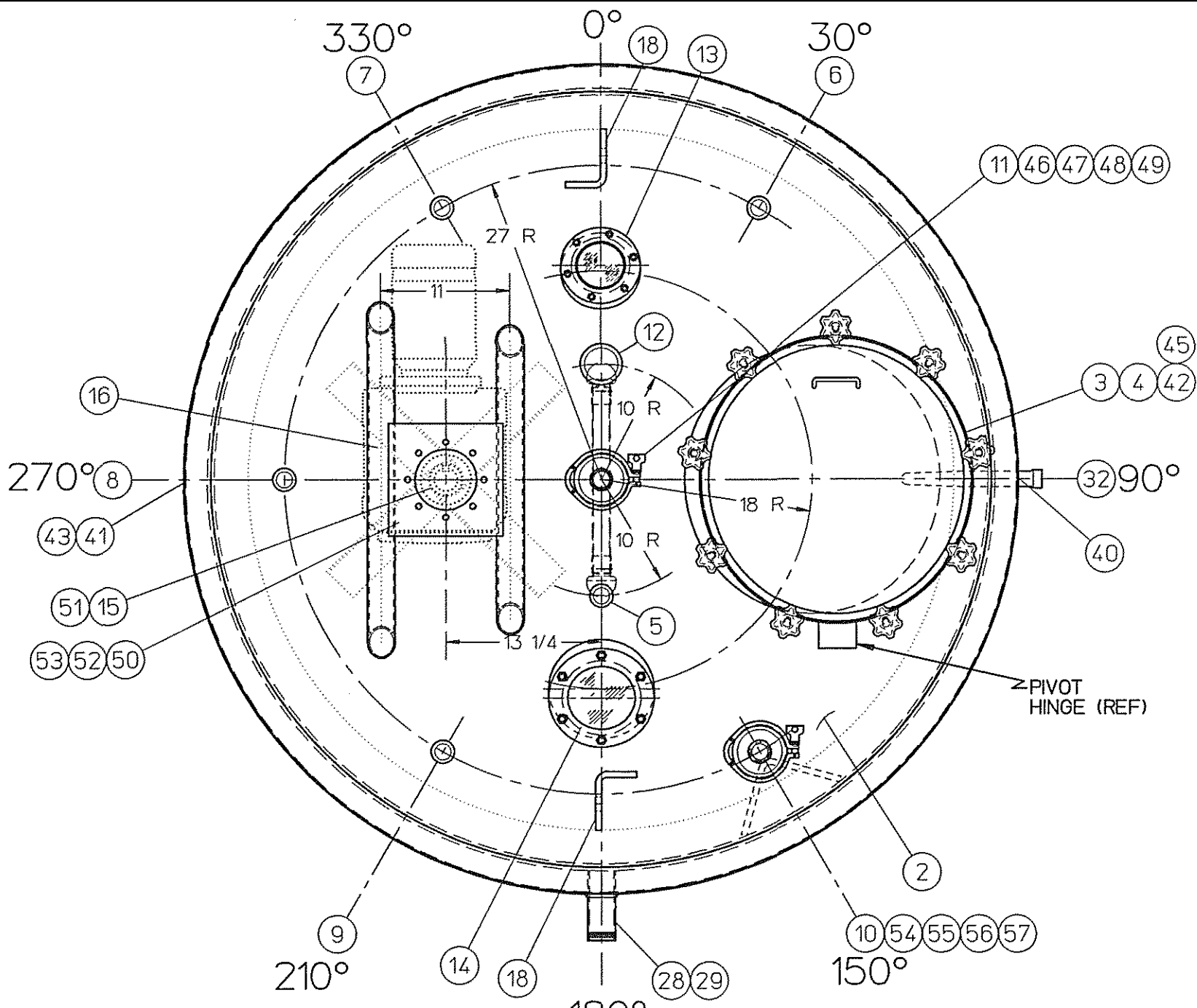
