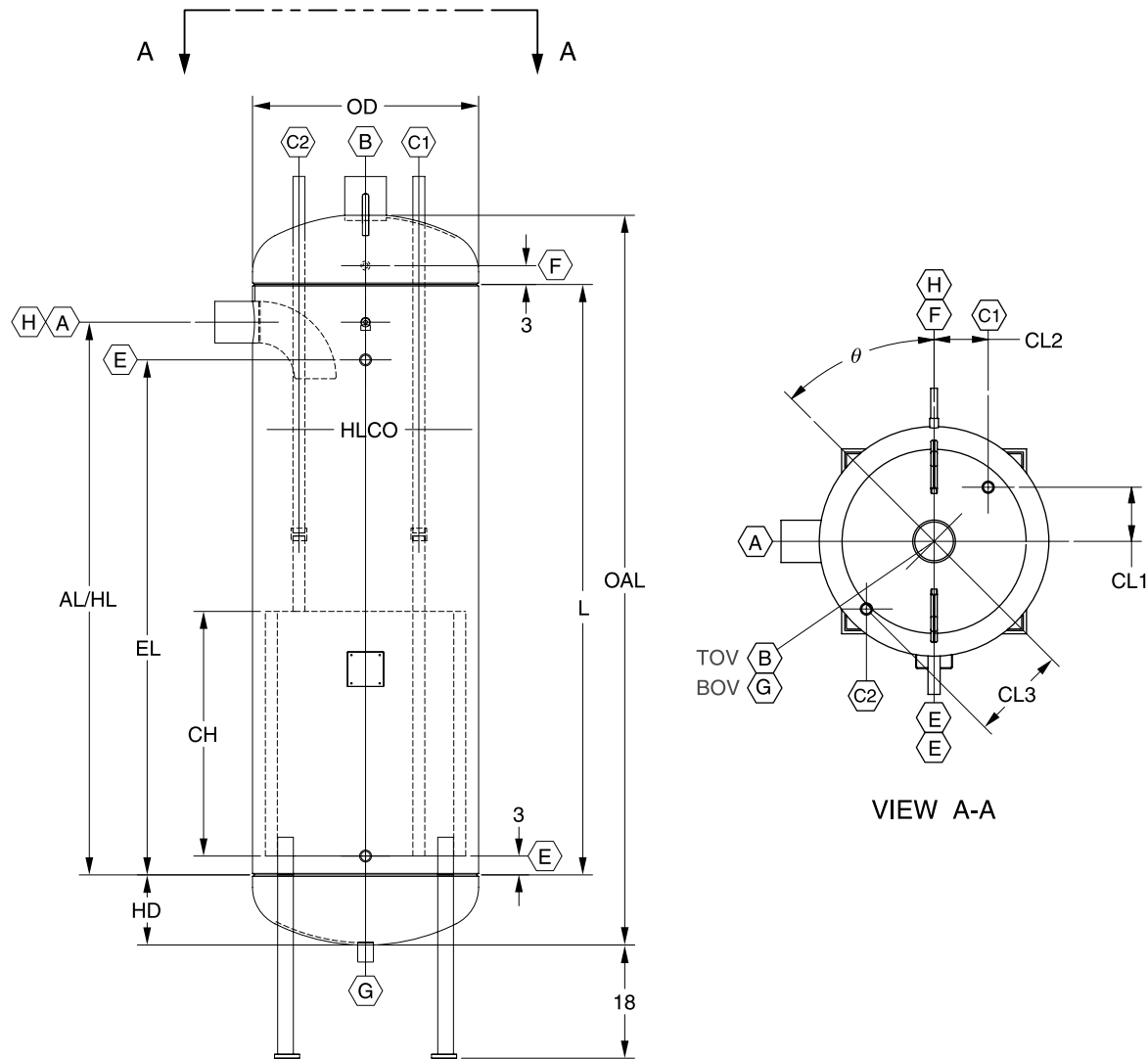


File: EQUIPMENT MANUAL - Section 120
Replaces: E120-510 SED (OCT 2004)
Dist: 1, 1a, 1b, 1c, 4, 4b, 4c
Revised: June 24, 2010, p. 2

VERTICAL ACCUMULATORS with COILS





NOTES:

1. All dimensions and nozzle nominal pipe sizes are given in inches unless noted otherwise.
2. Operating charge at OPL is based on ammonia @ +0 F RT.
3. Nozzle connections are supplied as pipe stubs unless otherwise specified as a coupling (Cplg).
4. Couplings are ASME B16.11 Class 3000 "full" couplings.
5. Nozzles are sized for R-717 and should not be used with other refrigerants (e.g. R-22 & R-507).
6. Nameplate bracket is approximately 6 inches deep to allow for insulation.
7. All dimensions are subject to change; please consult factory for certified drawings.
8. Vessels are built in accordance with ASME Boiler & Pressure Vessel Code, Section VIII, Division 1.
9. Coils are SA-106-B Seamless. SW=Single wound; DW=Double wound; TW= Triple wound
10. Legs are equally spaced.

