

CUST NO.	ITEM NO.	NO. REQ'D	PART NO.	DESCRIPTION	DRAWING NO.
	1	1	V05	TANK ASSY 16,600 GAL MODEL "F" FERMENTER	FP15364 D
	1	1	H05	HEAD TOP 10GA 304 S/S ASME F&D 8"KR 1"SF	
	2	1	H55	HEAD ASSY BOT INNER 7GA 304 S/S 90° CONE 2"KR,1.5"SF W/18GA 304 S/S INF. T-PL	FP14960 D
	3	1	S01/S02W349403	SHELL ASSY 10GA 304 S/S W/20GA 304 S/S INFLATED TEMP-PL UPPER BANDS AND 7GA 304 S/S W/18GA 304 S/S INFLATED TEMP-PL LOWER BAND	FP14890 D
	4	2	104	LUG LIFTING ASSY SVW 304S/S SIM. TO PT. #9901259 EXC. ITEM #1 = .75"THK.	9000480 B
	5	4	9824639	WELL ASSY THERM .75"NPT 316L S/S OAL 20.625"	
	6	3	(REF)	CONN TP-PL INLET 1.5" 304 S/S SCH 40 PIPE 6"LG TOE(9801781)	FP14890 D
	7	3	(REF)	CONN TP-PL OUTLET 1.5" 304 S/S SCH 40 PIPE 6"LG TOE(9801781)	FP14890 D
	8	1	750P294433	MANWAY ASSY MC10 16"ID 304 S/S (REDHOOK STYLE)(REF. 750P294433)	
	9	4	109	LEG 12" 304 S/S SCH 10 PIPE	9000263 B
	10	4	CUST FURN	TIE DOWN BOLT 1-8NC (CUSTOMER SUPPLIED/INSTALLED)	
	11	4	CUST FURN	WASHER FLAT 1" (CUSTOMER SUPPLIED/INSTALLED)	
	12	4	CUST FURN	NUT HEAVY HEX 1-8NC (CUSTOMER SUPPLIED/INSTALLED)	
	13	1	9852534	VALVE SAMPLE 316L S/S .375"-18 STRAIGHT THREADS PERLICK	9900633 A
	14	1	9802383	GASKET FIBER PERLICK F-11284-1	9900633 A
	15	1	9802384	ADAPTER WELD IN .25" 304 S/S	DETAIL D
SHIP LOOSE	16	4	116W164563	BASE PLATE 1"THK 15.5"OD W/1.25"ID 304 S/S	
SHIP LOOSE	17	4	117	LEG COLLAR 304 S/S .25"THK X 4"HIGH W/12.875"ID	
	18	A/R		INSULATION 2" URETHANE 2" X 4' GROOVED	NOTE 19
	19	1	119	HEAD OUT BOT 12GA 304 S/S 90° CONE 2"KR 1"SF	
	20	1	9827623	RING ENCLOSURE .1875"NOM 304 S/S 35.8125"OD X 26.8125"ID	
	21	2	921W294433	JACKET SECTIONS 12GA 304 S/S	
	22	1	9827637	BREAST RING 12GA 304 S/S	9000582 C
	23	2	9901490	VENT ASSY JACKET 1" DIA 304 S/S	9901490 A
	24	1	F24W349403	EXTENSION DN80 304 S/S X 2"LG (TOP HEAD)	
	25	1	751P294433	TUBE 3"OD X .065"W 304 S/S POLISHED ID 6"LONG (OUTLET)	
	26	4	126W164563	LUG LEVELING .25"THK 304 S/S 1"W X 2"LG	
	27	1		PLATE NAME MUELLER ETCHED	
	28	1	9851480	PLATE DATA MUELLER FOIL 3.75" X 5.25" X .003"THK W/PRESSURE	
	29	8	9808631	LABEL CAUTION USE BACKUP WRENCH 3" X 2" LABEL BLUE W/WHITE LETTERING	
	30	4	9901403	LABEL "IN" .5" X 1.5" SILVER W/BUE LETTERING POLY-STIK-S .005"THK	
	31	4	9901404	LABEL "OUT" .5" X 1.5" SILVER W/BUE LETTERING POLY-STIK-S .005"THK	
	32	1	9900380	ENVELOPE ASSY INSTRUCTION SINGLE WALL TANK	
	33	2	(REF)	PLATE WARNING "PRESSURE" 316 /316L S/S 3.5"X2" X 16GA THK (9900362)	
	34	1		PERMANENT STAMPED SERIAL NUMBER	
	35	1	9827639	RECESS COLLAR 7GA 304 S/S W/3"ID	9900064 A
	36				
	37	1	137W164563	PIPE STUB 3"SCH 10 304 S/S BEVEL END	DETAIL A
	38	1	F38W349403	EXTENSION (CUST FURN) DN100 304 S/S 4.179"OD X 2"LG (TOP HEAD)	
	39	1	(REF)	CONN TP-PL INLET 1.5" 304 S/S SCH 40 PIPE 9.5"LG TOE(9800461)	FP14960 D
	40	1	(REF)	CONN TP-PL OUTLET 1.5" 304 S/S SCH 40 PIPE 9.5"LG TOE(9800461)	FP14960 D
	41	1	9822763	GASKET MANWAY .375" SQ. 16.25"ID WHITE NEOPRENE	
	42	1	042W361707	FITTING METRIC 304 S/S (CUSTOMER SUPPLIED DN80 TOP HEAD)	
	43	8	9824549	LABEL ATTENTION "CUSTOMER" 1.75"X3.5"X.005"THK MYLAR W/3M#468	
	44	1	153W164563	LEG HOLDING JIG FOR REDHOOK 16,600 GAL TANKS	FP08723 C
	45	1	045W361707	FITTING METRIC 304 S/S (CUSTOMER SUPPLIED DN100-TOP HEAD)	
	46	A/R	9808680	INSULATION 2"THK ALUMINA SILICA 6# DENSITY THERMAL CERAMIC FIBER	NOTE 19
	47	3	L47W361707	BRACE LEG 6" SCH80 PIPE 304 S/S	
	48				
	49				
	50				