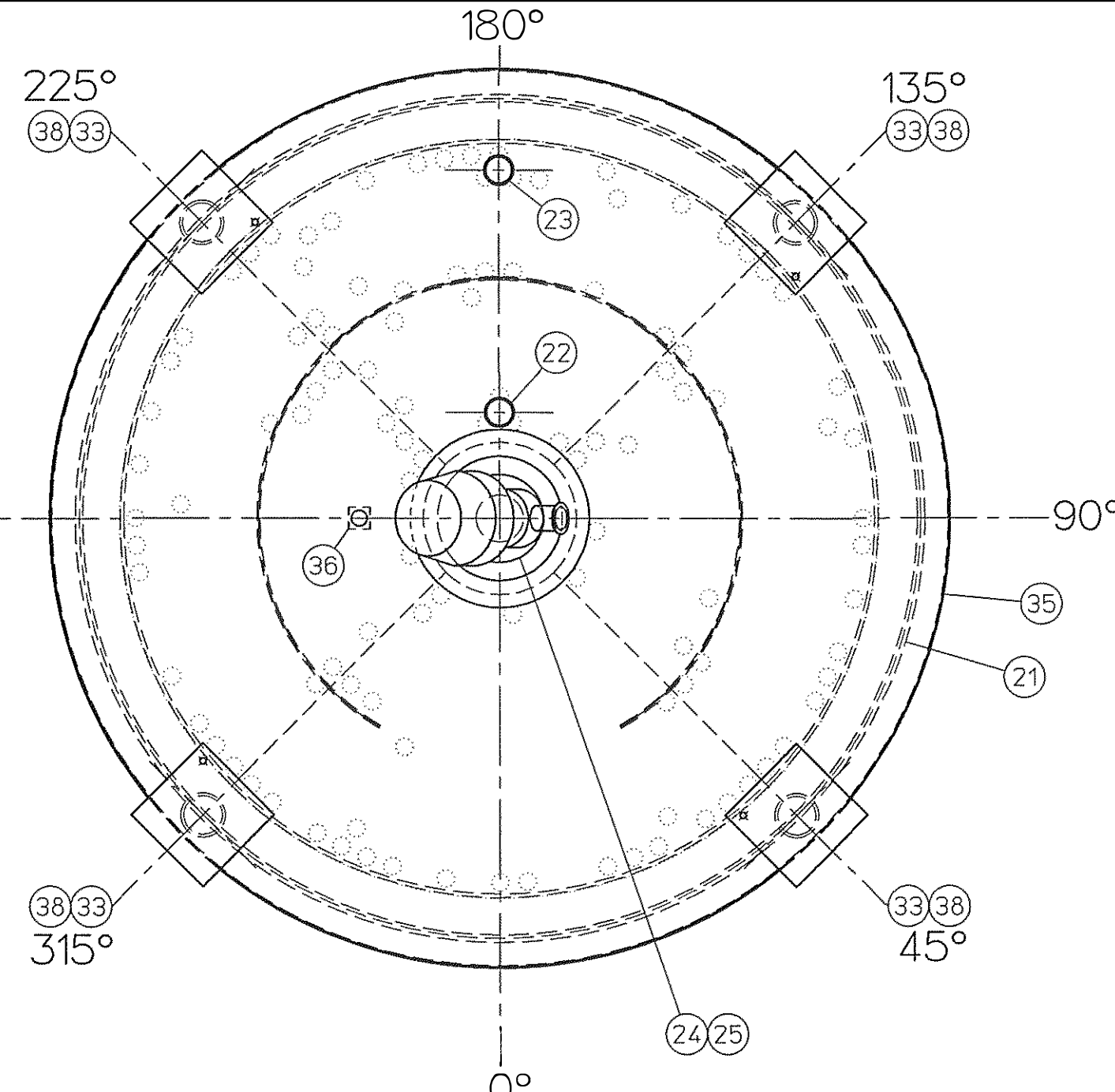
