

For Ammonia (R717) and Other Refrigerants

FEATURES

- The broadest standard line in the ammonia refrigeration industry: 8” up to 48” (larger custom sizes available)
- Complete access to coalescing elements
 - Through the blind flange at the top of the vessel (for separators up to 20” diameter)
 - Through the manway in the top head (for separators 24” diameter 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 300PSI and are ASME stamped and National Board registered.

DESIGN FUNCTION

Phillips coalescing oil separators remove oil from the compressor discharge 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 stainless steel 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 DIA (IN.)	CFM (HIGH STAGE @ +95°F CONDENSING)					
		+10°F	+15°F	+20°F	+25°F	+30°F	+35°F
COS8AH	8	124	111	100	90	82	74
COS12AH	12	284	255	230	208	188	170
COS16AH	16	457	411	370	334	302	274
COS20AH	20	723	650	585	528	477	433
COS24AH	24	1032	927	835	754	681	618
COS30AH	30	1632	1466	1320	1191	1077	976
COS36AH	36	2373	2132	1920	1733	1567	1420
COS42AH	42	3251	2921	2630	2374	2146	1945
COS48AH	48	4215	3787	3410	3077	2783	2522

LOW STAGE SEPARATOR RATINGS

MODEL NUMBER	VESSEL DIA (IN.)	CFM (LOW STAGE @ +10°F CONDENSING)					
		+10°F	+15°F	+20°F	+25°F	+30°F	+35°F
COS8AL	8	132	115	100	88	77	68
COS12AL	12	304	264	230	201	177	156
COS16AL	16	489	424	370	324	284	250
COS20AL	20	772	671	585	512	449	396
COS24AL	24	1103	958	835	731	642	565
COS30AL	30	1743	1514	1320	1155	1014	893
COS36AL	36	2535	2202	1920	1680	1475	1300
COS42AL	42	3473	3016	2630	2301	2021	1780
COS48AL	48	4502	3911	3410	2984	2620	2308



ENGINEERING DATA

COALESCENT OIL SEPARATOR DIMENSIONS

MODEL	A	B	C	D	LEVEL EYE	R	S	T	U	V	W	X	Y	Z
	DIA. (IN.)	OAH	HEAD	SHELL		FLANGE	MANWAY	DRAIN	DRAIN2	INSTRMNT	OIL OUTLET	INLET	OUTLET	RELIEF
COS8	8	64	4	60	1100A-R-T	8		½	½	½	1	2	2	½
COS12	12	65½	5½	60	1100A-R-T	12		½	½	½	1½	3	3	½
COS16	16	78½	6½	72	1100A-R-T	16		½	½	½	1½	4	4	½
COS20	20	79½	7½	72	1100A-R-T	20		½	½	½	2	5	5	½
COS24	24	101	8½	84	1100A-R-T		11x15x6	½	½	½	2	6	6	½
COS30	30	116	10	96	1100A-R-T		12x16x6	½	½	½	2½	8	8	¾
COS36	36	119	11½	96	1100A-R-T		12x16x6	½	½	½	3	10	10	¾
COS42	42	146	13	120	1100A-R-T		12x16x6	½	½	½	4	10	10	¾
COS48	48	149	14½	120	1100A-R-T		14x18x6	½	½	½	5	12	12	¾