Key to Nozzle/Coupling Locations:

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

Figure 1. Data and Dimensions

VERTICAL ACCUMULATOR WITH COILS - CAPACITIES R-717 ⁽¹⁾

Model Number	Operating Temperature										
	Two Stage ⁽²⁾				Single Stage ⁽³⁾						
	-50°F	-40°F	-30°F	-20°F	-20°F	-10°F	0°F	10°F	20°F	30°F	40°F
VAC-12-84	12.7	15.7	19.0	22.5	19.5	22.6	25.6	29.3	32.8	36.1	38.7
VAC-16-84	23.0	28.5	34.5	40.9	35.5	41.1	46.5	53.2	59.7	65.5	70.3
VAC-20-98	35.5	44.0	53.3	63.1	54.8	63.5	71.7	82.1	92.1	101.0	108.0
VAC-24-100	51.9	64.2	77.7	92.0	80.0	92.6	104.0	119.0	134.0	147.0	158.0
VAC-30-113	82.8	102.0	124.0	146.0	127.0	147.0	167.0	191.0	214.0	235.0	252.0
VAC-36-116	119.0	147.0	178.0	211.0	184.0	213.0	240.0	275.0	308.0	339.0	363.0
VAC-42-119	163.0	202.0	244.0	289.0	252.0	291.0	329.0	377.0	423.0	464.0	492.0
VAC-48-122	212.0	262.0	317.0	376.0	327.0	378.0	427.0	489.0	549.0	603.0	646.0
VAC-54-125	269.0	333.0	404.0	478.0	416.0	481.0	543.0	622.0	698.0	766.0	822.0
VAC-60-128	334.0	413.0	500.0	592.0	515.0	596.0	674.0	771.0	865.0	950.0	1,019.0
VAC-72-158	480.0	595.0	720.0	852.0	741.0	858.0	969.0	1,109.0	1,244.0	1,366.0	1,465.0
VAC-84-164	649.0	804.0	973.0	1,152.0	1,002.0	1,159.0	1,310.0	1,499.0	1,682.0	1,847.0	1,981.0
VAC-96-170	848.0	1,050.0	1,271.0	1,505.0	1,308.0	1,514.0	1,711.0	1,958.0	2,196.0	2,412.0	2,587.0
Separation Velocity	227.5	210.0	192.5	175.0	175.0	157.5	140.0	127.5	115.0	102.5	90.0

