October 2021

# Types ACE95 and ACE95Sr Tank Blanketing Valves





## **Features**

- Fully Balanced Pilot Design Reduces Inlet Pressure Sensitivity
- Frictionless Pilot Valve
- Bubble Tight Shutoff
- Pilot Controlled
- Angled or In-Line Body Option
- Arctic Temperature Constructions



Figure 2. Type ACE95Sr Tank Blanketing Valve

- Self-Contained
- Highly Sensitive
- Diagnostics Available
- Vacuum Settings Available
- Stainless Steel
   Construction Available
- Special Service Capabilities



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## **Specifications**

The Specifications section lists the specifications for Types ACE95 and ACE95Sr Tank Blanketing Valves. Factory specification is stamped on the nameplate fastened on the valve at the factory.

## Sizes and End Connection Styles Type ACE95 Angled Body<sup>(1)</sup>: 3/4 NPT 1 NPT NPS 1 / DN 25, CL150 RF NPS 1 / DN 25, CL300 RF NPS 1 / DN 25, PN 16/25/40 RF NPS 1 / DN 25, Sanitary Flange In-Line Body: 3/4 NPT 1 NPT NPS 1 / DN 25, CL150 RF NPS 1 / DN 25, CL300 RF NPS 1 / DN 25. PN 16/25/40 RF NPS 1 x 2 / DN 25 x 50. CL150 RF NPS 1 x 2 / DN 25 x 50, PN 16/25/40 RF NPS 1 / DN 25, Sanitary Flange Type ACE95Sr Angled Body<sup>(1)</sup>: 2 NPT ( NPS 2 / DN 50, CL150 RF NPS 2 / DN 50, CL300 RF Maximum Operating Inlet Pressure<sup>(2)</sup> 200 psig / 13.8 bar Maximum Emergency Outlet (Casing) Pressure<sup>(2)</sup> 20 psig / 1.4 bar Maximum Operating Outlet Pressure<sup>(2)</sup> 1.5 psig / 0.10 bar **Outlet Pressure Ranges** -5 in. w.c. to 1.5 psig / -12 to 0.10 bar Minimum and Maximum Differential Pressures<sup>(2)</sup> Minimum: 25 psi / 1.7 bar Maximum: Up to 200 psi / 13.8 bar depending on main valve spring (See Table 6) **Main Valve Flow Characteristic** Linear **Pressure Registration**

External

### Accuracy

Typically within 0.5 in. w.c. / 1 mbar when flowing 5 to 70 percent of advertised capacities

## **Temperature Capabilities**<sup>(2)(4)</sup>

Nitrile (NBR): -20 to 180°F / -29 to 82°C Fluorocarbon (FKM): 0 to 212°F / -18 to 100°C Ethylenepropylene (EPDM - FDA): -20 to 212°F / -29 to 100°C Perfluoroelastomer (FFKM): -20 to 212°F / -29 to 100°C

### **IEC Sizing Coefficients**

Type ACE95 <sup>(3)</sup> :	Type ACE95Sr:
X <sub>T</sub> : 0.72	X <sub>τ</sub> : 0.72
F <sub>D</sub> : 0.40	F <sub>D</sub> : 0.46
F <sub>L</sub> : 0.89	F <sub>∟</sub> : 0.89
K <sub>m</sub> : 0.79	K <sub>m</sub> : 0.79

### Flow Coefficients for Relief Valve Sizing

Type ACE95:	Type ACE95Sr:
$C_v 1$ use $C_v 1.1$	$C_v$ 20 use $C_v$ 22
C <sub>v</sub> 2 use C <sub>v</sub> 2.2	$C_v$ 45 use $C_v$ 50
$C_v 4$ use $C_v 4.4$	$C_v$ 60 use $C_v$ 66
C <sub>v</sub> 7.5 use C <sub>v</sub> 9.25	
C <sub>v</sub> 10 use C <sub>v</sub> 11	

## **Construction Materials**

Body: CF3M/CF8M Stainless steel Trim: 304 Stainless steel and 316 Stainless steel Elastomers: Nitrile (NBR), Fluorocarbon (FKM), Ethylenepropylene-FDA (EPDM-FDA) or Perfluoroelastomer (FFKM) **Diaphragm:** Fluorinated ethylene propylene (FEP) Actuator: 316 Stainless steel or Carbon steel

