evapco for LIFE

EVAPORATIVE CONDENSERS



Capacities from
124 to 1,516 ammonia tons!

Available with Optional

evapco® WATER SYSTEMS

GLOBAL COLD CHAIN ALLIANCE®

Member of iiar International Institute of Ammonia Refrigeration www.iiar.org

IARW International Association of Refrigerated Warehouses

AHRI Air-Conditioning, Heating, and Refrigeration Institute

PMRC

PERFORMANCE MAINTENANCE RELIABILITY CONDENSER

PMRC Design and Construction Features







About EVAPCO

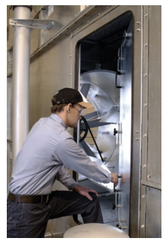
EVAPCO is the global innovator in heat transfer solutions. Our pledge is to make everyday life easier, more comfortable, more reliable, and more sustainable for people everywhere. With 36 locations spread throughout 14 countries and over 500 active patents worldwide, we are the team that engineers and contractors know they can count on for life.

Contact

your local EVAPCO sales representative or visit **evapco.com** to learn more.

Optional Design Features:

- Basin internal walkway with entry step and assist handle
- External service platforms
- Stainless steel construction







IBC COMPLIANT DESIGNS

PVC Water Distribution with ZM®II Nozzles

- Large orifice prevents clogging **(no moving parts)**.
- Redesigned nozzles for superior water distribution.
- Threaded nozzles eliminate troublesome grommets.
- Fixed position requires zero maintenance.
- Threaded end caps for ease of cleaning.
- Guaranteed for life.

Thermal-Pak II® Heat Transfer Technology

- More surface area per plan area than competitive designs.
- Improved heat transfer efficiency due to tube geometry and orientation of tubes.
- Lower refrigerant charge.
- Optional 304L or 316L TITAN stainless steel coil technology.