**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. (ENP 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.
- SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR TEMP-PLATE OPERATION.
- SUITABLE PRESSURE AND/OR VACUUM RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR VESSEL OPERATION.
- PRODUCT SPECIFIC GRAVITY: 1.0135-1.0560
- REMOVE HEAT TINT FROM VESSEL INTERIOR WITH SHEET POLISHER.
- VESSEL DESIGNED FOR SEISMIC ZONE: #2A
- NET WEIGHT (ITEM #19), LEGS (ITEM #9), FOOT ASSY (ITEM #17), FOOT PADS (ITEM #16), AND MANWAY ASSY (ITEM #24) ARE TO BE GLASS BEAD BLASTED (GB).
- NO ESCUTCHEON PLATES ARE TO BE USED ON THESE TANKS.
- THESE TANKS ARE LOCATED IN A SHOW AREA. PLEASE USE EXTRA CARE DURING PRODUCTION FOR TOP QUALITY RESULTS.
- ITEM #42 TO BE ASSY FITTING FOR #36 & #38. CUSTOMER SUPPLIED (METRIC SIZE 304 S/S) AND MAILED TO SALES FOR INSTALLATION BY PMCO.
- STAMP TANK NUMBER AT HINGE POINT ON MANWAY.
- ITEMS #16 & #17 SHALL BE SHIPPED LOOSE.
- URETHANE INSULATION TO BE PLACED ON JACKET. INSWOOL INSULATION (ITEM #46) TO BE PLACED ON BOTTOM CONE.
- BOTTOM HEAD AND LEGS TO BE INSTALLED TO BOTTOM HALF OF TANK PRIOR TO SHELL TO SHELL WELDING.
- ITEM #24 & #38 TO BE AS SHORT AS POSSIBLE FOR CLEANING PURPOSES.