## Approximate Weights (with all accessories)

Type ACE95: 40 lbs / 18 kg Type ACE95Sr: 60 lbs / 27 kg

2. The pressure/temperature limits in this Bulletin or any applicable standard limitation should not be exceeded

3. For NPS 1 / DN 25 body size, all trims.

<sup>.</sup> Various Single Array Manifold (SAM) tank connections are also available. Contact your local Sales Office for more information

<sup>4.</sup> Special low temperature constructions for +process temperatures between -49 to 180°F / -45 to 82°C are available by request. The low temperature constructions passed Emerson Process Management Regulator Technologies, Inc. laboratory testing for lockup and external leakage down to -49°F / -45°C

## Introduction

Tank blanketing is the process of using a gas, such as nitrogen, to maintain a slightly positive pressure in an enclosed storage tank. Tank blanketing prevents a stored product from vaporizing into the atmosphere, reduces product combustibility and prevents oxidation or contamination of the product by reducing its exposure to air. Tank blanketing is utilized with various products, including: adhesives, pharmaceuticals, pesticides, fertilizers, fuels, inks, photographic chemicals and food additives.

Types ACE95 and ACE95Sr valves are self-contained, fully balanced, pilot-operated and are used for accurate pressure control on tank blanketing systems. These valves help control emissions and provide protection against atmospheric contamination. Types ACE95 and ACE95Sr valves maintain a positive tank pressure which reduces the possibility of tank wall collapse during pump out operations, prevents stored product from vaporizing to atmosphere. The Type ACE95Sr uses an angled body in either a 2 NPT, CL150 RF or CL300 RF and is taller than the Type ACE95.

## **Features and Benefits**

- Pilot Controlled—ACE95 Series valves are pilot operated which results in a high degree of accuracy and control.
- Fully Balanced Pilot—Eliminates setpoint changes caused by variations in inlet pressure.
- Large Actuator—Large actuator diaphragm increases sensitivity to tank pressure changes.
- **Rolling Pilot Diaphragm**—The rolling diaphragm balances the pilot valve and eliminates friction, resulting in extremely accurate control.
- **Diagnostic Port**—Allows field analysis of valve operation, simplifying maintenance and reducing service costs.
- Arctic Temperature Constructions—For process temperatures as low as -49°F / -45°C.
- Special Service Capabilities—Optional materials are available for applications handling sour gases.

## **Options and Accessories**

- Inlet Pressure Gauge—Displays pressure of blanketing gas supply to the tank blanketing valve.
- Control Pressure Gauge—Low-pressure gauge to measure control pressure (tank pressure).
- **Purge Meter (Rotameter)**—Maintains a small amount of flow through the sensing and/or main line. Prevents corrosive tank vapors from damaging upstream equipment.
- **Pressure Switch**—Allows installation of an alarm system to indicate low or high-pressure on the tank.
- **Outlet Check Valve**—Prevents corrosive gases and vapors from flowing back into the blanketing system through the delivery line.
- **Diagnostic Gauge**—Allows analysis of valve operation in the field, simplifying service and reliability.
- **Single Array Manifold (SAM)**<sup>(1)</sup>—Provides sense line connection and main valve connection through a single tank nozzle. (Not compatible with In-Line end connection).

## **Principle of Operation**

Types ACE95 and ACE95Sr tank blanketing valves control the vapor space pressure over a stored liquid. When liquid is pumped out of the tank or vapors in the tank condense, the pressure in the tank decreases. Tank pressure is sensed by the large actuator diaphragm. When tank pressure is less than the valve set pressure, spring force moves the actuator diaphragm downward.

When the actuator moves downward, it pushes open the pilot valve which allows loading pressure to flow into the tank. As loading pressure decreases, inlet pressure is able to overcome the force of the main valve spring, opening the main valve. See Figure 3.

When pressure in the tank increases above setpoint, the large actuator diaphragm is pushed upward, allowing the pilot to close. Loading pressure equalizes with inlet pressure closing the main valve.

The pilot valve is balanced (inlet pressure creates equal upward and downward force on these components); therefore, the outlet pressure of the unit is not affected by fluctuating inlet pressure.