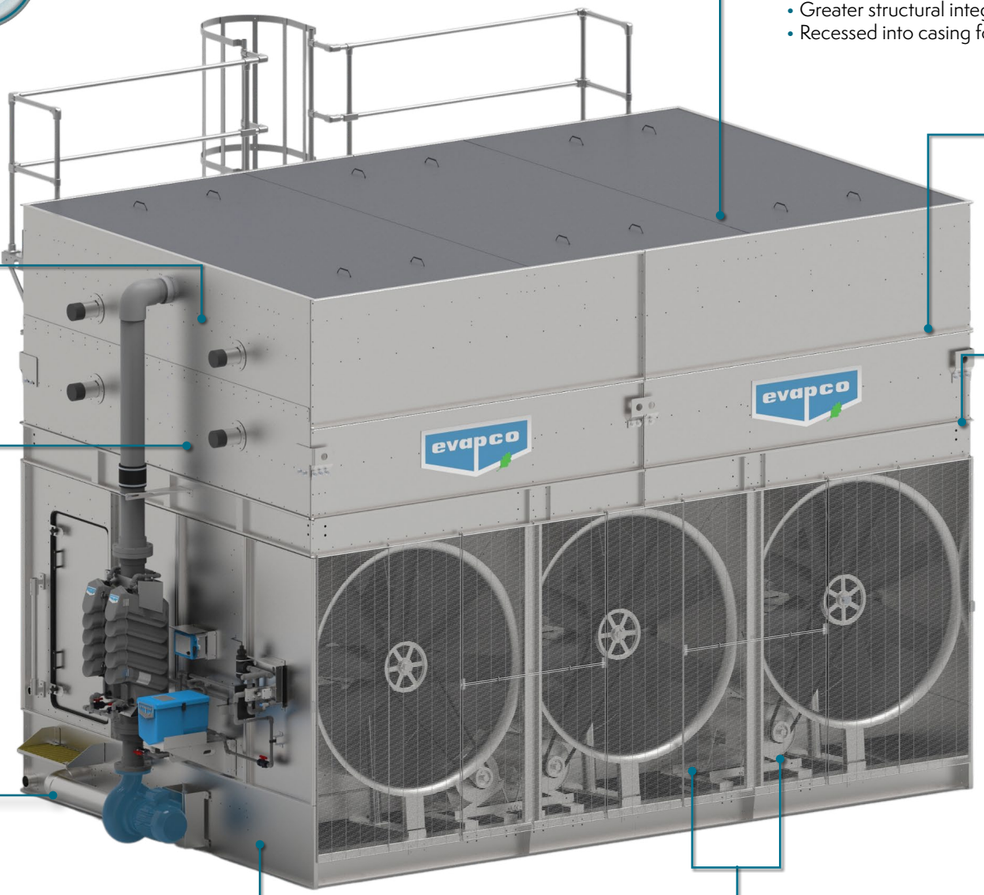
Improved Water Distribution Piping

- Horizontally mounted pumps allow for reduced basin water level.*
- Simplified piping for easier basin access.
- Totally enclosed pump motors assure long, trouble-free life.

**Refer to engineering data for availability.*

Optional Super Low Sound Fan

- Extremely wide chord fan blades for sound-sensitive applications.
- One-piece molded heavy-duty construction.
- 10-13 dB(A) sound reduction on fan side at 50 ft.



Water Saver Drift Eliminators

- Patented design reduces drift rate to 0.001%.
- Saves water and reduces water treatment cost.
- Greater structural integrity than older blade-type designs.
- Recessed into casing for greater protection.

Double-Brake Flange Joints

- Stronger than single-brake designs by others.
- Greater structural integrity.
- Minimizes water leaks at field joints.

Unique Field Seam

- Eliminates up to 85% of fasteners.
- Self-guiding channels improve quality of field seam to eliminate leaks.
- Easy to install.
- Lower installation cost.

MOTOR AND DRIVE 5 Year WARRANTY

Sloped-Pan Bottom

- Pan bottom slopes to drain.
- Easy to clean.
- Stainless steel strainer resists corrosion.

Individual Fan Drive System

- Increased flexibility for improved capacity control.
- Greater reliability through redundancy.
- Easy motor replacement.
- Front-mounted drives for improved maintenance accessibility.

PMRC Design Features

Proven Performance & Design Flexibility

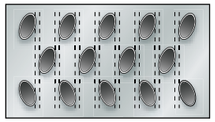


The PMRC Evaporative Condenser offers more capacity and greater system design flexibility than ever before. EVAPCO's research and development team has invested hundreds of hours in laboratory testing to develop the next generation in forced draft condenser technology. These efforts have produced an efficient fan section design combined with the proven Thermal-Pak II® coil technology to offer improved condenser performance.

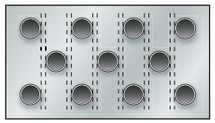
The PMRC features more plan area options and fan horsepower options for the system design engineer. With more condenser capacity, more plan area options, and greater flexibility in motor selection, the design engineer can now match the condenser performance to the specific application requirements. More equipment choices and more design flexibility mean greater value for the end user.

Thermal-Pak II® Coil Design

Lower Refrigerant Charge



Thermal-Pak II® Coil by EVAPCO



Round Tube Coil by Others

Only EVAPCO condensers offer the unique Thermal-Pak II® Coil which assures greater operating efficiency. Its unique elliptical tube design allows for closer tube spacing resulting in more surface area per plan area than traditional round tube designs. The Thermal-Pak II® Coil design has a lower resistance to air flow and permits greater water loading, making the Thermal-Pak II® Coil the most efficient design available to yield a low refrigerant charge.

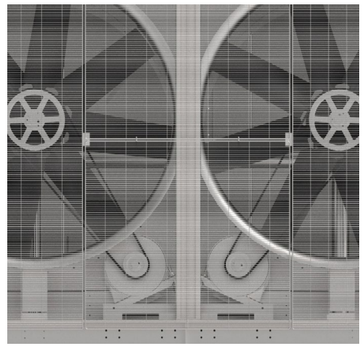
Energy Efficient for Lowest Operating Cost