**MATERIAL FINISHES**

INTERIOR 2B/NOTE #11 EXTERIOR 2B/NOTE #13

**WELD FINISHES**

INTERIOR FINE GRIND #4  
EXTERIOR BUFF (BF)/NOTE #13

**SPECIFICATIONS**

VESEL

CODE NONE

RADIOGRAPHY

Top Head To Shell Shell Bottom Head Bottom Head To Shell

HEAT TRANSFER

CODE NONE

RADIOGRAPHY

Top Head To Shell Shell Bottom Head Bottom Head To Shell

SIZE (GALLONS) - MODEL SERIAL NUMBER  
SEE SALES ORDER BLOCK

**VESEL INFORMATION**

DESIGN PRESSURE 15 PSI DESIGN TEMP. 100 °F  
HYDRO TEST PRESSURE 0 PSI DESIGN VACUUM .1445 PSI  
DESIGN PRESSURE 100 PSI HEAT TRANSFER INFORMATION DESIGN TEMP. 100 °F  
TEST PRESSURE 130 PSI VOLUME 1.89 CU. FT.  
HEATING / COOLING MEDIUM NONE / GLYCOL

EST. EMPTY WEIGHT = 13200 LBS  
SCALE 1" = 32" (DO NOT SCALE THIS DRAWING)

DRAWN BY L. GARTON DATE 11/17/06  
REVIEWED BY L. GARTON DATE 11/17/2006  
REVIEWED BY L. OCONNOR DATE 12/15/06  
APPROVED BY L. OCONNOR DATE 2/15/2008

SOLD TO REDHOOK BREWERY  
ADDRESS PORTSMOUTH, NH  
CUSTOMER ORDER NO. SEE SALES ORDER BLOCK

TITLE 16,600 GAL MODEL "F" CONE BOTTOM FERMENTER

QUANTITY SEE SALES ORDER BLOCK

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

SALES ORDER & SERIAL NO. 382414-5,6,7,8 BLOCK  
DRAWING NO. FP15364

382414-5,6,7,8	REDHOOK BREWERY	39756	4	LOC 01/23/08
361707-3,4	REDHOOK BREWERY	36605	23	LMG:11/17/06
S.O. NO.	CUSTOMER & ADDRESS	CUSTOMER NO.	BY	DATE