1. Installation of single array manifold requires the blanketing gas supply pipe to extend into the vapor space a minimum of 6 in. beyond the tank roof

# Types ACE95 and ACE95Sr



VALVE CLOSED

VALVE OPEN

	INLET PRESSURE
$\leq$	TANK PRESSURE
	ATMOSPHERIC PRESSURE
*******	INLET BLEED PRESSURE

Figure 3. Type ACE95 Operational Schematic

## **NACE** Compliance

Optional materials are available for applications handling sour gases. These constructions comply with the recommendations of NACE International sour service standards. The manufacturing processes and materials used by Emerson assure that all products specified for sour gas service comply with the chemical, physical and metallurgical requirements of NACE MR0175 ISO-2002, NACE MR0103 and/ or NACE MR0175/ISO 15156. Customers have the responsibility to specify correct materials. Environmental limitations may apply and shall be determined by the user.

## Diagnostics

Tank blanketing valves are often installed in locations that are difficult to access. Types ACE95 and ACE95Sr valves are available with a diagnostics feature that allows analysis of valve operation in the field, making maintenance easier and more reliable.

The diagnostics feature uses the relationship between pressure in the pilot and main valve chambers to analyze valve performance.

## **Sizing Methods**

## **Direct Displacement**

The direct displacement method should be used with extreme caution. The direct displacement method determines the amount of blanketing gas required to replace liquid pumped out of the tank. Direct displacement does not allow for fluctuating temperature or other factors that may affect pressure in the vapor space. This method is typically applied to tanks operating at constant temperature and containing non-flammable, non-volatile products.

$$\mathbf{Q}_{\text{total}} = \mathbf{Q}_{\text{pump}}$$

where,

Q<sub>total</sub> = Required Flow Rate Q<sub>pump</sub> = Required Flow Rate to replace pumped

out liquid from Table 1

## API 2000

The American Petroleum Institute Standard 2000 (API 2000) sizing method accounts for liquid pump-out as well as contraction of tank vapors due to cooling. When using API methods:

 $\mathbf{Q}_{\text{total}} = \mathbf{Q}_{\text{pump}} + \mathbf{Q}_{\text{thermal}}$ 

where,

Q<sub>total</sub> = Required Flow Rate

- Q<sub>pump</sub> = Required Flow Rate to replace pumped out liquid from Table 1
- Q<sub>thermal</sub> = Required Flow Rate due to thermal cooling. See Thermal Equations 1 to 4 below or Table 2.

## Thermal Equations

For tanks up to 840,000 gallons / 3179 m<sup>3</sup> capacity, use one of the following equations:

## Equation 1:

**Equation 2:** 

Equation 3:

$$Q_{thermal}$$
 [Nm<sup>3</sup>/h Air] =  $V_{tank} \times 0.169$ 

**Equation 4:** 

 $Q_{thermal}$  [Nm<sup>3</sup>/h Nitrogen] =  $V_{tank} \times 0.169 \times 1.015$ 

where,

For Equations 1 and 2:  $V_{tank}$  = tank volume, gallons For Equations 3 and 4:  $V_{tank}$  = tank volume, m<sup>3</sup>

For tanks greater than 840,000 gallons / 3179  $m^{\rm 3}$  capacity: See Table 2.

Depending on the method, there can be a significant difference in the calculated required capacity. No matter which method is used, the tank must be equipped with supplemental venting to protect the tank, product and personnel in cases of equipment failure, fire exposure or other conditions that could cause the tank pressure or vacuum to exceed operating limits.

## **Capacity Information**

Capacity information (Tables 2, 3, 4 and 5) are based on 0.97 specific gravity nitrogen. Nitrogen is the most common blanketing gas. Should you use a different gas, convert the tabular values as follows: For blanketing (pad) gases other than nitrogen, multiply the given nitrogen flow rate values by the conversion factors in Table 3. For gases of other specific gravities, multiply the given nitrogen flow rate by 0.985 and divide by the square root of the appropriate specific gravity.

#### Table 1. Flow Rate Conversion(1)

MULTIPLY MAXIMUM PUMP RATE OUT:	BY	TO OBTAIN <sup>(1)</sup> :
U.S. GPM	8.021	SCFH
U.S. GPH	0.1337	SCFH
m³/hr	1.01	Nm³/h
Barrels/hr	5.615	SCFH
Barrels/day	0.2340	SCFH
1. Gas flow of blanketing gas to replace liquid pumped out.		*

Table 2. API 2000 Requirements for	r Thermal Venting Capacity for	Tanks Larger than 840,000 gall	ons / 20 000 barrels / 3179 m <sup>3</sup>
	i inclinal vonting capacity for	rainte Earger than e re,eee gan	

