



CUST. NO.	ITEM NO.	NO. REQ'D	PART NO.	DESCRIPTION	DRAWING NO.
	1	1	V02	TANK ASSY 300 HL MODEL F BRIGHT BEER TANK 304 S/S	FP15836D
	1	1	H02/101	HEAD TOP ASSY ASME F&D .25" 304 S/S 8"IKR 1.5"SF	
	2	1	F38W349403	EXTENSION PIPE 4.0" SCH 80 304 S/S	DETAIL B
	3	1	O45W361707	FITTING (CUST FURN) DN100 304 S/S METRIC (NOTE 24)	DETAIL B
	4	1	F24W349403	EXTENSION PIPE 3" SCH 80 304 S/S	DETAIL B
	5	1	O42W361707	FITTING (CUST FURN) DN80 304 S/S METRIC (NOTE 24)	DETAIL B
	6	2	104W382414	LUG LIFTING ASSY SVW 304 S/S SIM. TO 9901259 EXC. ITEM 1 = .75"THK	9000480B
	7	1	C02	HEAD ASSY BOTTOM 90DEG CONICAL .1874" NOM. 304 S/S W/ 18GA 304 S/S INF HTS 8"IKR 1.5"SF	FP15837D
	8	1	M16	MANWAY ASSY MC16 16"ID 304 S/S 6 LUG 4" COLLAR	9501074D
	9	1	(REF)	TUBE OUTLET 3"OD X .065" WALL 304 S/S 6"LG POLISHED ID (751P294433)	
	10	1	(REF)	NIPPLE 304/304L S/S 1.5"NPT X 6"LG SCH 40 TOE SA-312 (115W305103)	FP15837D
	11	1	(REF)	NIPPLE 304/304L S/S 1.5"NPT X 6"LG SCH 40 TOE SA-312 (115W305103)	FP15837D
	12	1	219W356145	CONE CLOSURE 5.0"ID X 3.5"OA 14 GA 304 S/S 2B	FP15837D
	13	1	S02	SHELL 304 S/S 10GA UPPER W/20GA INF HTS .1874" NOM. LOWER W/18GA INF HTS	FP15837D
	14	3	9824639	WELL ASSY THERM .75"NPT 316L S/S OAL 20 5/8"	DETAIL A&D
	15	2	(REF)	NIPPLE 304/304L S/S 1.5"NPT X 6"LG SCH 40 TOE SA-312 (9801781)	FP15837D
	16	2	(REF)	NIPPLE 304/304L S/S 1.5"NPT X 6"LG SCH 40 TOE SA-312 (9801781)	FP15837D
	17	4	217	LEG ASSY 8" SCH40 304 S/S 115.625"LG	DETAIL A
	18	-	-	-DELETED-	
	19	4	126W164563	LUG LEVELING .25"X 1"X 2" 304 S/S	DETAIL A
	20	4	420	PLATE BASE LEG 1" 304 S/S 11.25" DIAMETER (NOTE 23)	DETAIL A
	21	4	421	COLLAR LEG .25"X 4"X 8.75"ID 304 S/S (NOTE 23)	DETAIL A
	22	4		WASHER FLAT 1" (CUSTOMER SUPPLIED/INSTALLED)	DETAIL A
	23	4		TIE DOWN BOLT 1-BNC (CUSTOMER SUPPLIED/INSTALLED)	DETAIL A
	24	4		NUT HEAVY HEX 1-BNC (CUSTOMER SUPPLIED/INSTALLED)	DETAIL A
	25	1	125	RING BREAST 12GA 304 S/S	
	26	1	J02	JACKET OUTER 12GA 304 S/S	NOTE 29
	27	1	227	HEAD OUTER BOTTOM 12GA 304 S/S 90DEG CONE 2"IKR 1"SF	
	28	1	128	RING CLOSURE 12GA 304 S/S 31.25"OD FLANGED OD .25"IKR	DETAIL A
	29	1	9828988	VENT JACKET PLUG NYLON 6/6 PART #102000W BLACK	
	30	1	9902473	INSULATION 2"URETHANE GRVD 24"X48"	NOTE 25
	31	1	9808680	INSULATION 2"THK CALCIUM MAGNESIUM-SILICATE THERMAL CERAMIC	NOTE 25
	32	1		PLATE NAME "MUELLER" ETCHED	
	33	1	9851152	PLATE DATA "ASME" VESSEL&HTS 18-8 S/S 5.5"X4"X.048"THK ETCHED	
	34	1	9851480	PLATE DATA "MUELLER" 5.25"X3.75"X.003"THK FOIL	
	35	1	9900380	ENVELOPE ASSY INSTRUCTION SINGLE WALL TANK	
	36	3	9901403	LABEL "IN" 1.5"X.5"X.005"THK MYLAR	
	37	3	9901404	LABEL "OUT" 1.5"X.5"X.005"THK MYLAR	
	38	6	9808631	LABEL ATTENTION "BACKUP" 3"X2"X.005"THK MYLAR	
	39	6	9824549	LABEL ATTENTION "CUSTOMER" 3.5"X1.75"X.005"THK MYLAR	
	40	1		PERMANENT STAMPED SERIAL NUMBER	
	41	1	241	JIG LEG HOLDING (RED HOOK)	
	42	1	9822763	GASKET MANWAY .375"SQ 16.25" ID WHITE NEOPRENE 50 DURO +OR- 5 FDA	
	43	1	143	PIPE STUB 3" SCH40 304 S/S BEVEL END	DETAIL C
	44	1	9802384	ADAPTER WELD IN .25" 304 S/S FOR PERLICK PETCOCK 1.25"LG (CUSTOMER FURNISHED)	
	45	1	S51M305787	SLUG 1.50"DIA .25"THK 304 S/S	