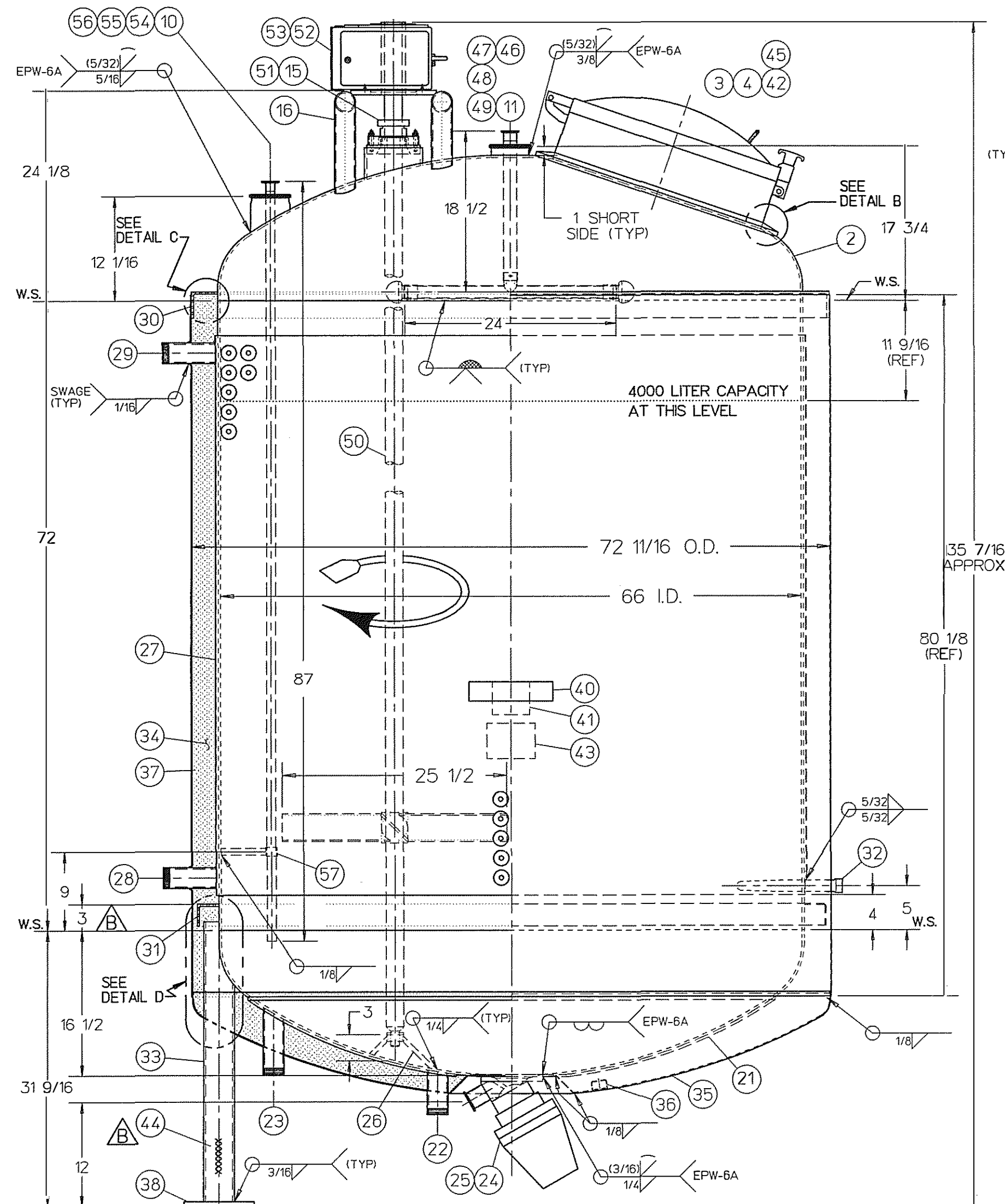




