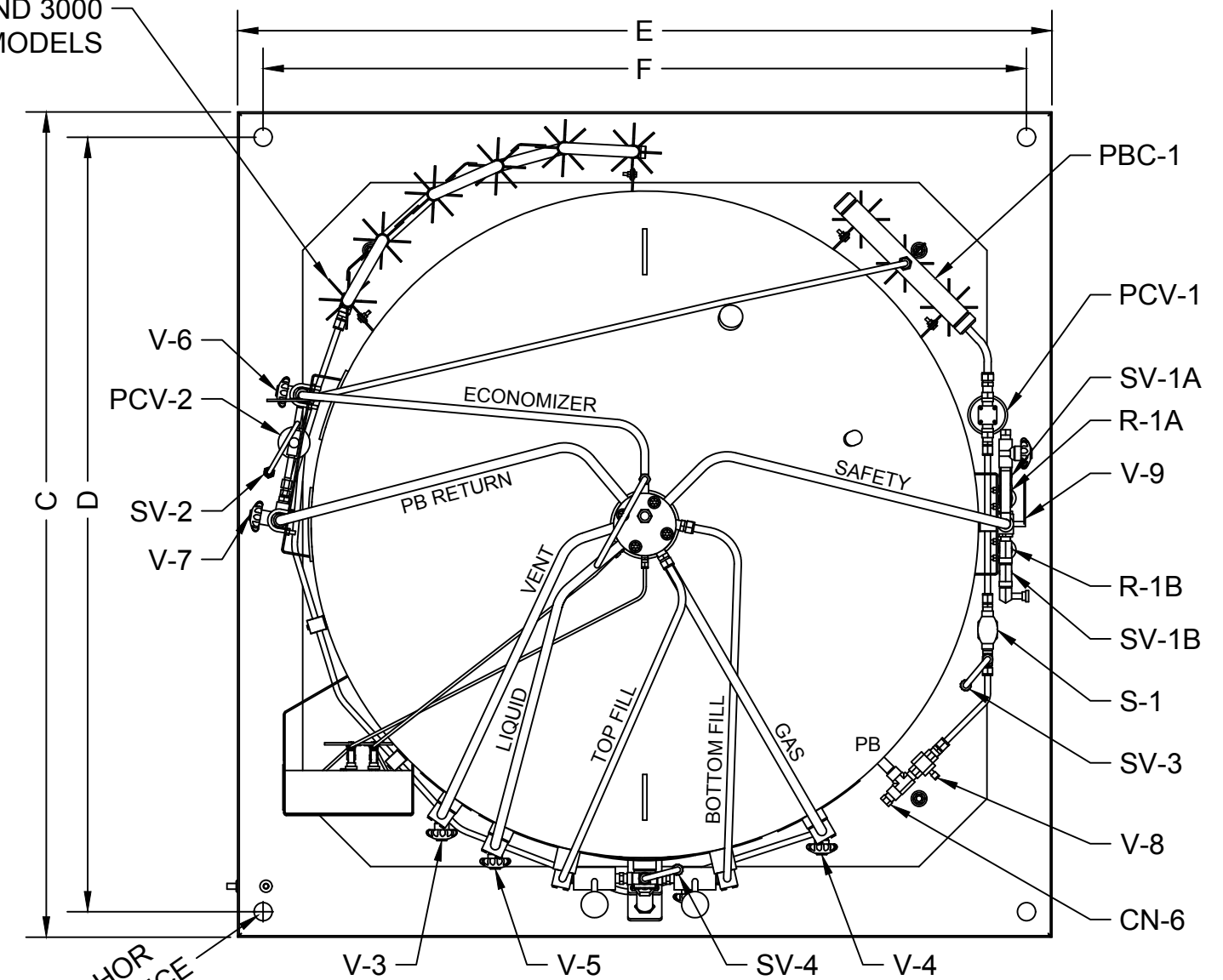