**NOTES, CONT'D:**

- ASME DATA PLATE "RT" MARKING PER UG116(e) WHEN APPLICABLE.
- MATERIAL SPECIFICATIONS FOR ASME: S/S SHEET AND PLATE (SA-240), S/S ROD AND BAR (SA-479), S/S PIPE (SA-312), S/S TUBE (SA-213), S/S BOLTS (SA-193 GR. B8), S/S NUTS (SA-194 GR. 8), S/S NUTS (SA-194 GR. 8M), S/S FORGINGS (SA-182), S/S COUPLINGS (UG-11) OR (SA-182). SEE PARTS LIST FOR C/S MATERIAL SPECIFICATIONS.
- ASME CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACE OR WELD JOINT EXCLUDING MANWAY.
- ALL WELDING TO BE DONE BY ASME CERTIFIED WELDERS.
- SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR VESSEL OPERATION.
- SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR HEAT TRANSFER OPERATION.
- ENTIRE OUTER BOTTOM CONE, EXPOSED INNER CONE, RING CLOSURE, MANWAY, & LEG, FOOT, BRACE ASSY TO BE GLASS BEAD BLASTED.
- REMOVE HEAT TINT FROM VESSEL INTERIOR WITH SHEET POLISHER.
- STAMP TANK NUMBER AT HINGE POINT ON MANWAY.
- BASE PLATE (ITEM 20) & LEG COLLAR (ITEM 21) TO BE SHIPPED LOOSE.
- ITEMS 3 & 5 TO BE CUSTOMER SUPPLIED AND MAILED TO SALES FOR INSTALLATION BY P/MCO.
- USE URETHANE INSULATION ON ALL THE SIDEWALL AND INSWOOL INSULATION ON BOTTOM CONE.
- BOTTOM HEAD AND LEGS TO BE INSTALLED ON BOTTOM HALF OF TANK PRIOR TO SHELL TO SHELL WELDING.
- NO ESCUTCHEON PLATES ARE TO BE USED ON THIS TANK.
- THIS TANK IS LOCATED IN A SHOW AREA. USE CARE DURING PRODUCTION FOR TOP QUALITY RESULTS.
- OUTER JACKET SEAMS TO RUN VERTICAL.

