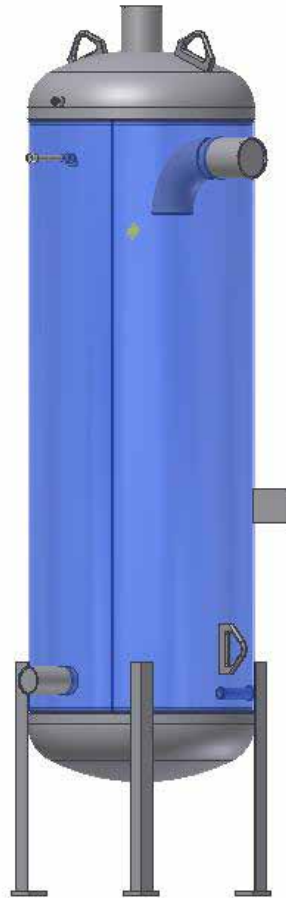


# ***VERTICAL ACCUMULATORS***



**DESCRIPTION**

Vertical accumulators provide protection for a screw compressor by preventing occasional liquid in the suction line from entering the suction of the compressor. A means of transferring the captured liquid back to the system must be included in the system design.

**FEATURES**

- Designed, Fabricated & Certified to the ASME BPV Code & Manufacturer’s Data Report registered with the National Board
- 250 psi standard design pressure (300 psi on 24 inch and smaller)
- Post weld heat treatment
- High quality, corrosion resistant, long lasting epoxy paint
- Customizable nozzle orientation, elevation and size etc. via CoolWare™
- Shipped fully sealed and pressurized with a nominal nitrogen charge to maintain cleanliness and protect internal surfaces

**OPTIONS:**

- Post weld heat treatment deduct
- Higher design pressures for non-ammonia applications
- Ship loose level column with level eyes and level probe
- Dual stamping for temperature applications below -20°F
- Corrosion allowance