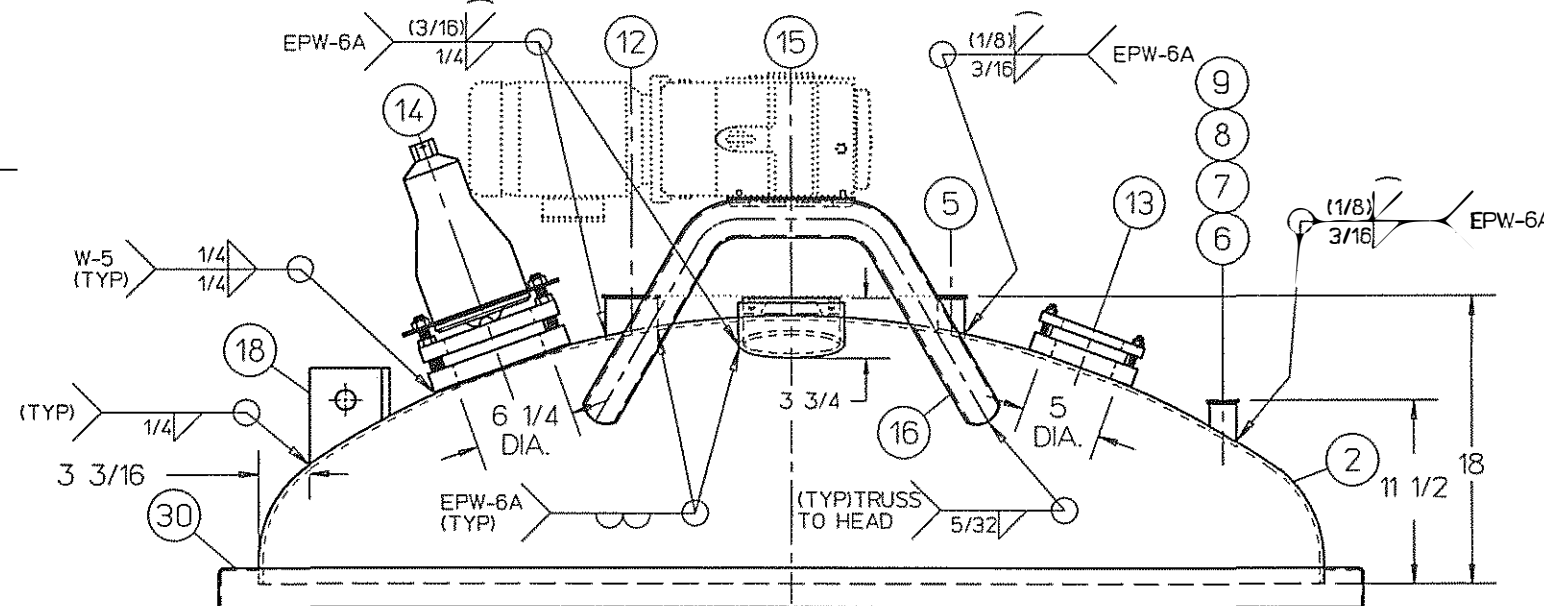
TOP HEAD AND SHELL ORIENTATION



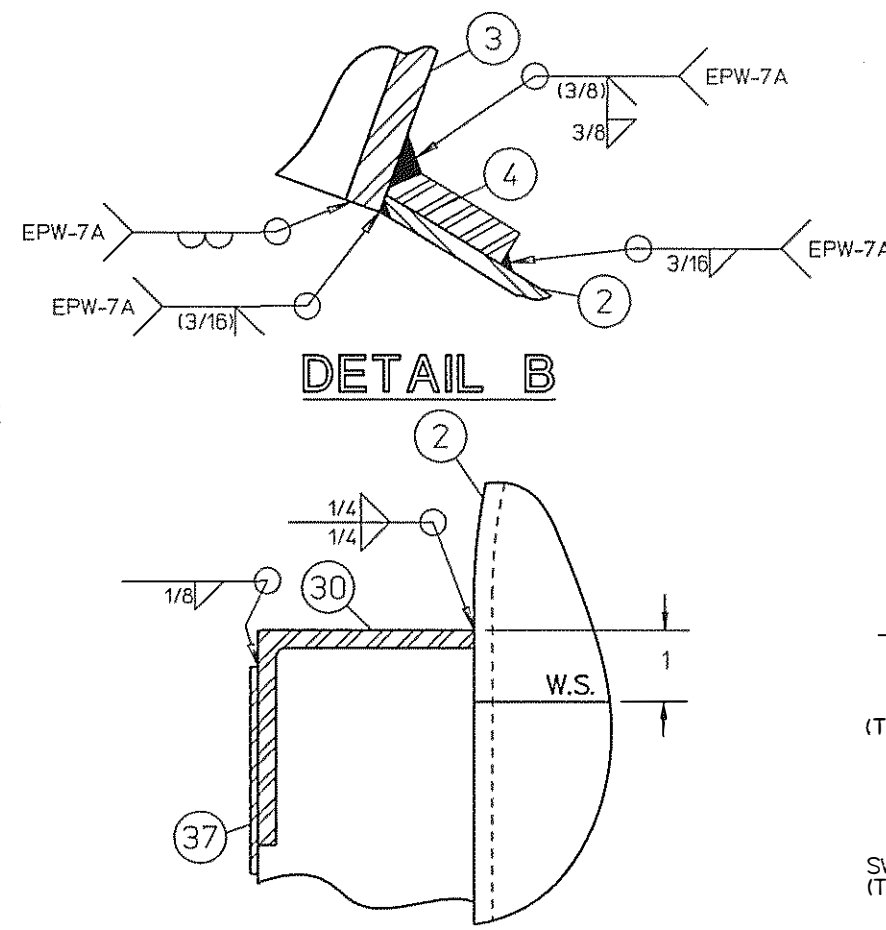
BOTTOM VIEW OF BOTTOM HEAD ORIENTATION



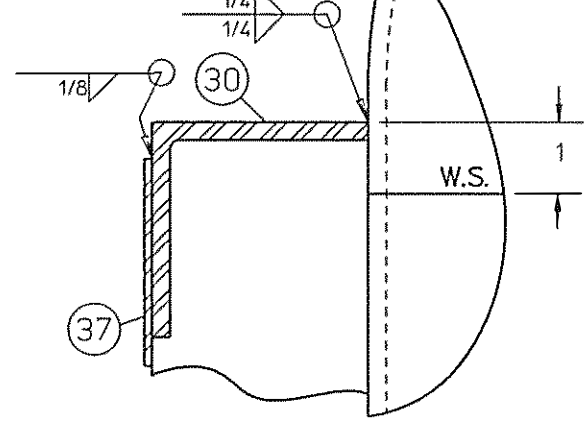
ELEVATION VIEW
SEE TOP & BOTTOM HEAD VIEWS FOR TRUE ORIENTATION



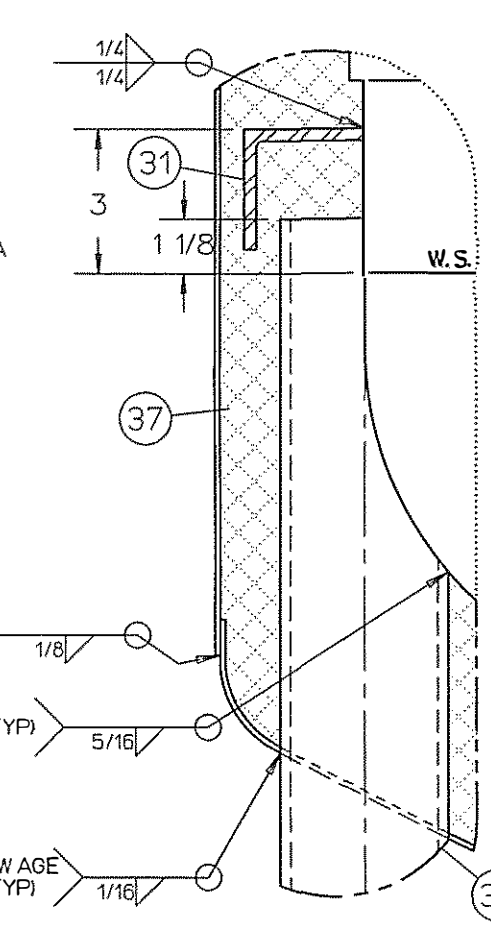
VIEW A-A



DETAIL B



DETAIL C



DETAIL D

NOTES CONT:

14. ASME DATA PLATE "RT" MARKING PER UG1616(e) WHEN APPLICABLE.
15. MATERIAL SPECIFICATIONS FOR ASME:
S/S SHEET PLATE (SA-240), C/S SHEET OR PLATE (SA-36)
S/S ROD AND BAR (SA-479), C/S ROD AND BAR (SA-36)
S/S PIPE (SA-312), C/S PIPE (SA-53)
S/S TUBE (SA-213), C/S TUBE (SA-179)
S/S BOLTS (SA-193), C/S BOLTS (SA-307 GR. B)
S/S NUTS (SA-194 GR. B), C/S NUTS (SA-194 GR. 2H)
316 S/S NUTS (SA-194 GR. 8M)
S/S FORGINGS (L-GRADE SA-336) (STRAIGHT-GRADE SA-182)
S/S FORGINGS (SA-181), (SA-105)
S/S COUPLINGS (UG-118) OR SA-182
16. SUITABLE PRESSURE AND/OR VACUUM RELIEF VALVE(S) MUST BE INSTALLED BY CUSTOMER FOR VESSEL OPERATION.
- 17.