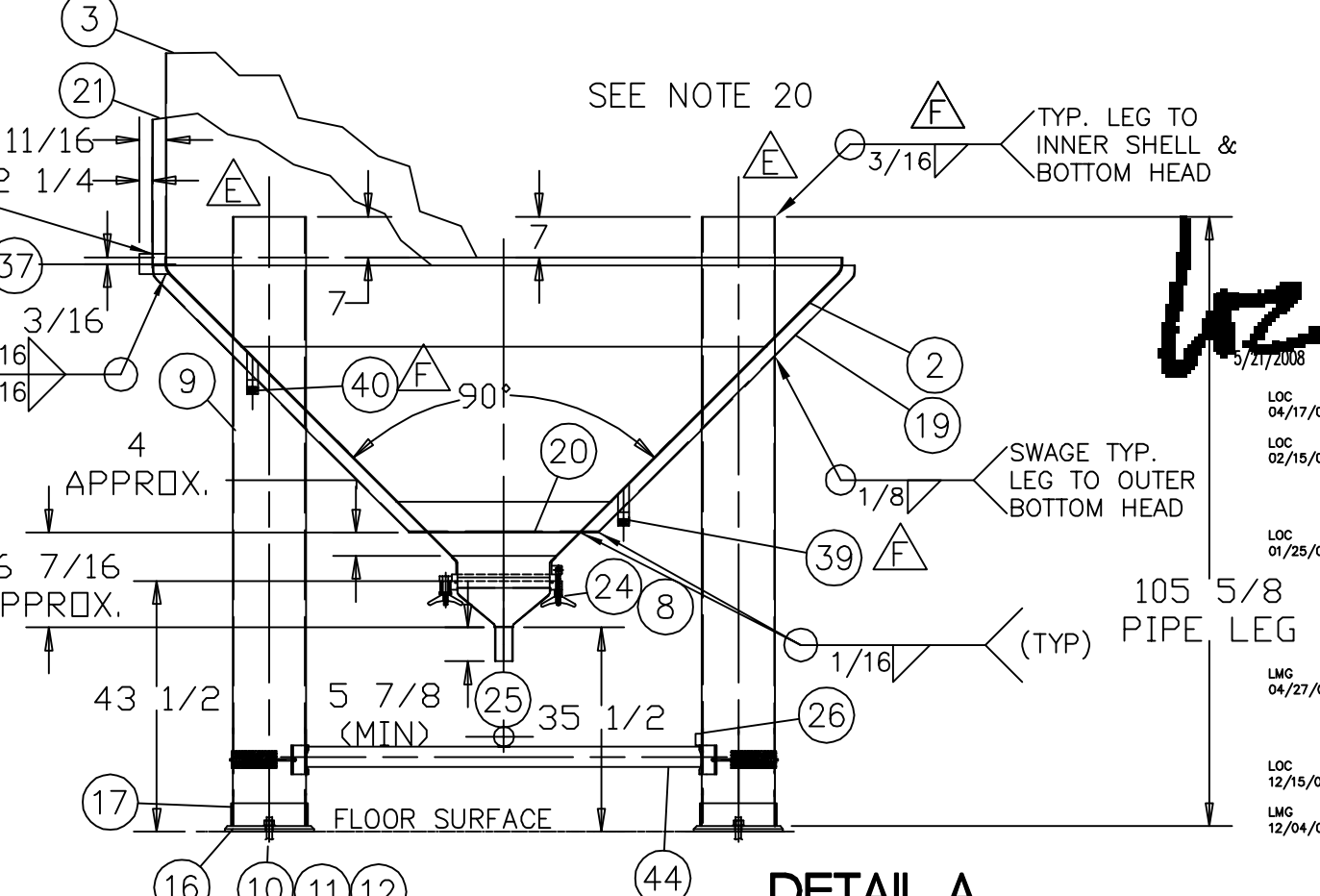
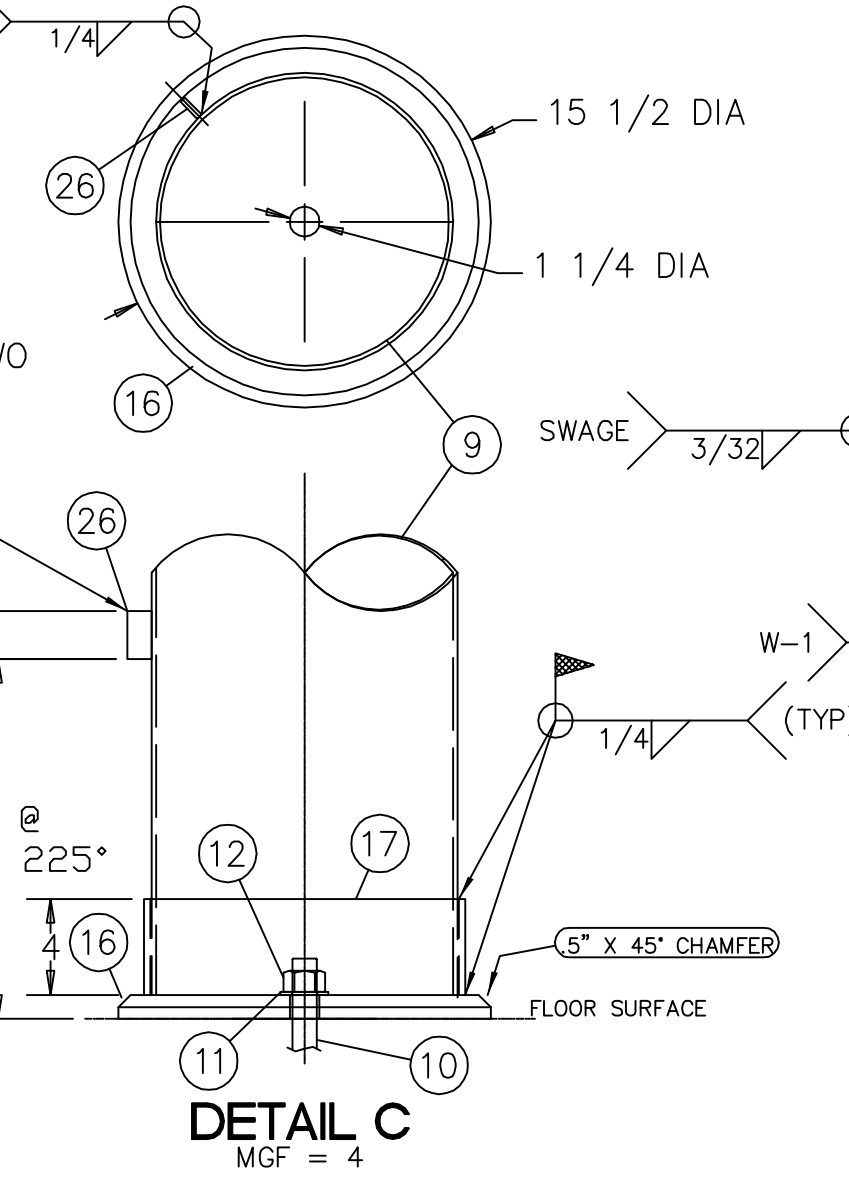
**SALES ORDER BLOCK**