Lower Horsepower Options

The fan drive system of the PMRC utilizes large diameter vane-axial fans in a single-stage arrangement to provide more efficient air flow and reduced power consumption. When compared to the traditional centrifugal fan condenser models, the vane-axial fan design can offer up to a 50% reduction in energy consumption. And, with the new PMRC model selections **even more low horsepower options are available to obtain greater energy savings.**

Individual Fan Drive System

Capacity Control Flexibility & Operating Redundancy



The PMRC fan drive system provides individual motor-to-fan configuration **as standard equipment** on all models. The dedicated fan-to-motor arrangement ensures less "wear and tear" on the drive system versus tandem fan motor drive arrangements resulting in less maintenance. The individual motor-to-fan design offers greater capacity control flexibility to match the system load requirements. In addition, all EVAPCO condensers are equipped with an internal baffle system, which extends from the pan bottom vertically through the coil bundle. This unique design allows the user to cycle fan motors independently without harmful effects of air bypass inside the unit. The individual motor-to-fan design ensures maximum operating redundancy in the condenser fan system when critical operation is necessary. The PMRC comes standard with a 5-year motor and drive warranty.

Inverter Duty Motors as STANDARD

Inverter Duty motors are standard on PMRC Condensers. Inverter Duty motors are totally enclosed, offering premium efficiency and inverter capable (VFD by others).

NOTE: *Variable Frequency Drive (VFD) control may require other component modifications such as motor shaft grounding brushes, AC load reactors, low-pass filters and tuned trap filters to ensure proper motor performance and service life.*

Easy Field Assembly

Fewer Fasteners
Lower Installed Cost



The PMRC features a field seam design which ensures easier assembly and fewer field seam leaks. The field seam incorporates self-guiding channels to guide the coil casing section into position and set in place on the bottom fan section of the condenser. In addition, the design eliminates up to 85% of the required fasteners typically used to join the condenser sections in the field, significantly reducing the contractor labor costs for installation.

Improved Maintenance

Fan Drive Accessibility

The drive components of the PMRC are easily accessed for routine maintenance from the front of the unit. Bearing grease fittings are extended to the outside of the unit for ease of lubrication. All drive sheaves have been relocated to the front of the fan section and motors are positioned on a platform base to allow for easy belt tension adjustment.

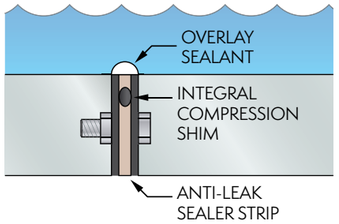
Basin Access Package



An external basin access step and grab bar shall be provided at each exterior access door for easier basin access. Also, an internal walkway shall be provided at the level of the basin door to provide access to the interior of the unit for routine maintenance. The walk extends the length of the basin for easier travel through the unit.

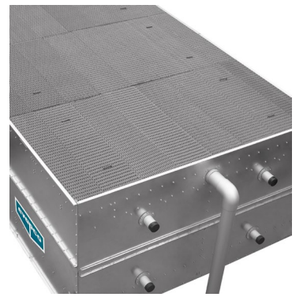
Construction Features

Unique Seam Design—Eliminate Field Leaks



The PMRC features EVAPCO's unique panel construction design which includes a special butyl tape sealer with an integral sealing gasket. Each joint is then backed with a secondary caulking compound and encased in a double-brake flange for added strength and structural integrity. This unique sealing system has been proven effective in both laboratory tests and years of field application.

Superior Water Saver Drift Eliminators

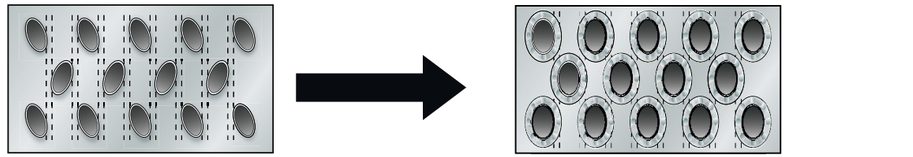


The PMRC condensers incorporate a patented* highly efficient PVC drift eliminator. The eliminator removes entrained water droplets from the air stream to limit the drift rate to less than 0.001% of the recirculating water rate. With a low drift rate, PMRC condensers save valuable water and water treatment chemicals. The eliminators feature a honeycomb design that offers greater structural integrity. They are recessed in the top of the casing and UV protected for longer life. They are constructed of inert polyvinyl chloride (PVC) which eliminates corrosion in this critical area of the condenser. The eliminators are assembled in sections for easy handling and removal for coil and water distribution system inspection.