18. SHOP TO LOCATE INSULATION PINS (9824541) ON 12" CTRS (APPROX) ON INNER SHELL & CONE TO SUPPORT INSULATION OVER T/P LOCATE PINS ON SPOTS.
19. CLEAN-IN-PLACE DEVICES ARE POSITIONED TO MAXIMIZE COVERAGE. HOWEVER, THE PAUL MUELLER COMPANY CANNOT GUARANTEE COMPLETE CLEANABILITY. C.I.P. IS RATED FOR 80 GPM AT 25 PSI.

20. AGITATOR SPECS:
DOWNWARD LOAD: 615 LBS.
TORQUE: 3401 INLB.
BENDING MOMENT: 3431 INLB.
21. QUALITY ASSURANCE NOTE:
ALL TANKS WITH VERTICAL AGITATORS ARE TO BE INSPECTED BY ENGINEERING. ALL AGITATORS WITH MECHANICAL SEALS MUST BE FILLED TO PRODUCT LEVEL WITH WATER, PRESSURED TO OPERATING PRESSURE AND RUN A MINIMUM OF 30 MINUTES. ENGINEERING MUST WITNESS AGITATOR OPERATION BEFORE SHIPMENT.
22. UPON COMPLETION OF TANK, ALL INTERNAL SURFACES ARE TO BE THOROUGHLY CLEANED AND PASSIVATED PER QA-701 (NITRIC ACID).
23. EXTERIOR MATERIAL AND WELD FINISH:
ENTIRE TOP HEAD TO 2" BELOW OUTER JACKET WELD, GLASS BEAD BLAST MATERIAL AND WELDS
ENTIRE BOTTOM HEAD TO 2" ABOVE OUTER JACKET WELD, GLASS BEAD BLAST MATERIAL AND WELDS
JACKET AREA BETWEEN BLASTED AREA TO BE 2B MATERIAL/BLUFF WELDS