TANK C	APACITY	IN BREATHING (VACUU	M), SCFH / Nm³/h OF AIR
GALLONS	m <sup>3</sup>	SCFH	Nm³/h
1,050,000	4000	24,000	643
1,260,000	5000	28,000	750
1,470,000	6000	31,000	831
1,680,000	7000	34,000	911
1,890,000	8000	37,000	992
2,100,000	9000	40,000	1072
2,520,000	10,000	44,000	1179
2,940,000	11,000	48,000	1286
3,360,000	13,000	52,000	1394
3,780,000	14,000	56,000	1501
4,200,000	16,000	60,000	1608
5,040,000	19,000	68,000	1822
5,880,000	22,000	75,000	2010
6,720,000	25,000	82,000	2198
7,560,000	29,000	90,000	2412

 Table 3. Conversion Factors (for converting Nitrogen flow rates to other gas flow rates)

BLANKET GAS	SPECIFIC GRAVITY	CORRECTION FACTOR		
Natural Gas	0.60	1.270		
Air	1.00	0.985		
Dry CO <sub>2</sub>	1.52	0.797		
	Correction Factor = $\frac{0.985}{\sqrt{SG}}$			

#### Table 4. Type ACE95 Capacities

	INLET PRESSURE				CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF NITROGEN									
INLET PRESSURE				C <sub>v</sub> = 1		Cv	C <sub>v</sub> = 2		C <sub>v</sub> = 4		C <sub>v</sub> = 7.5		C <sub>v</sub> = 10	
psig	bar	kg/cm <sup>2</sup>	kPa	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	
25	1.7	1.76	172	1130	30.3	2300	61.6	4440	119	9900	265	11,200	300	
30	2.1	2.11	207	1280	34.3	2670	71.6	5020	135	11,200	300	13,000	348	
40	2.8	2.81	276	1680	45.0	3440	92.2	6780	182	13,500	362	16,400	440	
50	3.5	3.52	345	2050	54.9	4090	110	8140	218	17,800	477	20,200	541	
60	4.1	4.22	414	2330	62.4	4800	129	9370	251	18,200	488	22,700	608	
70	4.8	4.92	483	2670	71.6	5450	146	10,600	284	23,600	632	26,600	713	
80	5.5	5.62	552	3010	80.7	6160	165	12,000	322	27,400	734	30,800	825	
90	6.2	6.33	621	3410	91.4	6840	183	13,200	354	30,800	825	34,100	914	

						(	CAPACITIE	S IN SCFH	/ Nm³/h OF	NITROGEN	4	-	
	INLET PRESSURE			C <sub>v</sub> = 1		Cv	C <sub>v</sub> = 2		C <sub>v</sub> = 4		C <sub>v</sub> = 7.5		= 10
psig	bar	kg/cm <sup>2</sup>	kPa	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h
100	6.9	7.03	690	3690	98.9	7430	199	14,600	391	34,100	914	38,000	1018
110	7.6	7.73	758	4000	107	8110	217	16,000	429	36,800	986	41,300	1107
120	8.3	8.44	827	4370	117	8750	235	17,200	461	38,800	1040	44,600	1195
130	8.9	9.14	896	4590	123	9340	250	18,300	490	43,400	1163	46,300	1241
140	9.6	9.84	965	4930	132	10,100	271	19,500	523	46,500	1246	50,500	1353
150	10.3	10.55	1034	5300	142	10,800	289	21,000	563	49,900	1337	54,500	1461
160	11.0	11.25	1103	5640	151	11,400	306	21,500	576	53,200	1426	58,200	1560
170	11.7	11.95	1172	5950	159	12,000	322	23,000	616	55,800	1495	62,300	1670
180	12.4	12.65	1241	6320	169	12,600	338	24,700	662	59,600	1597	65,900	1766
190	13.1	13.36	1310	6630	178	13,400	359	25,600	686	62,600	1678	69,600	1865
200	13.8	14.06	1379	6970	187	14,000	375	27,200	729	65,100	1745	71,900	1927

