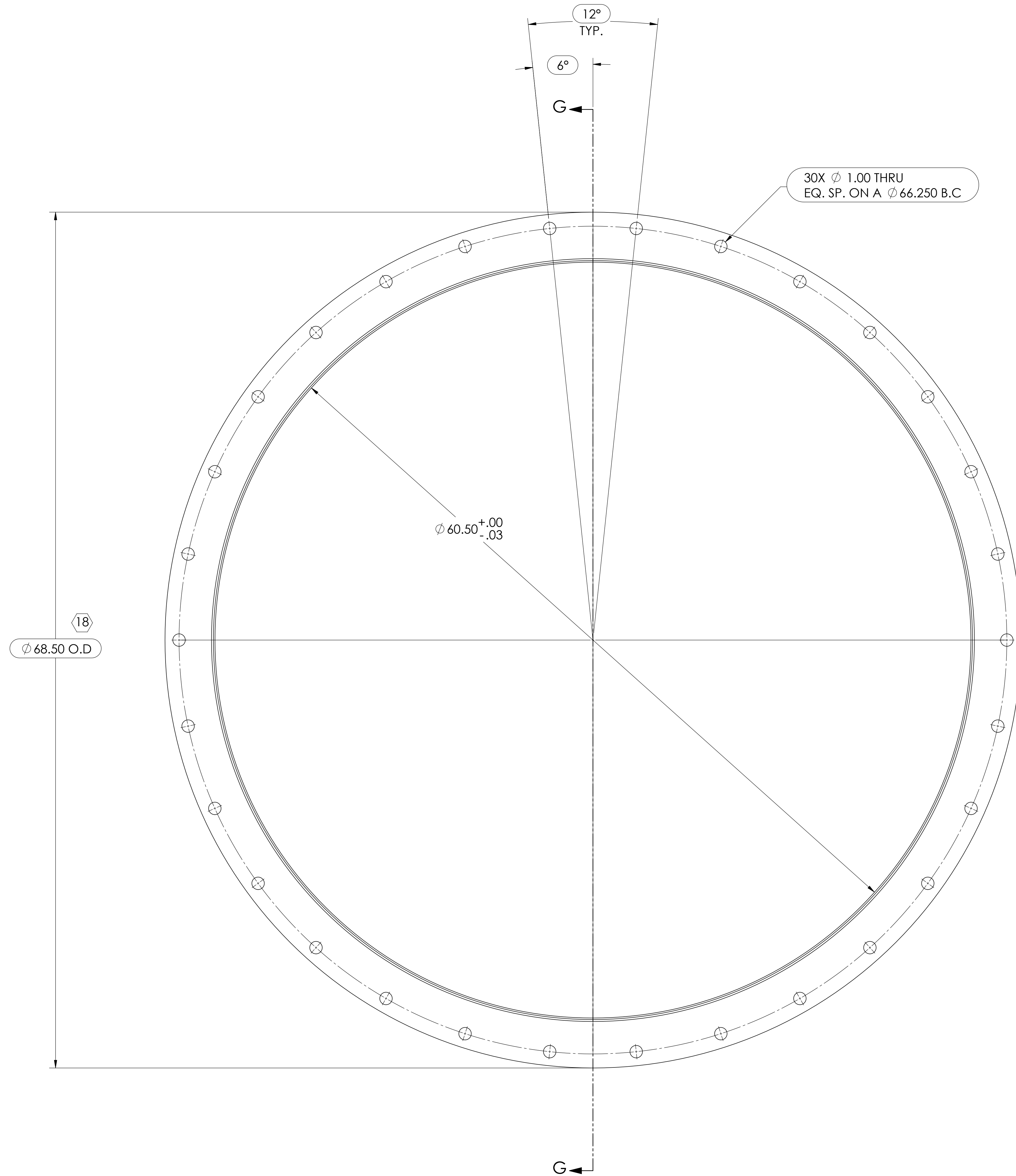


# -102 DETAIL (LIFTING LUG)

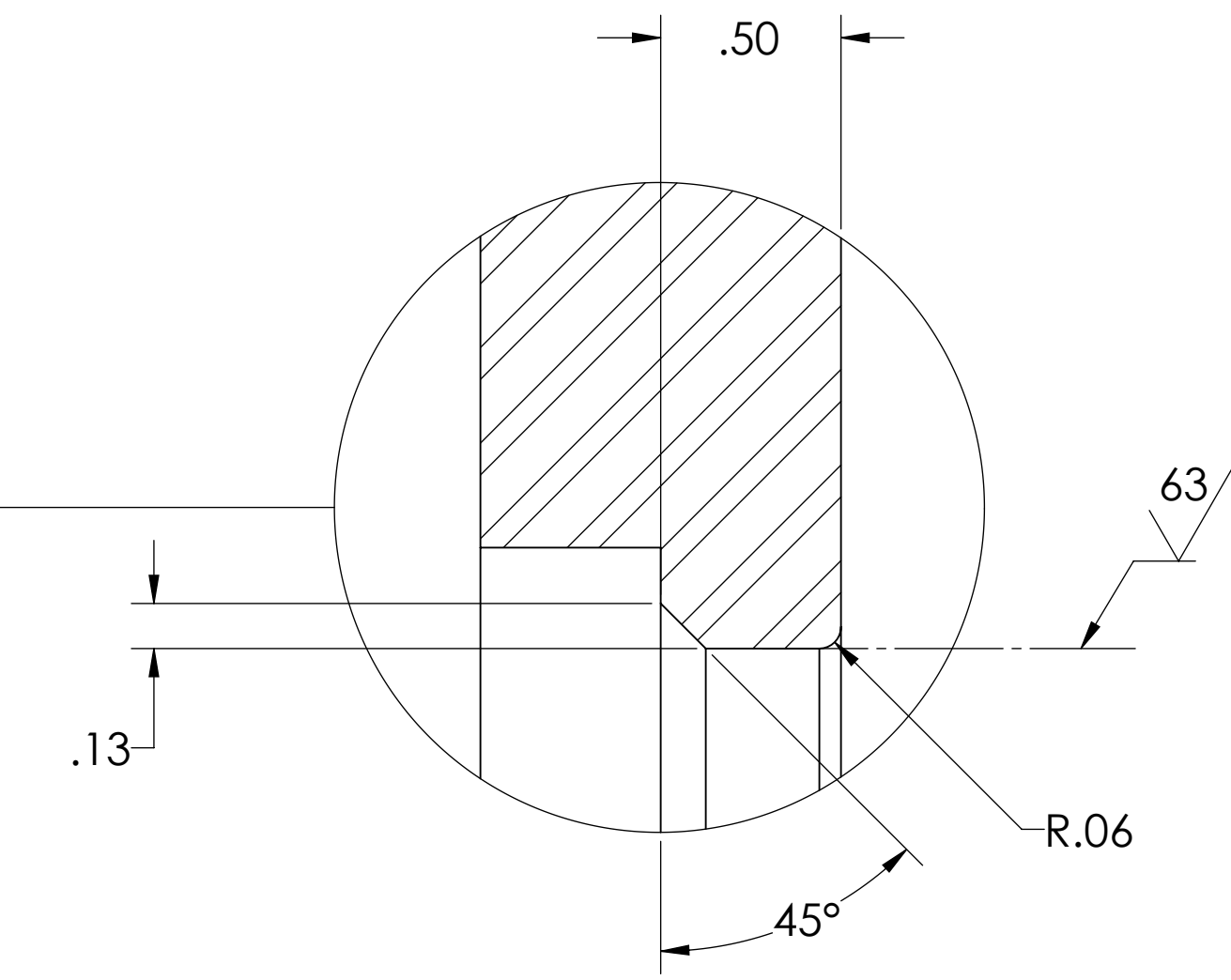


MATERIAL: 304 SSSL., 3/4" WIDE X 1/4" THICK FLAT BAR, ASTM A479  
