

Centrifugal Oil Separators

Maximum Working Pressure—450 psig

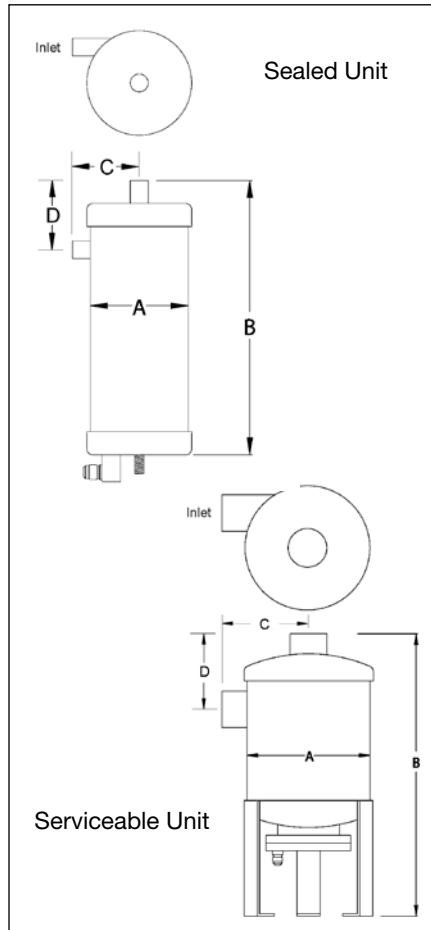
Centrifugal Oil Separators

CRN OH11138.5C

Centrifugal oil separators are designed to remove large quantities of oil at a wide range of operating capacities. Field tests have shown these oil separators are up to 99% effective—even in high oil loading conditions. For screw compressor applications, a high pressure oil separator/reservoir **without internal float valve** must be used (see page 12).

Totally sealed and serviceable units are available. We recommend serviceable oil separators be used in supermarket and parallel compressor systems.

Select an oil separator based on the system's tonnage under normal operating conditions. This is the capacity or compressor(s) BTUs based on refrigerant gas at the saturated suction and condensing temperatures of the operating system. For optimum sizing, select an oil separator with a capacity closest to the system's load at evaporating temperature. Minimum tonnage is 30% of the rated capacity.



For refrigerants and conditions not listed, see our sizing calculator at www.westermeyerind.com or contact Westermeyer Industries for assistance.

	Catalog Number	ODS Conn. Size	Dimensions				Max. Capacity in Tons of Refrigeration						Maximum Discharge (CFM)	Precharge Amount (oz.)
							R-134A		R-22		R-404A			
			A	B	C	D	-40°F	+40°F	-40°F	+40°F	-40°F	+40°F		
Sealed Units	OS4-04C	1/2	4"	13"	3"	3.5"	1	2	2	3	2	3	1.5	15
	OS4-05C	5/8	4"	15"	3"	3.5"	4	5	6	7	6	7	5	15
	OS4-07C	7/8	4"	17"	3"	4"	6	7	9	10	8	9	7.5	15
	OS4-11C	1-1/8	4"	19"	3"	4"	8	10	12	13	11	12	10	15
	OS6-13C	1-3/8	6"	15"	4.5"	5"	10	13	16	18	15	19	13	40
	OS6-15C	1-5/8	6"	17"	4.5"	5"	15	17	20	23	19	24	17	40
Serviceable Units	OS4-05FA*	5/8	4"	15"	3"	3.5"	4	5	6	7	6	7	5	25
	OS4-07FA*	7/8	4"	17"	3"	4"	6	7	9	10	8	9	7.5	25
	OS4-11FA*	1-1/8	4"	19"	3"	4"	8	10	12	13	11	12	10	25
	OS6-13F*	1-3/8	6"	17"	4.5"	5"	10	13	16	18	15	19	12	25
	OS6-15F*	1-5/8	6"	17"	4.5"	5"	15	17	20	23	19	24	17	25
	OS6-21F*	2-1/8	6"	17"	5.25"	5.88"	23	27	32	38	30	39	27	25
	OS8-21*	2-1/8	8"	24"	5.63"	6"	28	34	45	50	39	52	38	25
	OS10-25*	2-5/8	10"	27"	6.5"	6.5"	58	70	90	100	80	105	76	25
	OS12-31*	3-1/8	12.8"	30"	7.75"	9"	90	110	140	160	125	165	118	25

See page 15 for oil separator sizing information.

All capacities shown are based on 100°F condensing temperature. 450 psig maximum working pressure.

* Replacement float assembly and gasket available for flanged oil separator (part number W1900-30). See page 31 for more information.

Centrifugal, Coalescing, and Conventional Oil Separator

Discharge CFM Sizing Chart

Example of Use

Find the DCFM value for the refrigerant being used at the appropriate evaporating and condensing temperature. Then, multiply this value by the system tonnage at the operating conditions. Use this value to select an oil separator with the nearest maximum DCFM value to the calculated DCFM.

i.e. R-134A, 20 Tons @ 20F/110F = 1.02 DCFM. Total DCFM = 20.40 (20 tons x 1.02 DCFM)

For refrigerants and conditions not listed, see our sizing calculator at www.westermeyerind.com or contact Westermeyer Industries for assistance.

Evaporating Temperature										
		-40°F	-30°F	-20°F	-10°F	0°F	10°F	20°F	30°F	40°F
R-134A Condensing Temperature	80°F	1.60	1.56	1.52	1.48	1.45	1.42	1.39	1.36	1.33
	90°F	1.44	1.40	1.37	1.33	1.30	1.27	1.24	1.22	1.19
	100°F	1.31	1.27	1.24	1.21	1.17	1.15	1.12	1.09	1.07
	110°F	1.20	1.17	1.13	1.10	1.07	1.04	1.02	0.99	0.97
	120°F	1.11	1.08	1.04	1.01	0.98	0.95	0.93	0.91	0.88
R-22 Condensing Temperature	80°F	1.03	1.01	1.00	0.98	0.97	0.96	0.94	0.93	0.92
	90°F	0.93	0.91	0.90	0.89	0.87	0.86	0.85	0.84	0.83
	100°F	0.84	0.83	0.81	0.80	0.79	0.78	0.77	0.76	0.75
	110°F	0.77	0.75	0.74	0.73	0.72	0.71	0.70	0.69	0.68
	120°F	0.71	0.69	0.68	0.67	0.65	0.64	0.63	0.62	0.61
R-404A Condensing Temperature	80°F	1.02	1.00	0.96	0.94	0.92	0.89	0.87	0.85	0.83
	90°F	0.95	0.92	0.89	0.86	0.84	0.81	0.80	0.78	0.76
	100°F	0.88	0.85	0.81	0.79	0.76	0.74	0.72	0.70	0.68
	110°F	0.83	0.80	0.77	0.74	0.71	0.69	0.67	0.65	0.63
	120°F	0.77	0.75	0.71	0.68	0.66	0.63	0.61	0.59	0.58
R-410A Condensing Temperature	80°F					0.62	0.62	0.61	0.60	0.60
	90°F					0.56	0.55	0.55	0.54	0.53
	100°F					0.50	0.50	0.49	0.49	0.48
	110°F					0.46	0.45	0.44	0.44	0.43
	120°F					0.42	0.41	0.40	0.40	0.39
CO₂ Condensing Temperature	20°F	0.37		0.37		0.37				
	40°F	0.30		0.30		0.30				
	60°F	0.23		0.23		0.23				