#### Table 4. Type ACE95 Capacities (continued)

Table 5. Type ACE95Sr Capacities

		DEGQUIDE			CAPAC	ITIES IN SCFH	/ Nm <sup>3</sup> /h OF NIT	ROGEN	
	INLET PI	RESSURE		C <sub>v</sub> =	= 20	C <sub>v</sub> :	= 45	C <sub>v</sub> = 60	
psig	bar	kg/cm <sup>2</sup>	kPa	SCFH	Nm³/h	SCFH	Nm³/h	SCFH	Nm³/h
25	1.7	1.76	172	26,700	716	60,200	1613	80,000	2144
30	2.1	2.11	207	30,200	809	68,100	1825	90,800	2433
40	2.8	2.81	276	37,500	1005	84,500	2265	112,700	3020
50	3.5	3.52	345	45,700	1225	102,800	2755	137,100	3674
60	4.1	4.22	414	53,800	1442	121,000	3243	161,400	4325
70	4.8	4.92	483	61,800	1656	139,200	3731	185,600	4974
80	5.5	5.62	552	69,900	1873	154,400	4138	209,800	5623
90	6.2	6.33	621	78,000	2090	175,500	4703	234,000	6271
100	6.9	7.03	690	86,000	2305	193,600	5188	258,200	6920
125	8.6	8.79	862	102,100	2736	238,900	6402	306,500	8214
150	10.3	10.55	1034	126,300	3385	284,200	7616	378,900	10,154
175	12.1	12.31	1207	142,400	3816	329,400	8828	427,200	11,449
200	13.8	14.06	1379	166,500	4462	347,700	9318	499,600	13,390

Table 6. Minimum and Maximum Differential Pressures

BODY	( SIZE		INLET PRESS	SURE RANGE	SPRING PART	SPRING FR	EE LENGTH	SPRING WIRE DIAMETER	
NPS	DN	VALVE C <sub>V</sub>	psig	bar	NUMBER	In.	mm	In.	mm
			25 to 50	1.7 to 3.4	GC220704X22	1.50	38.1	0.038	0.96
3/4 and 1	20 and 25	20 1 to 4 and 25	51 to 120	3.5 to 8.3	GC220705X22	1.50	38.1	0.051	1.30
			121 to 200	8.3 to 13.8	GC220706X22	1.50	38.1	0.059	1.50
	1 25		25 to 50	1.7 to 3.4	GC220705X22	1.50	38.1	0.051	1.30
1		7.5 to 10	51 to 120	3.5 to 8.3	GC220706X22	1.50	38.1	0.059	1.50
			121 to 200	8.3 to 13.8	GC220709X22	1.50	38.1	0.072	1.83
			25 to 50	1.7 to 3.4	GC220714X22	4.58	116	0.148	3.76
2	50	20 to 60	51 to 120	3.5 to 8.3	GC220712X22	4.00	102	0.177	4.50
			121 to 200	8.3 to 13.8	GC220713X22	4.00	102	0.218	5.54

# Types ACE95 and ACE95Sr



Figure 4. Type ACE95 NPT and In-Line Connection Dimensions



GE18680

Figure 5. Type ACE95 NPT and Angle Connection Dimensions

IN./ mm



Figure 6. Type ACE95Sr NPT Dimensions

E0736

		DIMENSIONS										
DODY				Angle	-Body			A	ngle and Ir	n-Line <sup>(1)</sup> Bod	У	
BODY SIZE	END CONNECTION STYLE		、 、		E	3			(	C		
ULL	01122	,	•	Without C	Without Check Valve		eck Valve	Low-Pr	ressure	High-Pr	essure <sup>(2)</sup>	
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
NPS 3/4 / DN 20	NPT	3.25	83	0.83	21	5.03	128	12.5				
	NPT	3.25	83	0.83	21	5.03	128		12.5			
NPS 1/	CL150, CL300 and PN 16/25/40 RF Flange	5.89	150	3.47	88	7.67	195			12.5	317	14.6
DN 25	CL150 and CL300 RF Weld Neck Flange	5.22	133	2.80	71	7.00	128					
	Sanitary Flange	6.05	154	3.63	92	7.83	199					

4 01 Та 

For In-Line body: available only for NPS 1 / DN 25 body size with CL150 RF flange.
 High-pressure body requires a unique spring case which is available as special order.

IN. /

mm



Figure 7. ACE95 Series Flanged and In-Line Body Dimensions (see Table 7)



Figure 8. ACE95 Series Flanged and Angle Body Dimensions (See Table 7)

GC950902

## **Ordering Information**

Refer to the Specifications section on page 2. Carefully review each specification and construction feature, then complete the Ordering Guide on pages 11 and 12.