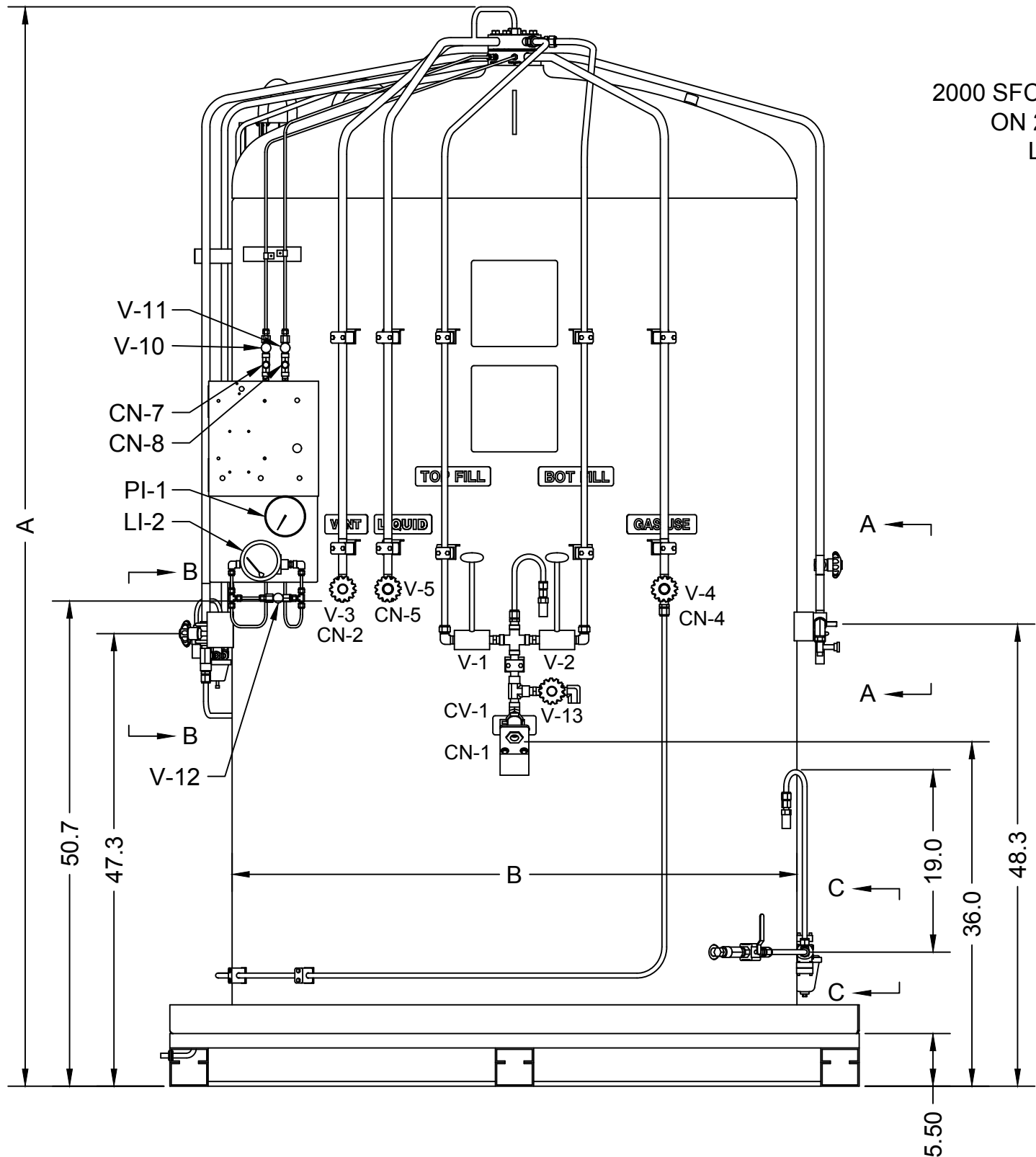