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	No. of Legs 18"H	Theta θ	Uninsulated Dry Wt (lbm)	R-717 ⁽²⁾ Operating Charge (lbm)	Surge Vol. (cu-ft)	Coil Description ⁽⁹⁾
VAC-12-84	300	12 $\frac{3}{4}$	84	6	72	3	90°	500	85.6	0.59	43 LF NPS-3/4 Sch-80 SW
VAC-16-84	300	16	84 $\frac{1}{4}$	6 $\frac{1}{8}$	72	3	90°	700	137.1	0.95	65 LF NPS-3/4 Sch-80 SW
VAC-20-98	300	20	98 $\frac{3}{8}$	7 $\frac{3}{16}$	84	3	90°	1,000	264.9	2.69	82 LF NPS-1 Sch-80 SW
VAC-24-100	300	24	100 $\frac{3}{8}$	8 $\frac{3}{16}$	84	3	90°	1,200	454.2	2.70	85 LF NPS-1 $\frac{1}{4}$ Sch-80 SW
VAC-30-113	250	30	113 $\frac{3}{8}$	9 $\frac{1}{16}$	94	3	90°	1,800	726.9	8.56	135 LF NPS-1 $\frac{1}{4}$ Sch-80 SW
VAC-36-116	250	36	116 $\frac{3}{8}$	11 $\frac{1}{16}$	94	4	45°	2,200	1,230.9	9.04	155 LF NPS-1 $\frac{1}{2}$ Sch-80 SW
VAC-42-119	250	42	119 $\frac{3}{8}$	12 $\frac{1}{16}$	94	4	45°	2,800	1,413.6	19.33	235 LF NPS-1 $\frac{1}{2}$ Sch-80 DW
VAC-48-122	250	48	122 $\frac{1}{2}$	14 $\frac{1}{4}$	94	4	45°	4,000	2,017.7	17.07	250 LF NPS-2 Sch-40 DW
VAC-54-125	250	54	125 $\frac{1}{2}$	15 $\frac{3}{4}$	94	4	45°	4,700	2,697.8	19.15	320 LF NPS-2 Sch-40 DW
VAC-60-128	250	60	128 $\frac{1}{2}$	17 $\frac{1}{4}$	94	4	45°	5,300	3,441.4	23.73	355 LF NPS-2 Sch-40 DW
VAC-72-158	250	72	158 $\frac{3}{8}$	20 $\frac{5}{16}$	118	4	45°	9,000	4,938.8	81.90	450 LF NPS-2 Sch-40 TW
VAC-84-164	250	84	164 $\frac{3}{4}$	23 $\frac{3}{8}$	118	4	45°	12,700	7,214.0	105.18	575 LF NPS-2 Sch-40 TW
VAC-96-170	250	96	170 $\frac{3}{4}$	26 $\frac{3}{8}$	118	4	45°	14,900	10,472.7	101.47	650 LF NPS-2 Sch-40 TW

Model Number	Nozzle / Coupling NPS ^{(3) (4) (5)}							AL	Inlet CL1	Inlet CL2	Outlet CL3	EL	HL	HLCO
	A	B	C	E	F	G	H							
VAC-12-84	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3/4	1 $\frac{1}{4}$	1/2	1	3/4	57 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	4	62	57 $\frac{3}{4}$	42
VAC-16-84	3	3	3/4	1 $\frac{1}{4}$	1/2	1	3/4	58 $\frac{1}{2}$	3 $\frac{3}{16}$	3 $\frac{3}{16}$	6	62	58 $\frac{1}{2}$	42
VAC-20-98	4	4	1	1 $\frac{1}{4}$	1/2	1	3/4	74	4 $\frac{5}{8}$	4 $\frac{5}{8}$	8	74	73	56
VAC-24-100	4	4	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1/2	1	3/4	74	4 $\frac{15}{16}$	4 $\frac{15}{16}$	10	74	74	58
VAC-30-113	5	5	1 $\frac{1}{4}$	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	88	6 $\frac{1}{16}$	6 $\frac{1}{16}$	12 $\frac{1}{2}$	88	86 $\frac{1}{2}$	70
VAC-36-116	6	6	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	88	8 $\frac{1}{2}$	8 $\frac{1}{2}$	15	88	88	72
VAC-42-119	6	6	2 $\frac{1}{2}$	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	88	12 $\frac{7}{8}$	4 $\frac{1}{16}$	10 $\frac{1}{4}$	88	88	73
VAC-48-122	8	8	3	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	86	16 $\frac{1}{16}$	5 $\frac{1}{8}$	11 $\frac{1}{4}$	86	86	70
VAC-54-125	8	8	3	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	86	18 $\frac{3}{16}$	7 $\frac{1}{4}$	14 $\frac{1}{4}$	86	86	71
VAC-60-128	8	8	3	1 $\frac{1}{2}$	3/4	1 $\frac{1}{2}$	3/4	86	20 $\frac{5}{16}$	9 $\frac{3}{8}$	17 $\frac{1}{4}$	86	86	73
VAC-72-158	10	10	4	1 $\frac{1}{2}$	1	1 $\frac{1}{2}$	3/4	108	21 $\frac{1}{16}$	6 $\frac{1}{16}$	15 $\frac{1}{2}$	108	108	95
VAC-84-164	10	10	4	1 $\frac{1}{2}$	1	1 $\frac{1}{2}$	3/4	108	21 $\frac{1}{16}$	6 $\frac{1}{16}$	15 $\frac{1}{2}$	108	108	98
VAC-96-170	12	12	4	1 $\frac{1}{2}$	1	1 $\frac{1}{2}$	3/4	106	21 $\frac{1}{16}$	6 $\frac{1}{16}$	15 $\frac{1}{2}$	106	106	96

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Form 120-510 SED (2010-05)
Supersedes: 120-510 SED (2004-10)
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Published in USA • GUI

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