## **Ordering Guide**

Type (Select One) □ ACE95 □ ACE95Sr

Body Size and Inlet Connection Style (Select One)

### Type ACE95 (Angled Body)

- □ 3/4 NPT
- □ 1 NPT
- NPS 1 / DN 25, CL150 RF
- D NPS 1 / DN 25, CL300 RF
- NPS 1 / DN 25, PN 16/25/40 RF
- NPS 1 / DN 25, Sanitary Flange

### Type ACE95 (In-Line Body)

- □ 3/4 NPT
- □ 1 NPT
- NPS 1 / DN 25, CL150 RF
- D NPS 1 / DN 25, CL300 RF
- D NPS 1 / DN 25, PN 16/25/40 RF
- D NPS 1 x 2 / DN 25 x 50, CL150 RF
- D NPS 1 x 2 / DN 25 x 50, PN 16/25/40 RF
- D NPS 1 / DN 25, Sanitary Flange

### Type ACE95Sr (Angled Body)

- □ 2 NPT
- □ NPS 2 / DN 50, CL150 RF
- NPS 2 / DN 50, CL300 RF

### Actuator/Diaphragm (Select One)

- □ Carbon steel with FEP diaphragm
- □ 316 Stainless steel with FEP diaphragm

### NACE

- □ NACE MR0175-2002
- □ NACE MR0103
- NACE MR0175/ISO 15156

### Elastomers (Select One)

- □ Nitrile (NBR)
- □ Fluorocarbon (FKM)
- □ Ethylenepropylene (EPDM FDA)
- Perfluoroelastomer (FFKM)

Also, please complete the Specifications Worksheet at the bottom of the Ordering Guide on page 12.

### Main Valve Coefficient (Select One) Type ACE95

- $\Box$  C<sub>v</sub> 10 (not available in 3/4 NPT)
- $\Box$  C<sub>v</sub> 7.5 (not available in 3/4 NPT)
- $\Box$  C<sub>v</sub> 4
- $\Box$  C<sub>v</sub> 2  $\Box$  C<sub>v</sub> - 1

## Type ACE95Sr

- $\Box C_v 60$
- $\Box$  C<sub>v</sub> 45
- $\Box$  C<sub>v</sub> 20

#### Control Pressure Range (Select One)

- □ 0.5 to 5 in. w.c. / 1 to 12 mbar
- □ 4 to 10 in. w.c. / 10 to 25 mbar
- □ 8 to 15 in. w.c. / 20 to 37 mbar
- □ 0.5 to 1.5 psig / 0.03 to 0.10 bar
- -1 to 1 in. w.c. / -2 to 2 mbar
- -0.5 to -5 in. w.c. / -1 to -12 mbar

#### Inlet Operating Range (Select One)

- □ 25 to 50 psig / 1.7 to 3.5 bar
- □ 51 to 120 psig / 3.5 to 8.3 bar
- □ 121 to 200 psig / 8.3 to 13.8 bar

#### **Options** (Select Desired Options)

- Stainless steel Filter in lieu of standard Aluminum/Zinc
- □ Inlet Pressure Gauge, Stainless steel
- □ Control Pressure Gauge, Dwyer<sup>®</sup>
- Control Gauge, Stainless steel, for setpoint below 2 in. w.c. / 5 mbar
- Control Gauge, Stainless steel, for setpoint above 2 in. w.c. / 5 mbar
- □ Sensing Line Purge, Acrylic
- □ Sensing Line Purge, Stainless steel
- □ Main Line Purge, Acrylic
- □ Main Line Purge, Stainless steel
- Pressure Switch, X-Proof
- □ Main Line Check Valve, Stainless steel
- Diagnostic and Inlet Gauges, Stainless steel

- continued -

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## **Ordering Guide (continued)**

### Single Array Manifold (Optional)

 Yes, please add a SAM unit to my order. Please specify tank connection size and style (i.e. NPS 2 / DN 50, CL150 RF). Not available for In-Line bodies.

#### Parts Kit (Optional)

□ Yes, please send one parts kit to match this order.

Specification Worksheet
Application Specifications:         Product in Tank         Tank Size         Pump In Rate         Pump Out Rate         Blanketing Gas (Type and Specific Gravity)         Conservation Vent Setpoints:
Pressure Requirements (Please Designate Units):         Maximum Inlet Pressure (P <sub>1max</sub> )         Minimum Inlet Pressure (P <sub>1min</sub> )         Control Pressure Setting (P <sub>2</sub> )         Maximum Flow (Q <sub>max</sub> )
Other Specifications:         Is a vapor recovery regulator required?         Yes         No         Other Requirements:

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