**U.S. Patent No. 6315804*

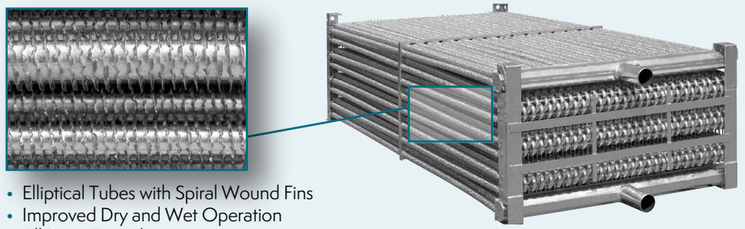
General Benefits

Due to the extensive benefits of EVAPCO's Ellipti-*fin*® and CROSSCOOL® technology, significantly expanded dry operation may be attained in most climates. Additionally, the plan area and fan horsepower may be reduced to achieve equivalent performance to larger non-eco units. This allows for the accommodation of continuously changing energy and space requirements in the modern heat transfer market. Ellipti-*fin*® heat transfer coils also offer ASME B31.5 Refrigerant Piping Code compliant high quality carbon steel. Each circuit is also inspected for quality before fins are attached. Assembled coils have a design working pressure of 300 psig. To ensure product longevity and protect against corrosion, coils are also hot-dip galvanized.



Thermal-Pak® II Coil by EVAPCO

Ellipti–*fin*® Finned Elliptical Tube by EVAPCO

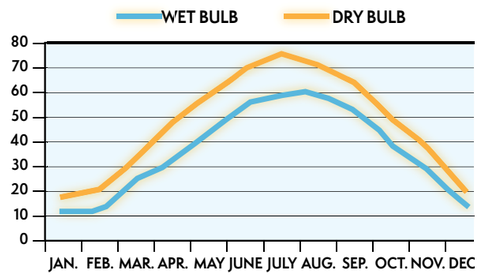


- Elliptical Tubes with Spiral Wound Fins
- Improved Dry and Wet Operation
- All Rows Finned

A Full Spectrum of Water Saving Advantages with eco-PMRC Technology

Water Savings

The upgraded eco coil technology enables the eco-PMRC to operate in a 100% dry mode at a significantly higher dry bulb switchover temperature than that of a typical bare tube coil evaporative condenser. This leads to a significant increase in the number of hours per year the condenser can operate in dry mode (spray pumps off), increasing your water and energy savings. Such savings are shown in the graph below for a meat processing plant application near Minneapolis, MN, where the unit is required to reject a constant heat load of 340 tons of refrigeration at a 90°F condensing temperature and a summer design wet bulb temperature of 78°F. The process operates 24 hours a day, 7 days a week. The eco-PMRC evaporative condenser and an PMRC evaporative condenser are also compared in the accompanying table. Data is provided by the National Climatic Data Center (NCDC). Per this data, the eco unit gains an additional 34% of the year when dry operation is still able to achieve 100% of the load capacity in comparison to the non-eco unit.



Minneapolis Annual Weather Data

EVAPCO Model	PMC-774E	eco-PMRC-700A
Plan Area	12′ x 18′	12′ x 18′
Fan Motor	30 hp	22-1/2 hp
Pump Motor	7-1/2 hp	7-1/2 hp
100% Dry Switchover (°F)	6.5°F	37°F
% Dry Operation / Year	2%	34%