TANK SIZE				
DIMENSION	MB1000	MB1500	MB2000	MB3000
A	90.5"	96.5"	117.5"	113"
B	42"	48"	48"	59"
C	55"	62"	62"	73"
D	50.5"	57.5"	57.5"	68.5"
E	53"	60"	60"	72"
F	48.5"	55.5"	55.5"	67.5"



Ø1.00 ANCHOR
Ø1.50 CLEARANCE
4 PLACES

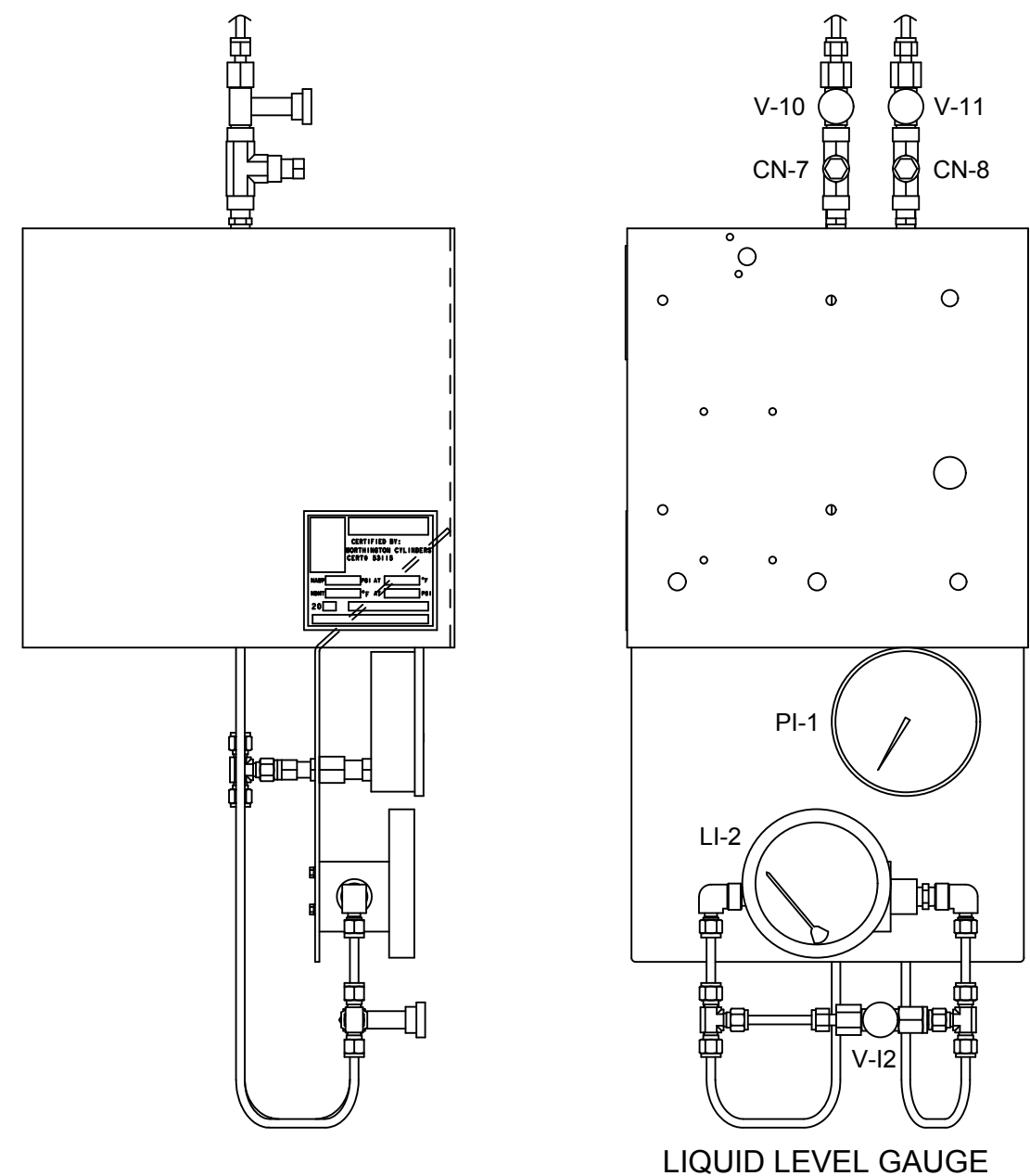
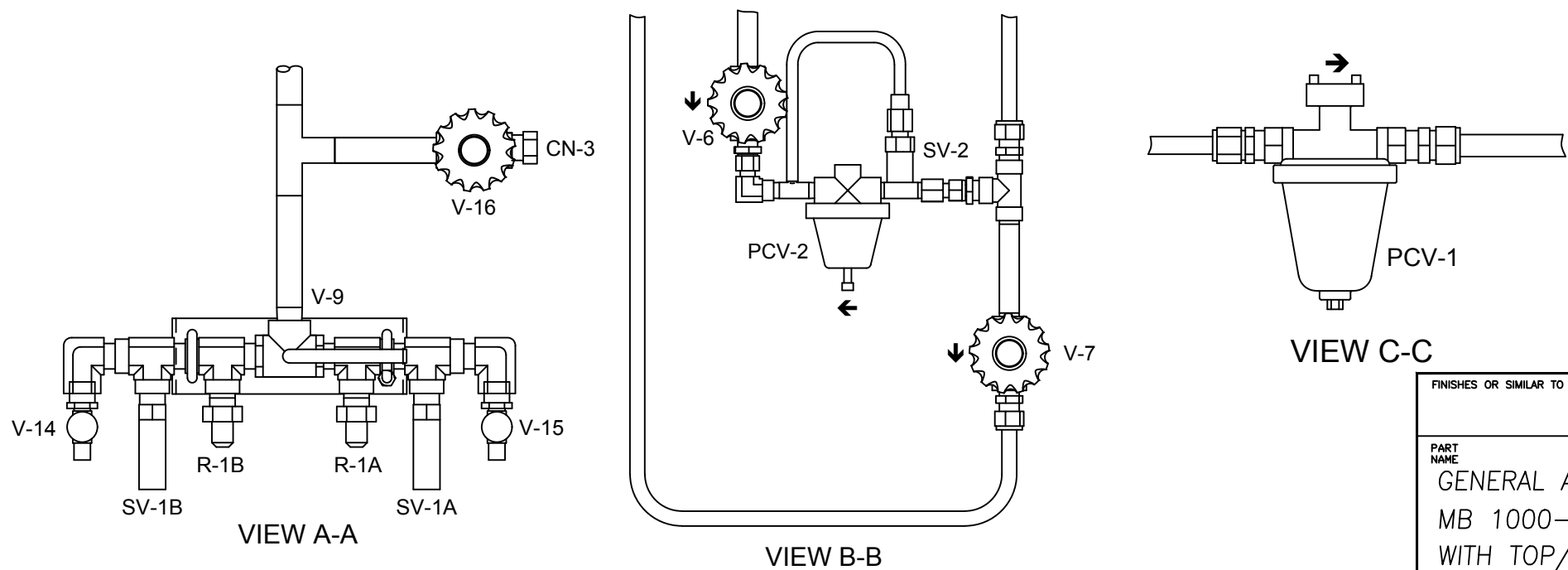
WARNING MUST BE CLEANED FOR CLASS 2 OXYGEN SERVICE IN ACCORDANCE WITH GS 38