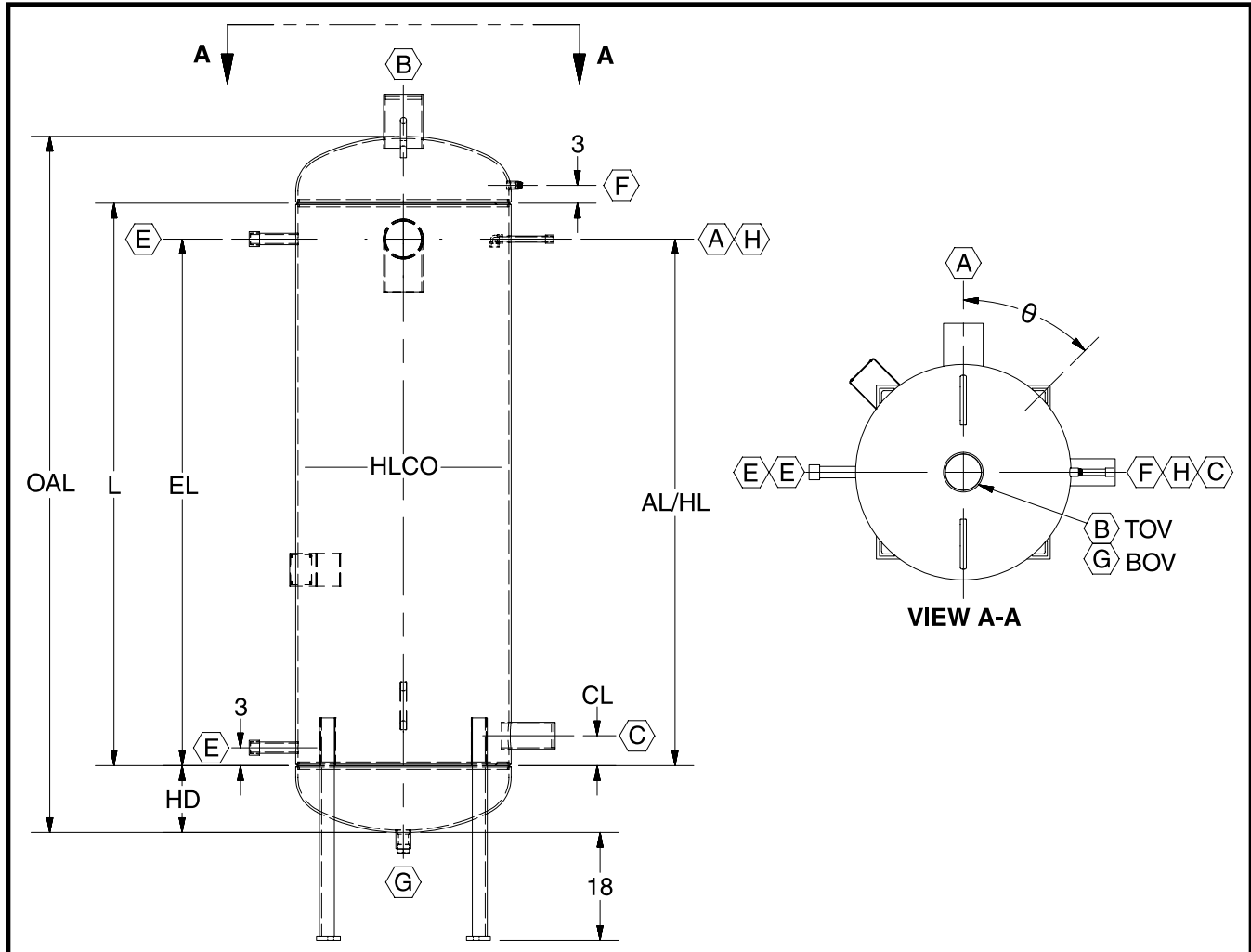


Figure 1. Data and Dimensions

Key to Nozzle/Coupling Descriptions:		
A - Wet Return	F - Relief (Coupling)	HD - Head Depth
B - Gas Outlet	G - Drain	L - Shell Length
C - Liquid Outlet	H - Oil Pot Vent	OAL - Overall Length
E - Level Column	OD - Outside Diameter	HLCO - High Level Cutout

VERTICAL ACCUMULATOR CAPACITIES R-717 <sup>(1)</sup>

Model Number	Operating Temperature										
	Two Stage <sup>(2)</sup>				Single Stage <sup>(3)</sup>						
	-50°F	-40°F	-30°F	-20°F	-20°F	-10°F	0°F	10°F	20°F	30°F	40°F
VA-12-84	14.7	17.0	19.5	22.2	19.4	21.9	24.7	27.6	30.7	33.9	37.3
VA-16-84	27.0	31.2	35.9	40.8	35.6	40.3	45.3	50.7	56.4	62.3	68.6
VA-20-98	43.1	49.8	57.1	65.1	56.7	64.2	72.2	80.8	89.8	99.3	109.0
VA-24-100	62.8	72.6	83.3	95.0	82.7	93.7	105.0	118.0	131.0	145.0	160.0
VA-30-113	99.4	115.0	132.0	150.0	131.0	148.0	167.0	187.0	207.0	229.0	252.0
VA-36-116	144.0	167.0	192.0	218.0	190.0	215.0	242.0	271.0	301.0	333.0	367.0
VA-42-119	198.0	229.0	262.0	299.0	260.0	295.0	332.0	371.0	412.0	456.0	502.0
VA-48-122	257.0	297.0	341.0	388.0	338.0	383.0	431.0	481.0	535.0	592.0	652.0
VA-54-125	326.0	377.0	433.0	493.0	430.0	487.0	548.0	612.0	681.0	753.0	829.0
VA-60-128	404.0	468.0	537.0	611.0	533.0	603.0	679.0	759.0	844.0	933.0	1027.0
VA-72-158	582.0	673.0	772.0	879.0	766.0	867.0	976.0	1091.0	1213.0	1342.0	1477.0
VA-84-164	791.0	915.0	1049.0	1195.0	1042.0	1179.0	1327.0	1483.0	1649.0	1825.0	2008.0
VA-96-170	1038.0	1200.0	1377.0	1570.0	1368.0	1547.0	1741.0	1946.0	2164.0	2394.0	2635.0

1. Capacities are given in tons of refrigeration, (R-717)
2. Two-stage capacities based on +35°F liquid feed temperature.
3. Single-stage capacities based on +95°F liquid feed temperature.