**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:**

- ALL MATERIALS OR COMPONENT PARTS CALLED OUT ON THIS DRAWING SHALL BE AS SPECIFIED "OR APPROVED EQUAL".
- DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE NOMINAL, AND STANDARD SHOP TOLERANCES ARE TO BE EXPECTED. (ENFP 222) MEASUREMENTS FOR ANY FIELD ATTACHMENTS SHOULD BE VERIFIED ON SITE BY OTHERS BEFORE FABRICATION OF THE ATTACHMENTS.
- 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.
- ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTER LINES, UNLESS SPECIFIED OTHERWISE.
- VESSEL TO BE VENTED FOR SHIPMENT.
- ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
- ALL WELD SIZES ARE MINIMUM AFTER GRINDING.
- CORROSION ALLOWANCE: 0 INCHES.
- PRODUCT SPECIFIC GRAVITY: 1.0135-1.0560.
- VESSEL DESIGNED FOR WIND LOAD: 0 MPH.
- VESSEL DESIGNED FOR SEISMIC ZONE: #2A.
- CUSTOMER TO PROVIDE SUFFICIENT PIPE SUPPORT & PIPING EXPANSION JOINT TO PREVENT EXTERNAL NOZZLE LOADS.
- FOR DYE TEST REQUIREMENTS SEE PROCEDURE ENG 103.

**CERTIFIED BY PAUL MUELLER COMPANY VESSEL**

Div: MAWP 25 P.S.I. at 100 °F  
 MAEWP 4"H2O P.S.I. at 100 °F  
 MDMT -20 °F at 25 P.S.I.

YEAR BUILT 2008

HEAT TRANSFER SURFACE  
 MAWP 100 P.S.I. at 100 °F  
 MAEWP P.S.I. at P.S.I.  
 MDMT °F at P.S.I.

NOTE #14: MUELLER

**MATERIAL FINISHES**

INTERIOR 2B/HRAP (NOTE 21) EXTERIOR 2B/HRAP (NOTE 20)

**WELD FINISHES**  
 INTERIOR FINE GRIND #4  
 EXTERIOR BUFF (BF) (NOTE 20)

**SPECIFICATIONS VESSEL**

CODE ASME

**RADIOGRAPHY**

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

**HEAT TRANSFER**

CODE NONE

**RADIOGRAPHY**

Top Head To Shell	Top Head To Shell	Shell	Bottom Head To Shell	Bottom Head To Shell

SIZE (GALLONS) - MODEL SERIAL NUMBER

30,000 LITER F 384634-2

**VESSEL INFORMATION**

DESIGN PRESSURE 25 PSI	DESIGN TEMP. 100 °F
HYDRO TEST PRESSURE 33 PSI	DESIGN VACUUM 4"H2O PSI
DESIGN PRESSURE 100 PSI	HEAT TRANSFER INFORMATION
TEST PRESSURE 130 PSI	DESIGN TEMP. 100 °F
	HEATING / COOLING
MEDIUM NONE / GLYCOL	VOLUME 1.65 CU. FT.

EST. EMPTY WEIGHT = 8,680 LBS

SCALE 3/8"=1" (DO NOT SCALE THIS DRAWING)

DRAWN BY D. HUTCHISON	DATE 3/26/2008
REVIEWED BY <i>And O'Brien</i>	DATE 4/2/2008
REVIEWED BY	DATE
APPROVED BY <i>And O'Brien</i>	DATE 5/1/2008

SOLD TO REDHOOK BREWERY  
 ADDRESS PORTSMOUTH, NH  
 CUSTOMER ORDER NO. 40042

TITLE 300 HL MODEL F BRIGHT BEER TANK

QUANTITY ONE

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

SALES ORDER & SERIAL NO. 384634 - 2  
 DRAWING NO. FP15836

SYM.	CHANGE	BY	DATE
B	PER S/O X003019, ADDED ITEMS 44 & 45**	DLH	8/18/2008
A	ITEM 14 WAS QTY 2**ADDED ITEM 43**TITLE WAS 8,300 GALLON**CHANGED ALL GALLON LEVELS TO LITERS**ITEM 4/5 WAS LEVEL WITH ITEM 2/3** SHELL WAS 142 1/2" OVERALL WAS 274 7/8"** ADDED LOCATION NOTE FOR ITEM 40**DETAIL A DIMS. WERE 15" & 18 1/4"**ADDED DETAIL C** DELETED BRACE, ITEM 18** ITEM 17 WAS 12" SCH40 AND ITEMS 20,21 & 43 WERE MODIFIED ACCORDINGLY**ITEM 12 WAS LOCATED AT 24 5/8" BELOW W.S.**	DLH	4/17/2008