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FINISHES OR SIMILAR TO	DRAFTSMAN BB	DATE 1/15/19	<p>PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS THE PROPERTY OF WORTHINGTON INDUSTRIES IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN PERMISSION OF WORTHINGTON INDUSTRIES.</p> <table border="1"> <tr> <th>PROJECT NO.</th> <th>SIZE</th> <th>NUMBER</th> <th>REV.</th> </tr> <tr> <td></td> <td>B</td> <td>MB-GA TBF</td> <td>--</td> </tr> </table>	PROJECT NO.	SIZE	NUMBER	REV.		B	MB-GA TBF	--
PROJECT NO.	SIZE	NUMBER		REV.							
	B	MB-GA TBF		--							
PART NAME GENERAL ARRANGEMENT MB 1000-3000 LITER WITH TOP/BOT FILL	DESIGN ENGINEERING BB	REVIEWER									
	APPROVAL	SCALE									
DO NOT SCALE DRAWING											

TANK SPECIFICATIONS									
MODEL	MB-1000VHP		MB-1500VHP		MB-2000VHP		MB-3000VHP		
GROSS CAPACITY	1074 LITERS	284 GALLONS	1552 LITERS	410 GALLONS	2043 LITERS	540 GALLONS	2933 LITERS	775 GALLONS	
NET CAPACITY	965 LITERS	255 GALLONS	1457 LITERS	385 GALLONS	1942 LITERS	513 GALLONS	2725 LITERS	720 GALLONS	
MAWP	34.4 BAR	500 PSIG	34.4 BAR	500 PSIG	34.4 BAR	500 PSIG	24.1 BAR	500 PSIG	
NER	1% PER DAY NITROGEN								
GASEOUS CAPACITY:									
NITROGEN	23,672 SCF	670 M ³	35,742 SCF	1012 M ³	47,639 SCF	1,349 M ³	66,847 SCF	1,892 M ³	
OXYGEN	29,326 SCF	830 M ³	44,277 SCF	1,253 M ³	59,016 SCF	1,671 M ³	82,811 SCF	2,344 M ³	
ARGON	28,725 SCF	813 M ³	43,369 SCF	1,228 M ³	57,806 SCF	1,636 M ³	81,113 SCF	2,296 M ³	
CARBON DIOXIDE*	18,911 SCF	535 M ³	28,552 SCF	808 M ³	38,057 SCF	1,077 M ³	53,401 SCF	1,512 M ³	
TARE WEIGHT (APPROX.)	2,200 LB	997 KG	3,000 LB	1,360 KG	3,250 LB	1,474 KG	4,500 LB	2,041 KG	
FULL WEIGHT:									
NITROGEN	3,914 LB	1,775 KG	5,589 LB	2,537 KG	6,701 LB	3,039 KG	9,356 LB	4,240 KG	
OXYGEN	4,628 LB	2,098 KG	6,667 LB	3,023 KG	8,138 LB	3,691 KG	11,358 LB	5,151 KG	
ARGON	5,168 LB	2,343 KG	7,482 LB	3,390 KG	9,225 LB	4,183 KG	12,883 LB	5,843 KG	
GASEOUS WITHDRAWAL RATE**	960 SCF		1,350 SCF		1,400 SCF		1,550 SCF		
GASEOUS WITHDRAWAL RATE***	N/A		N/A		2,600 SCF		2,650 SCF		
CARBON DIOXIDE*	4,363 LB	1,978 KG	6,266 LB	2,841 KG	7,603 LB	3,448 KG	10,608 LB	4,811 KG	
GASEOUS WITHDRAWAL RATE**	410 SCF		580 SCF		600 SCF		650 SCF		
INNER CONTAINER: DESIGNED, MANUFACTURED, AND STAMPED IN ACCORDANCE WITH ASME SECTION VIII DIV. 1									
MATERIAL SPECIFICATION	SA-240 TYPE 304 SS								
OPERATING TEMP. RANGE	-196°C TO + 38°C / -320°F TO +100°F								
OUTER VESSEL:									
MATERIAL SPECIFICATION	ASME SA-240 TYPE 304 STAINLESS STEEL								
MAWP	FULL VACUUM, -15 PSI								
CASING RELIEF DEVICE	VACCUUM PUMPOUT/RELIEF (1000-2000 LITER) BURST DISC (3000 LITER)								
PIPING MATERIALS:									
EXTERIOR TUBES	ASME SA-269 TYPE 304 STAINLESS STEEL								
EXTERIOR FITTINGS	TYPE 316 STAINLESS STEEL AND BRASS								
EXTERIOR PIPING	ASME SA-312 TYPE 304 STAINLESS STEEL								

* SATURATION BASED ON OPERATING PRESSURE
 ** USING INTERNAL VAPORIZER COIL
 *** EXTERNAL HIGH FLOW VAPORIZER COIL OPTION AVAILABLE



