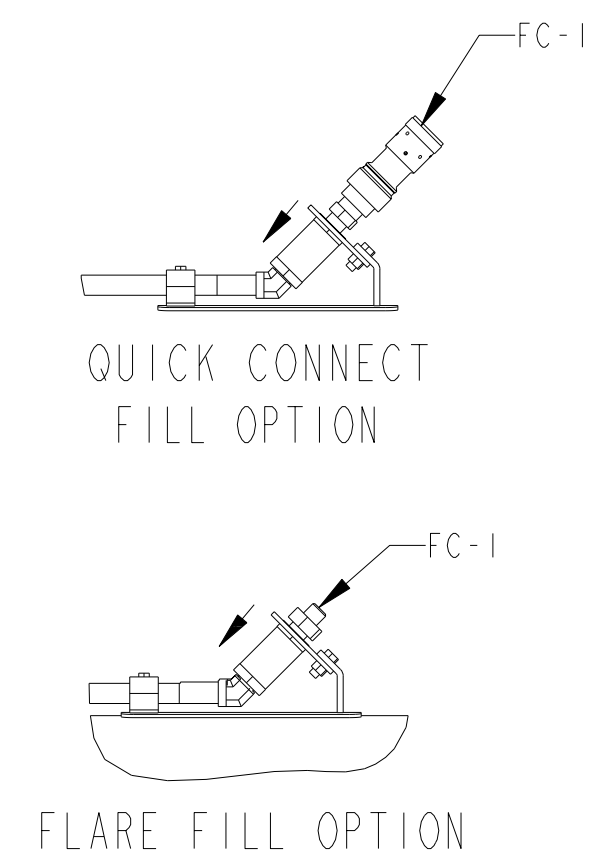


NOMENCLATURE	
V-1	TOP FILL CHECK VALVE
V-2	LIQUID VALVE
V-4	VENT/FULL TRYCOCK VALVE
V-5	ISOLATION VALVE
V-6	5-WAY VALVE
V-7	PRESS. BLDG FEED CHECK VALVE
V-8	PRESS BLDG RTN CHECK VALVE
V-9	GAS USE VALVE
V-10	ECONOMIZER CHECK VALVE
LI-1	LEVEL INDICATOR, CYL-TEL
PI-1	PRESSURE INDICATOR
R-1	REGULATOR PBE-1
RV-1	MAIN RELIEF VALVE
RV-2	LINE RELIEF VALVE
BD-1	BURST DISC
S-1	STRAINER

PIPING	
A	TOP FILL
B	LIQUID WITHDRAWAL
C	PRESSURE BUILDING INLET
D	PRESSURE BUILDING OUTLET
E	LIQUID PHASE
F	VAPOR PHASE
G	VENT/FULL TRYCOCK
H	SAFETY CIRCUIT
J	ECONOMIZER CIRCUIT



DESIGN SPECIFICATION		
ITEM	INNER VESSEL	OUTER JACKET
CODE	ASME SEC. VIII, DIV I	CGA 341-1995
RELIEF SETTING MAWP	500 PSI / 35.45 bar	
GROSS VOLUME	568 GALLONS / 2149 LITERS	
NET VOLUME	516 GALLONS / 1954 LITERS	
TARE WEIGHT	3600 lbs / 1630 kgf	
NORMAL EVAPORATION RATE	1% PER DAY NITROGEN .62% PER DAY ARGON & OXYGEN	
MATERIAL	9% NICKEL	TYPE 304 STAINLESS STEEL
	PALLET BASE ZINC COATED CS A36	
FULL WEIGHT		
LIQUID OXYGEN	8600 lbs / 3900 kg	
LIQUID NITROGEN	7100 lbs / 3220 kg	
LIQUID ARGON	9600 lbs / 4350 kg	
GASEOUS EQUIVALENT AT 1 ATM AND 70°F / 1 ATM AND 0°C		
OXYGEN	59,400 SCF / 1570 Nm <sup>3</sup>	
NITROGEN	48,100 SCF / 1270 Nm <sup>3</sup>	
ARGON	58,100 SCF / 1530 Nm <sup>3</sup>	
GAS DELIVERY RATE 2000 SCFH / 52.4 Nm <sup>3</sup> H		

REV	ECR NO	REVISION DESCRIPTION	BY	DATE	APPROVED	DATE	SCALE	TITLE	DRAWING NO.	REV
A		UPDATED DESING SPEC	CMV	6-26-06	CMV	6-9-05	N/A	OUTLINE AND DIMENSION	D-12993020	A
					TJS	6-14-05		PERMA-CYL 2000 09		
					KJR	6-10-05				
					CJS	6-13-05				
					RC	6-10-05				
					RDF	6-15-05				

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.  
 TOLERANCES:  
 FRACTIONS ± 1/8  
 ANGLES ± 1°  
 2 PLACE DECIMALS ± .01  
 3 PLACE DECIMALS ± .001

PART NUMBER  
**12993020**

DRAWING NO. **D-12993020** REV **A**  
 SCALE N/A DO NOT SCALE DRAWING SHEET 1 OF 1