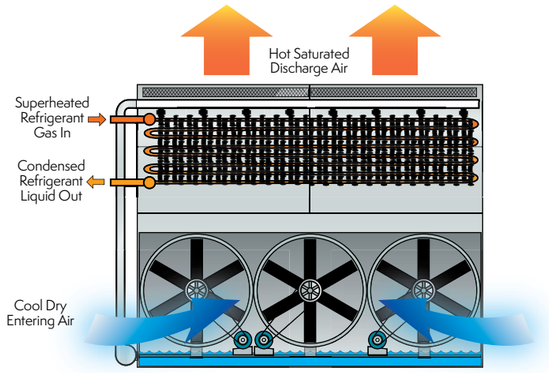
Principle of Operation

Dry Mode

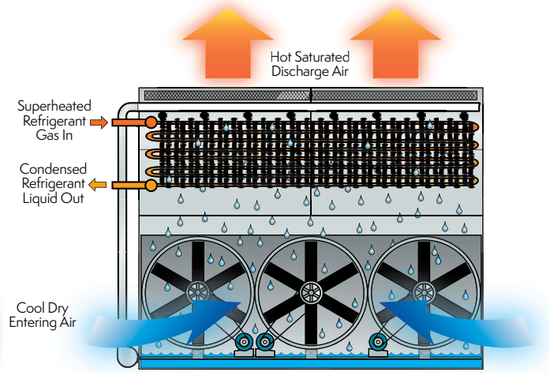
Cool ambient air is forced into the unit and moves over the Ellipti–fin® heat transfer coil. The coils are cooled as air runs over them, allowing refrigerant to condense into a liquid. The condensed liquid flows out of the coil into a high-pressure receiver for return to the system. The hot discharge air continues through the drift eliminators and dissipates harmlessly into the atmosphere.

Evaporative Mode

Air is once again pulled over the coils, while water is simultaneously flooded over the condenser coil. As ambient air moves, a portion of this spray water is evaporated and further cools the tubes and causes the refrigerant gas to condense. The hot saturated air is then discharged through the drift eliminators, while the non-evaporated water reenters the sump for continued usage.



eco-PMRC Dry Mode



eco-PMRC Evaporative Mode

Model Comparisons

Table 1 compares box sizes, R-717 capacity ranges, base MBH ranges, and dry capacity increases over non-eco units.



BOX SIZE	MODEL	R-717 TONS	BASE MBH	TOP OF THE BOX DRY CAPACITY INCREASE
6′ x 12′	eco-PMRC-183 thru eco-PMRC-252	130-179	2,690-3,704	60%
6′ x 18′	eco-PMRC-279 thru eco-PMRC-387	198-274	4,101-5,688	63%
9′ x 12′	eco-PMRC-275 thru eco-PMRC-559	195-396	4,042-8,217	53%
9′ x 18′	eco-PMRC-479 thru eco-PMRC-831	340-589	7,041-12,215	52%
9′ x 24′	eco-PMRC-549 thru eco-PMRC-1118	389-793	8,070-16,434	53%
9′ x 36′	eco-PMRC-959 thru eco-PMRC-1662	680-1,179	14,097-24,431	52%
12′ x 12′	eco-PMRC-314 thru eco-PMRC-688	223-488	4,615-10,113	50%
12′ x 18′	eco-PMRC-632 thru eco-PMRC-1024	448-726	9,290-15,052	50%
12′ x 20′	eco-PMRC-573 thru eco-PMRC-1095	406-777	8,423-16,096	48%
12′ x 24′	eco-PMRC-794 thru eco-PMRC-1376	563-976	11,671-20,227	50%
12′ x 36′	eco-PMRC-1263 thru eco-PMRC-2047	896-1,452	18,566-30,090	50%
12′ x 40′	eco-PMRC-1148 thru eco-PMRC-2191	814-1,554	16,875-32,207	47%

Table 1 — eco-PMRC Box Size and Capacity Benefits

Selection Procedure

Two methods of selection are presented. The first is based on the total heat of rejection as described immediately below. The second, and simpler, method is based on evaporator tons. The evaporator ton method is only applicable to systems with open type reciprocating compressors.