WARNING MUST BE CLEANED FOR CLASS 2 OXYGEN SERVICE IN ACCORDANCE WITH GS 38

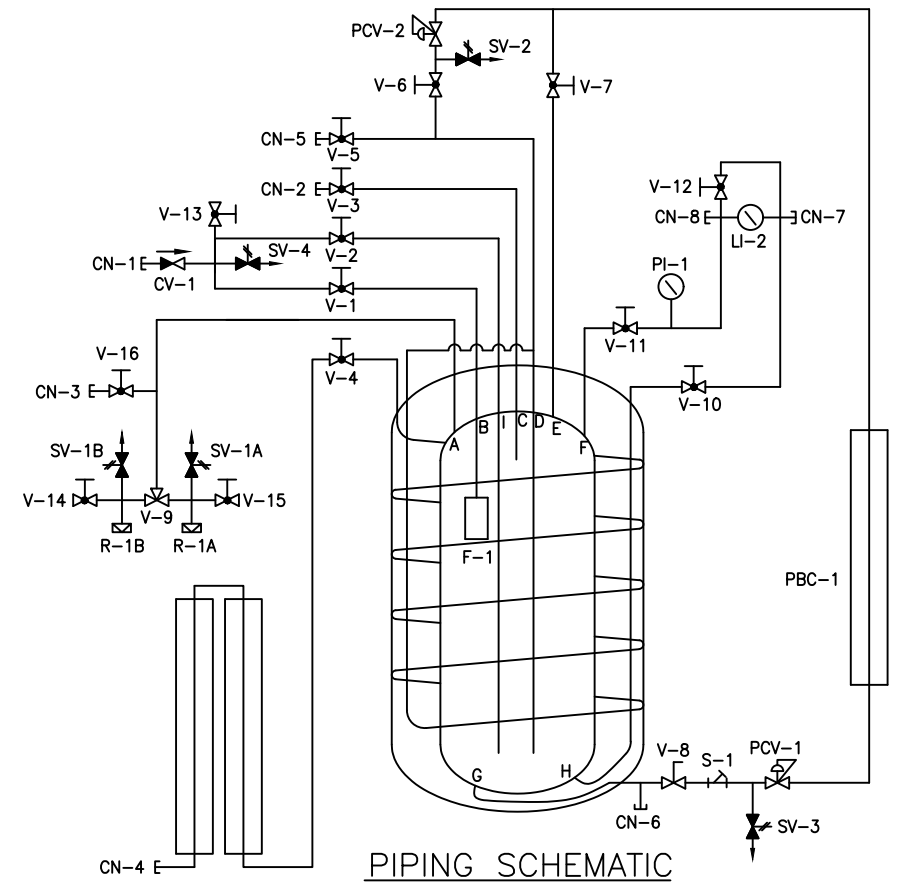
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FINISHES OR SIMILAR TO	DRAFTSMAN BB	DATE 1/15/19	<p>PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS THE PROPERTY OF WORTHINGTON INDUSTRIES IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN PERMISSION OF WORTHINGTON INDUSTRIES.</p>	
PART NAME GENERAL ARRANGEMENT MB 1000-3000 LITER WITH TOP/BOT FILL	DESIGN ENGINEERING BB	REVIEWER		
	APPROVAL	PROJECT NO.	SIZE	NUMBER
		SCALE	B	MB-GA TBF

DO NOT SCALE DRAWING

TAG NO.	TW PART NO	DESCRIPTION	MANUFACTURER PART NUMBER
CN-1	N/A	TOP/BOTTOM FILL 1/2" PS FNPT	CGA PER GAS SERVICE
CN-2	N/A	FULL TRYCOCK/VENT 1/2" PS FNPT	CGA PER GAS SERVICE
CN-3	N/A	AUXILIARY VAPOR 1/2" PS FNPT	1/2" FNPT CONNECTION
CN-4	N/A	VAPORIZER OUTLET (INTERNAL) 1/2" PS FNPT	CGA PER GAS SERVICE
CN-5	N/A	LIQUID FILL/WITHDRAWAL 1/2" PS FNPT	CGA PER GAS SERVICE
CN-6	N/A	AUXILIARY LIQUID WITHDRAWAL 1/2" PS FNPT	1/2" FNPT CONNECTION, SWAGELOK
CN-7	N/A	AUXILIARY LIQUID INSTRUMENT CONNECTION (TELEMETRY TAP)	1/4" FNPT CONNECTION, SWAGELOK
CN-8	N/A	AUXILIARY GAS INSTRUMENT CONNECTION (TELEMETRY TAP)	1/4" FNPT CONNECTION, SWAGELOK
CV-1	85441395	CHECK VALVE, 1/2" FNPT, BRASS, GENERANT	GENERANT CV-503B-T-5
V-1/2	85444049	GLOBE VALVE, 1/2" FNPT, BRASS	REGO BK8404T
V-3	6914-4062	GLOBE VALVE, 1/2" FNPT, BRASS	REGO T9454G6S
V-4	6914-4061	GLOBE VALVE, 1/2" FNPT, BRASS	REGO T9454G6G
V-5	6914-4060	GLOBE VALVE, 1/2" FNPT, BRASS	REGO T9454G6B
V-6	VP50-9C43	GLOBE VALVE, 3/8" FNPT, BRASS	REGO 9454ADAG
V-7	6914-4061	GLOBE VALVE, 1/2" FNPT, BRASS	REGO T9454G6G
V-8	6919-9075	BALL VALVE, 1/2" FNPT, BRASS	WORCESTER 05CN44T16PMSE
V-9	85449412	DIVERTER BALL VALVE, 1/2" FNPT, STAINLESS STEEL	APOLLO 76-603-57
V-10/11/12/14/15	85443725	GLOBE VALVE, 1/4" NPT, BRASS	GENERANT FNV-10Q-X
V-13	6914-4050	GLOBE VALVE, 1/2" FNPT, BRASS	REGO 9454DA
LI-2	57143696	LIQUID LEVEL GAUGE, 3.5" DIAL, 0-150", BRASS, 1/4" FNPT	ORANGE RESEARCH 1516-DG-1E3.5B-V
PI-1	57143738	PRESSURE GAUGE, 4" DIAL, 0-600 PSIG, 1/4"NPT	--
PCV-1	85368043	PB REGULATOR, 1/2" FNPT, BRONZE, 400 PSIG, TYPE A-401	TYCO 21971-0400
PCV-2	6999-9008	BP REGULATOR, 1/4" FNPT, BRASS, 425 PSIG, TYPE FRM	CASH ACME 20445
S-1	85390011	STRAINER, 1/2" FNPT BRONZE BODY	HEROSE 08413.0400.5056
SV-1A/B	85450257	RELIEF VALVE, 1/2" NPT, BRASS, 500 PSIG, ASME	REGO PRV19434T500
SV-2/3	6913-9079	RELIEF VALVE, 1/2" NPT, BRASS, 600 PSIG	REGO PRV-9432-T-600
SV-4	6913-9072	RELIEF VALVE, 1/2" NPT, BRASS, 500 PSIG	GENERANT LCV-250B-K-500
R-1A/B	85163525	SAFETY HEAD, 1/2" NPT INLET X FREE OUTLET, BRASS, 750 PSIG	BS&B TYPE A6