QTY. 4

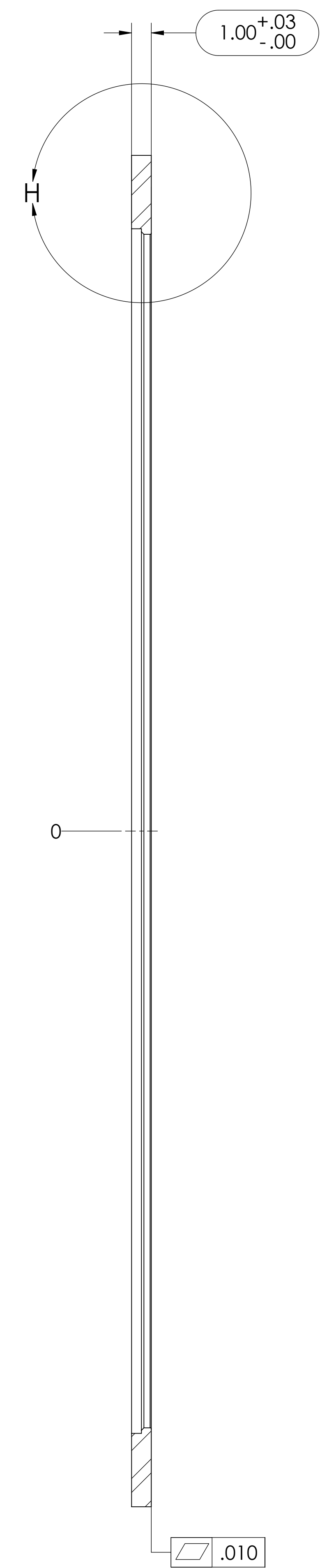
# -103 DETAIL (FLANGE)



**DETAIL H**  
SCALE 1 : 1



**DETAIL J**  
SCALE 2 : 1



**SECTION G-G**