CUST NO.	ITEM NO.	NO. REQ'D	PART NO.	DESCRIPTION	DRAWING NO.
	1	1	100	TANK ASSY 4000LITER MODEL "F" 316L S/S/EP	
	1	1	101	TOP HEAD ASSY 316L S/S	
	2	1	102	HEAD 80:10 F&D 66"ID .25"THK 316L S/S w/ 1.5"SF & 7"IKR	
	3	1	9827264	MANWAY ASSY MC56 24"ID 316LSS 9 LUG 6" COLLAR MATL #4/2S WELDS #4/BF	9500612D
	4	1	401W215663	PAD REINF .50"THK x 25.25"ID x 29"OD (1.875"WD) 304 S/S	DETAIL B
	5	1	9820741	FERRULE 14MPW 1.5" 316LSS W/O SHOULDER 4"LG .160"W SA479	9001166B
	6	1	9820741	FERRULE 14MPW 1.5" 316LSS W/O SHOULDER 4"LG .160"W SA479	9001166B
	7	1	9820741	FERRULE 14MPW 1.5" 316LSS W/O SHOULDER 4"LG .160"W SA479	9001166B
	8	1	9820741	FERRULE 14MPW 1.5" 316LSS W/O SHOULDER 4"LG .160"W SA479	9001166B
	9	1	9820741	FERRULE 14MPW 1.5" 316LSS W/O SHOULDER 4"LG .160"W SA479	9001166B
	10	1	9817529	FERRULE 14MPW 4.0" 316L S/S 8"LG .345"W SA312 POLISHED #4 ID & OD	9000380B
	11	1	9820745	FERRULE 14MPW 4.0" 316LSS W/O SHOULDER 4"LG .223"W SA312 (CIP CONNECTION)	9001166B
	12	1	9820744	FERRULE 14MPW 3.0" 316LSS W/O SHOULDER 4"LG .197"W SA312 (RUPTURE DISC)	9001166B
	13	1	9827032	GLASS ASSY SIGHT 4" 316/316L S/S BASE W/ANNEALED GLASS	9000767C
	14	1	9817417	LIGHT ASSY EXPLOSION PROOF 316/316L S/S BASE W/TEMPERED GLASS	9000845C
	15	1	(REF)	FLANGE PAD 1" W/6" PIPE EXTENSION (SEAL MOUNT)	PC10161D
	16	1	(REF)	TRUSS ASSY AGIT SHORT 304 S/S 2.0"SCH40 PIPE w/ .5"THK x 8"SQ PLATE	VIEW A-A
	17				
	18	2	9826015	LUG LIFTING .5" 304/304L "L" SHAPED 6" TALL W/1.25"DIA HOLE	9001393B
	19				
	20	1	120	BOTTOM HEAD ASSY 316L S/S	
	21	1	102	HEAD 80&10 F&D 66"ID .25"THK 316L S/S w/ 1.5"SF & 7"IKR w/ TEMP-PLATE DIMPLED 14GA 304 S/S	PC10160D
	22	1	9800467	TEMP-PLATE CONNECTION 2"NPT SCH40 TOE 304 S/S (CONDENSATE OUT)	PC10160D
	23	1	9804431	TEMP-PLATE CONNECTION 2"NPT SCH40 TOE 304 S/S (STEAM IN)	PC10160D
	24	1	024	VALVE DIAPHRAGM (MANUAL) "ITT" 2"W/ TRI-CLAMP CONN. EPDM DIAPHRAGM 316L S/S	
	25	1	125W215663	CLOSURE CONE 10"ID 90DEG 14GA 304 S/S	
	26	1	9810487	SUPPORT ASSY GUIDE 3 LEG 316L S/S	9901185B
	27	1	127	SHELL .25"THK 66"ID x 72"LG 316L S/S w/ 14GA 304 S/S DIMPLED TEMP-PLT	PC10159D
	28	1	9800467	TEMP-PLATE CONNECTION 2"NPT SCH40 TOE 304 S/S (CONDENSATE OUT)	PC10159D