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

SYM.	CHANGE	BY	DATE
H	ITEM 2 WAS P/N H51, REVISED P/N'S TO INCLUDE OLD SALES NUMBER WHERE NEEDED**	DLH	5/20/2008
G	ADDED NOTE #21** DWT WAS 3/4" FOR ITEM #38*	LMG	4/17/2008
F	ITEMS 6 & 7 QTY WAS (4) EACH ITEM 24 WAS CUST. FURN. ADDED ITEMS 39, 40 & 41** ADDED WELD SYMBOL @ LEGS/HOCH PART NOS.** ITEM 33 QTY WAS (1)**	LOC	02/13/08
E	ADDED SALES ORDER BLOCK**DELETED DETAIL B & ITEM 40**REPLACED CERTIFIED STAMP W/CUST. APPROVAL STAMP**MOVED DETAIL D FOR S.O. BLOCK**ITEM 27 WAS P/N 3743**ITEM 28 WAS 9803082**ADDED PRODUCTION NOTE FOR LEGS** QTRD LEG VIEW TO MATCH TEMP-PLATE DWG**	LOC	01/23/08
D	ITEM #13 WAS P/N 9803210*	LMG	04/27/07
C	ITEM 47 WAS LEG REINFORCEMENT**DELETED ITEM 48-50 & DETAIL E**21 WAS 20 @ DETAIL C**	TLM	03/20/07
B	ADDED ITEM 42	LMG	12/15/06
A	ITEM #5 WAS AT 1.5625" ABOVE MANWAY**	LMG	12/04/06



SEPIA FROM DWG. NO. FP14913

**ELEVATION VIEW**  
SEE TOP & BOTTOM HEAD VIEWS FOR TRUE ORIENTATION

**PRODUCTION NOTE:**  
LEG ASSEMBLY WITH HORIZONTAL BRACING MUST BE EXACTLY AS DEPICTED ON THIS DRAWING TO MATCH TANKS IN FIELD.