DIMENSIONAL DATA

Model Number	MAWP	OD	OAL	HD	L	Number of Legs 18"H	Uninsulated Dry Wt. (lbm)	Surge Vol. (cu-ft)	Theta $\theta$
VA-12-84	300	12 <sup>3</sup> / <sub>4</sub>	84	6	72	3	500	2.5	0°
VA-16-84	300	16	84 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>8</sub>	72	3	400	4.5	0°
VA-20-98	300	20	98 <sup>3</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>16</sub>	84	3	800	9.5	0°
VA-24-100	300	24	100 <sup>3</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>16</sub>	84	3	1,000	14.2	0°
VA-30-113	250	30	113 <sup>3</sup> / <sub>8</sub>	9 <sup>11</sup> / <sub>16</sub>	94	3	1,400	27.0	0°
VA-36-116	250	36	116 <sup>3</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>16</sub>	94	4	1,700	39.8	45°
VA-42-119	250	42	119 <sup>3</sup> / <sub>8</sub>	12 <sup>11</sup> / <sub>16</sub>	94	4	2,000	54.8	45°
VA-48-122	250	48	122 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>4</sub>	94	4	3,200	67.8	45°
VA-54-125	250	54	125 <sup>1</sup> / <sub>2</sub>	15 <sup>3</sup> / <sub>4</sub>	94	4	3,500	86.6	45°
VA-60-128	250	60	128 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>4</sub>	94	4	4,000	109.6	45°
VA-72-158	250	72	158 <sup>3</sup> / <sub>8</sub>	20 <sup>3</sup> / <sub>16</sub>	118	4	7,300	206.3	45°
VA-84-164	250	84	164 <sup>3</sup> / <sub>4</sub>	23 <sup>3</sup> / <sub>8</sub>	118	4	10,600	287.0	45°
VA-96-170	250	96	170 <sup>3</sup> / <sub>4</sub>	26 <sup>3</sup> / <sub>8</sub>	118	4	12,600	363.4	45°

Model Number	Nozzle / Coupling NPS <sup>(2) (3) (4)</sup>							AL	CL	HL	EL	HLCO
	A	B	C	E	F	G	H					
VA-12-84	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>4</sub>	1/2	1	3/4	57 <sup>3</sup> / <sub>4</sub>	4	57 <sup>3</sup> / <sub>4</sub>	62	42
VA-16-84	3	3	3	1 <sup>1</sup> / <sub>4</sub>	1/2	1	3/4	58 <sup>1</sup> / <sub>2</sub>	4	58 <sup>1</sup> / <sub>2</sub>	62	42
VA-20-98	4	4	3	1 <sup>1</sup> / <sub>4</sub>	1/2	1	3/4	74	4	74	74	56
VA-24-100	4	4	3	1 <sup>1</sup> / <sub>4</sub>	1/2	1	3/4	74	4	74	74	58
VA-30-113	5	5	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	88	5	88	88	70
VA-36-116	6	6	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	88	5	88	88	72
VA-42-119	6	6	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	88	5	88	88	73
VA-48-122	8	8	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	86	5	86	86	70
VA-54-125	8	8	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	86	5	86	86	71
VA-60-128	8	8	4	1 <sup>1</sup> / <sub>2</sub>	3/4	1 <sup>1</sup> / <sub>2</sub>	3/4	86	5	86	86	73
VA-72-158	10	10	5	1 <sup>1</sup> / <sub>2</sub>	1	1 <sup>1</sup> / <sub>2</sub>	3/4	108	6	108	108	95
VA-84-164	10	10	5	1 <sup>1</sup> / <sub>2</sub>	1	1 <sup>1</sup> / <sub>2</sub>	3/4	108	6	108	108	98
VA-96-170	12	12	6	1 <sup>1</sup> / <sub>2</sub>	1	1 <sup>1</sup> / <sub>2</sub>	3/4	106	6	106	106	96

NOTES:

1. All dimensions and nozzle nominal pipe sizes are given in inches unless noted otherwise.
2. Nozzle connections are supplied as pipe stubs unless otherwise specified as a coupling (Cplg).
3. Couplings are ASME B16.11 Class 3000 "full" couplings.
4. **Nozzles are sized for R-717 and should not be used with other refrigerants (e.g. R-507).**
5. Nameplate bracket is approximately 6 inches deep to allow for insulation.
6. All dimensions are subject to change; please consult factory for certified drawings.
7. Vessels are built in accordance with ASME Boiler & Pressure Vessel Code, Section VIII, Division 1.
8. Legs are equally spaced.

MODEL NUMBER EXPLANATION