	29	1	9800467	TEMP-PLATE CONNECTION 2"NPT SCH40 TOE 304 S/S (STEAM IN)	PC10159D
	30	1	130	RING VACUUM TOP .25"THK x 3.0"x 3.0" ANGLE 66.5"ID 304 S/S	DETAIL C
	31	1	131W215663	RING VACUUM BOT .25"THK x 2.5"x 2.5" ANGLE 66.5"ID 304 S/S (DRILLED)	
	32	1	9900985	WELL ASSY THERM 1.25"-18NEF STRAIGHT THREAD 316L S/S 12"LG	9900985B
	33	4	133W215663	PIPE LEG 3.0" SCH40 304 S/S	
	34	138	9808680	INSULATION 2"THK INSWOOL ALUMINA SILICA 4# DENSITY CERAMIC	
	35	1	135	HEAD STD F&D 72.5"OD 12GA 304 S/S w/ 1"SF & 2"IKR	
	36	1	9901490	VENT ASSY JACKET NON SVW STYLE	9901490A
	37	1	137	JACKET OUTER 12GA 72.6875"OD 304 S/S	
	38	4	9816048	PLATE BASE .5"THK 1 HOLE 8"SQ 304 S/S #4 1/S	9000727B
	39	1	9802062	INSTRUCTION PKG SINGLE WALL TANKS	
	40	1	(REF) 3743	PLATE NAME, PROCESS 2.175 X 9.5 X 22 GA 304	
	41	1	(REF) 9803082	PLATE DATA, MUELLER .003"THK ALUMINUM FOIL	
	42	1	9900362	PLATE CAUTION PRESSURE	
	43	1	9803105	PLATE DATA "ASME" 18-8 S/S 5.5"x4"x.048"THK ETCHED	
	44	1		PERMANENT STAMPED SERIAL NUMBER	
				ATTACHMENTS:	
	45	1	9822890	O-RING .375"DIA MC56 24" RED SILICONE 65-75 DURO (FDA)(MANWAY)	
	46	1	9820724	DOWN TUBE WELDMENT 1.5"OD 316L S/S #6 EP INSIDE #4 OUTSIDE	9001139B
	47	1	147W215663	CP ASSY T-TYPE SWAGED 316L S/S SHORT CONN. W/ (2) 2.5" SANMATIC SPRAYBALLS	9000754B
	48	1	9900405	GASKET 40MP-FX 4" SILICONE FDA APPROVED	
	49	1	9802601	CLAMP 13MHM 4" 304 S/S HEAVY DUTY TRI-CLOVER ONLY	
	50	1	A00	AGITATOR ASSY AXIAL TURBINE 316L S/S 2"DIA SHAFT w/(1)25.50"DIA BLADE	PC10161D
	51	1	001	SEAL MECHANICAL "JOHN CRANE" SINGLE MECH. TYPE 32 DRY RUNNING FOR 2.00" DIA SHAFT, MATERIAL CODE XF(32)-10(15)1, TUNGSTEN CARBIDE	
	52	1	052	GEAR REDUCER "NORD" SK9032-AZB-210TC 10.73:1 RATIO 163 RPM OUTPUT SEVERE DUTY FLANGE B14 POS H5A	
	53	1	053	MOTOR ELECTRIC "BALDOR" 7.5HP 3/60/230-460V 1760RPM 213TC EXPLOSION PROOF CLASS 1, GROUP D, INVERTER DUTY, C-FACE END SHIELD TEFC	
	54	1	155W215663	DIP TUBE ASSY 1.0" 316L S/S w/L14AM7 FERRULE & 4" TC MOUNTING	
	55	1	9900405	GASKET 40MP-FX 4" SILICONE FDA APPROVED	
	56	1	9802601	CLAMP 13MHM 4" 304 S/S HEAVY DUTY TRI-CLOVER ONLY	
	57	1	157W215663	DIP TUBE SUPPORT ASSY .5"DIA RD w/ 1.25" SCH 40 x 1"LG 316L S/S	9902480C

