

### For Ammonia (R-717) and Halocarbon Refrigerants

#### Features

- The broadest standard line in the ammonia refrigeration industry: 8” up to 48”
- Complete access to coalescing elements
  - Through the blind flange at the top of the vessel (for vessels up to 20”)
  - Through a manway in the top head (for vessels 24” and larger)
- Phillips® Level Eyes® allow visual monitoring of oil level

#### Description

Phillips® coalescing oil separators are engineered to allow a more effective management of the lubricant in the refrigeration system. Oil in the discharge gas stream is separated from the refrigerant vapor before it has a chance to foul downstream heat transfer surfaces. Phillips offers the broadest line of coalescing oil separators in the ammonia refrigeration industry. All vessels are rated at 300 PSI, ASME stamped and National Board Registered.

#### Design Function

Phillips® coalescing oil separators remove oil from the gas stream in three steps. First, the discharge vapor is directed onto a baffle plate where the momentum of oil droplets cause them to impact the plate and drain out. Second, the vapor stream flows through a demister pad, where droplets gather and drain out. Third, the vapor is directed through one or more coalescing elements, where the tiniest droplets are captured and gather to form larger droplets that can drain away.

#### HIGH STAGE SEPARATOR RATINGS

MODEL NUMBER	VESSEL NOM. DIA. [in.]	CFM (HIGH STAGE @ +85°F CONDENSING)*					
		+10°F	+15°F	+20°F	+25°F	+30°F	+35°F
COS8AH	8	150	135	120	110	100	90
COS12AH	12	335	300	270	245	220	200
COS16AH	16	545	490	440	395	360	325
COS20AH	20	840	755	680	615	555	505
COS24AH	24	1260	1135	1020	920	830	755
COS30AH	30	1935	1740	1565	1410	1275	1160
COS36AH	36	2820	2530	2280	2060	1860	1685
COS42AH	42	3870	3475	3130	2825	2555	2315
COS48AH	48	5045	4530	4080	3680	3330	3020

#### LOW STAGE SEPARATOR RATINGS

MODEL NUMBER	VESSEL NOM. DIA. [in.]	CFM (LOW STAGE @ +10°F CONDENSING)*					
		-45°F	-40°F	-35°F	-30°F	-25°F	-20°F
COS8AL	8	160	140	120	105	90	80
COS12AL	12	355	310	270	235	205	185
COS16AL	16	580	505	440	385	340	300
COS20AL	20	900	780	680	595	520	460
COS24AL	24	1345	1170	1020	895	785	690
COS30AL	30	2065	1795	1565	1370	1200	1060
COS36AL	36	3010	2615	2280	1995	1750	1545
COS42AL	42	4135	3590	3130	2740	2405	2120
COS48AL	48	5385	4680	4080	3570	3135	2760

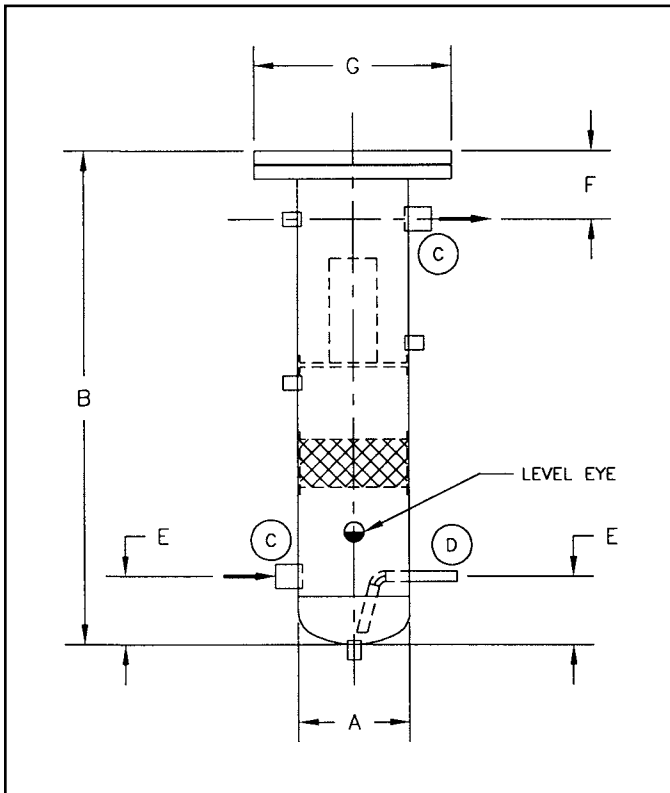
\*Ratings for these tables are for R-717. For R-22, use 75% of the R-717 ratings.

## COALESCENT OIL SEPARATOR DIMENSIONS

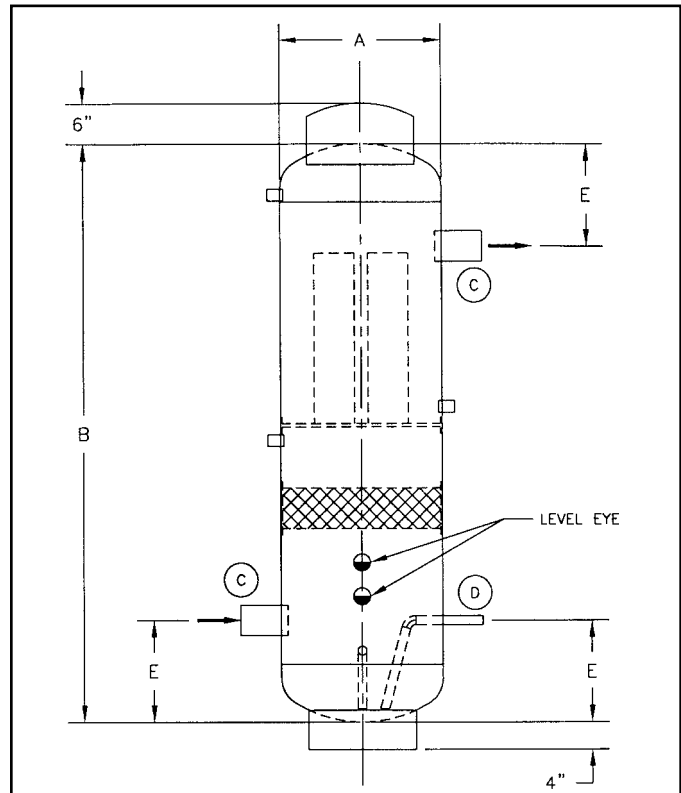
MODEL NUMBER	VESSEL DIMENSIONS		CONNECTION SIZES (IPS)		CONNECTION LOCATIONS		FLANGE	SHIPPING
	ACTUAL DIA. A	HEIGHT B	VAPOR C	OIL D	E	F	G	WEIGHT [lbs]
COS8A	8 5/8	65	2	1	6.3	5.8	15	264
COS12A	12 3/4	72	2 1/2	1 1/2	8	6.5	20.5	463
COS16A	16	84	3	2 1/2	9.5	7.5	25.5	825
COS20A	20	91	3 1/2	2	11	11	30.2	1223
COS24A	24	98	4	2	12.5	12.5	-	865
COS30A	30	111	5	2 1/2	15	15	-	1286
COS36A	36	124	6	3	17.5	17.5	-	1815
COS42A	42	147	8	4	20.5	20.5	-	2543
COS48A	48	150	10	5	24.5	24.5	-	3529

All dimensions are in inches

### 8" to 20" Diameter



### 24" to 48" Diameter



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