*COMPRESSION FITTINGS: SWAGELOK



PIPING SCHEMATIC

LEGEND

CN-1	CONNECTION, FILL	V-12	EQUALIZATION VALVE
CN-2	CONNECTION, FULL TRYCOCK AND VENT	V-13	HOSE DRAIN
CN-3	CONNECTION, VAPOR	V-14	VALVE, TEST
CN-4	CONNECTION, VAPORIZER OUTLET (INTERNAL)	V-15	VALVE, TEST
CN-5	CONNECTION, LIQUID WITHDRAWAL	V-16	VALVE, AUX VAPOR
CN-6	CONNECTION, AUXILIARY LIQUID WITHDRAWAL	LI-2	LIQUID LEVEL DP GAUGE
CN-7	CONNECTION, AUXILIARY LIQUID INSTRUMENT	PI-1	PRESSURE GAUGE
CN-8	CONNECTION, AUXILIARY GAS INSTRUMENT	PBC-1	PRESSURE BUILDING COIL
CV-1	CHECK VALVE, PUMP/TOP FILL	PCV-1	PRESSURE BUILDING REGULATOR
V-1	VALVE, TOP FILL	PCV-2	ECONOMIZER REGULATOR
V-2	VALVE, BOTTOM FILL	S-1	STRAINER
V-3	VALVE, FULL TRYCOCK/VENT	SV-1A	SAFETY VALVE
V-4	VALVE, GAS USE	SV-1B	SAFETY VALVE
V-5	VALVE, LIQUID WITHDRAWAL	SV-2	RELIEF VALVE
V-6	VALVE, ECONOMIZER ISOLATION	SV-3	RELIEF VALVE
V-7	VALVE, PRESSURE BUILDING OUTLET	SV-4	RELIEF VALVE
V-8	VALVE, PRESSURE BUILDING INLET	R-1A	INNER CONTAINER BURST DISC
V-9	VALVE, DIVERTER	R-1B	INNER CONTAINER BURST DISC
V-10	VALVE, LIQUID INSTRUMENT	F-1	FLOAT
V-11	VALVE, GAS INSTRUMENT		

SYM	LINE	SIZE
A	SAFETY	1/2"
B	TOP FILL	1/2"
C	FULL TRYCOCK/VENT	1/2"
D	LIQUID WITHDRAWAL	1/2"
E	PB RETURN	1/2" ODT
F	GAS INSTRUMENT	1/4"
G	PB INLET	1/2" ODT
H	LIQUID INSTRUMENT	1/4"
I	BOTTOM FILL	1/2"

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SHEET 3 OF 3

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	BB	1/15/19				
PART NAME	DESIGN ENGINEERING		PROJECT NO.	SIZE	NUMBER	REV.
	BB					
	REVIEWER		SCALE	B	MB-GA TBF	--
	APPROVAL		DO NOT SCALE DRAWING			