CERTIFIED CORRECT AND RELEASED FOR FABRICATION

FABRICATION WILL BE IN ACCORDANCE WITH THIS DRAWING. ANY FURTHER CHANGES WILL BE REVIEWED FOR COST AND DELIVERY ADJUSTMENTS.

PAUL MUELLER COMPANY

- NOTES:**
1. ALL MATERIALS OR COMPONENT PARTS CALLED OUT ON THIS DRAWING SHALL BE AS SPECIFIED "OR APPROVED EQUAL."
 2. DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE NOMINAL AND STANDARD SHOP TOLERANCES ARE TO BE EXPECTED. (INPE 222) MEASUREMENTS FOR ANY FIELD ATTACHMENTS SHOULD BE VERIFIED ON SITE BY OTHERS BEFORE FABRICATION OF THE ATTACHMENTS.
 3. CORROSION DISCLAIMER:
PAUL MUELLER COMPANY IS NOT RESPONSIBLE FOR CORROSION OR SUITABILITY FOR USE OF ANY MATERIAL IN ANY PARTICULAR APPLICATION! THE CORROSION RESISTANCE AND SUITABILITY FOR USE OF A MATERIAL IS DEPENDENT ON OPERATING ENVIRONMENT AND CONDITIONS, CLEANING PRACTICES, AND MANY OTHER FACTORS BEYOND THE CONTROL OF THE EQUIPMENT FABRICATOR. THE USER OF THE EQUIPMENT BEARS TOTAL RESPONSIBILITY FOR CORROSION OR SUITABILITY FOR USE OF ALL MATERIALS IN THEIR PARTICULAR APPLICATION!
 4. ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTER LINES, UNLESS SPECIFIED OTHERWISE.
 5. ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
 6. ALL WELD SIZES ARE MINIMUM AFTER GRINDING.
 7. CORROSION ALLOWANCE: NONE.
 8. PRODUCT SPECIFIC GRAVITY: 1.33.
 9. VESSEL DESIGNED FOR WIND LOAD: INDE.
 10. VESSEL DESIGNED FOR SEISMIC ZONE: 2A.
 11. CUSTOMER TO PROVIDE SUFFICIENT PIPE SUPPORT & PIPING EXPANSION JOINT TO PREVENT EXTERNAL NOZZLE LOADS.
 12. SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR HEAT TRANSFER OPERATION.
 13. ASME CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACE EXCLUDING MANWAY.

NATIONAL BOARD

CERTIFIED BY
PAUL MUELLER COMPANY
VESSEL

DIV.1

MAX. W.P. 50 P.S.I. AT 300 °F
W. MDMT -20 °F AT 50 P.S.I.

SERIAL NUMBER 222627-1

HEAT TRANSFER SURFACE
MAX. W.P. 90 P.S.I. AT 300 °F
MDMT -20 °F AT 90 P.S.I.

MATERIAL FINISHES

INTERIOR #4 EP (30) RA MAX EXTERIOR SEE NOTE #23

WELD FINISHES
FINE GRIND #4 (30) RA MAX
EXTERIOR SEE NOTE #23

SPECIFICATIONS VESSEL

CODE ASME

RADIOGRAPHY

Top Head	Top Head To Shell	Shell	Bottom Head	Bottom Head To Shell
NONE	NONE	NONE	NONE	NONE

HEAT TRANSFER

CODE ASME

RADIOGRAPHY

Top Head	Top Head To Shell	Shell	Bottom Head	Bottom Head To Shell
NONE	NONE	NONE	NONE	NONE

SIZE (GALLONS) - MODEL
4000 LITER "F" 222627-1

DESIGN INFORMATION

DESIGN PRESSURE	50 PS	DESIGN TEMP.	300 °F
HYDRO TEST PRESSURE	79 PS	DESIGN YIELD	29.92 N H3
DESIGN PRESSURE	90 PS	DESIGN TEMP.	300 °F
TEST PRESSURE	153 PS	VOLUME	1949 CU. FT.

HEATING / COOLING WATER

EST. EMPTY WEIGHT = 4745 LBS

SCALE T=12" DO NOT SCALE THIS DRAWING

DRAWN BY B **DATE** 10-21-98
REVIEWED BY A **DATE** 10/29/98
REVIEWED BY CAC **DATE** 10-30-98
APPROVED BY B

SOLD TO B
ADDRESS
CUSTOMER ORDER NO.

4000 LITER MODEL "F" CUSTOM PHARMACEUTICAL MIX TANK

QUANTITY ONE

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P. O. BOX 828 / SPRINGFIELD, MISSOURI 65801-0828 U.S.A.

SALES ORDER & SERIAL NO. 222627-1
DRAWING NO. PC10158

REV	BY	DATE	DESCRIPTION
B	For PROD MGMTS DELETE DM IN ELEV VIEW	RJ	12-1-98
A	ROTATE SERIAL NUMBER	CAC	10/30/98
SYM	CHANGE	BY	DATE
REVIEWS			