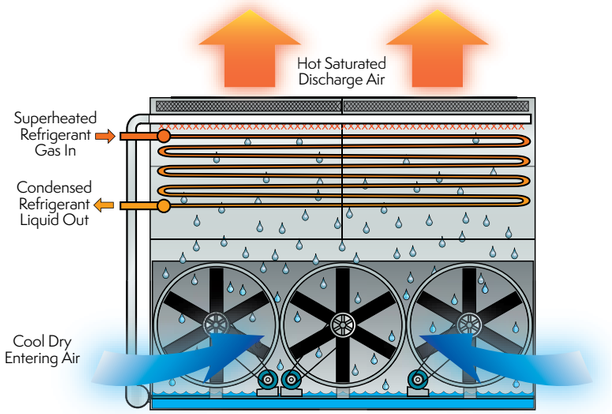
The heat of rejection method is applicable to all but centrifugal compressor applications and is normally used for selecting evaporative condensers for use with hermetic compressors and screw compressors. It can also be used for standard open type reciprocating compressors as an alternate to the evaporator ton method.

The evaporator ton method is based on the estimated heat of compression. **The heat of rejection method of selection is more accurate and should be used whenever possible.**

Refer to the factory for selections on systems with centrifugal compressors.

Principle of Operation

The refrigerant gas is discharged from the compressor into the inlet connection of the evaporative condenser. Water from the condenser's sump is continuously flooded over the condenser coil, while ambient air is simultaneously forced into the unit. As the ambient air moves up through the coil section, a portion of the spray water is evaporated into the air stream.



The evaporative process cools the spray water, which in turn cools the tubes containing the refrigerant gas. The cool tube walls cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the coil's sloping tubes to the high- pressure liquid receiver for return to the system.

The hot, saturated air is driven through the drift eliminators, where any entrained water droplets are removed. The condenser's fan then discharges this air stream out of the top of the unit at a high velocity, where it can dissipate harmlessly into the atmosphere. The water which was not evaporated falls into the sump and is recirculated by the spray pump to the water distribution system above the condensing coil section.

Heat of Rejection Method

In the heat of rejection method, a factor for the specified operating conditions (condensing temperature and wet bulb) is obtained from **Table 2** or **3** and multiplied times the heat of rejection.

The resultant figure is used to select a unit from **Table 4** on page 10. Unit capacities are given in **Table 4** in thousands of BTU/Hr or MBH.

If the heat of rejection is not known, it can be determined by one of the following formulas:

Open Compressors: Heat of Rejection = Evaporator Load (BTU/Hr) + Compressor BHP x 2545

Hermetic Compressors: Heat of Rejection = Evaporator Load (BTU/Hr) + kW Compressor Input x 3415

Example Selection

GIVEN: 450 ton load, ammonia refrigerant 96.3° condensing temperature, 78° wet bulb temperature and 500 compressor BHP.

SELECTION: Heat of Rejection

450 tons x 12000 = 5,400,000 BTU/Hr
500 BHP x 2545 = 1,272,500 BTU/Hr
TOTAL 6,672,500 BTU/Hr

From **Table 3** the capacity factor for 96.3° condensing and 78° wet bulb = 1.37.

6,672,500 x 1.37 = 9,141,325 BTU/Hr or 9142 MBH.

Therefore, select a model PMRC-631.

NOTE: *For screw compressor selections employing water cooled oil cooling, select a condenser for the total MBH as in the example. The condenser can then function in one of two ways:*

(1) Recirculating water from the water sump can be used directly in the oil cooler. A separate pump should be employed and the return water should be directed into the water sump at the opposite end from the pump suction.

(2) The condenser coil can be circuited so that water or a glycol-water mixture for the oil cooler can be cooled in a separate section of the coil. Specify load and water flow required.

For refrigerant injection cooled screw compressors, select the condenser in the same manner as shown in the example.

If the oil cooler is supplied by water from a separate source, then the oil cooling load should be deducted from the heat of rejection before making the selection.

COND. PRESSURE (psig)		COND. TEMP. (°F)	WET BULB TEMPERATURE (°F)																	
HCFC-22	HFC-134a		50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84	86
156	95	85	1.10	1.22	1.39	1.50	1.61	1.75	1.93	2.13	2.24	2.78	3.02	3.29	3.64	4.00	-	-	-	-
168	104	90	0.93	1.02	1.14	1.21	1.28	1.36	1.45	1.57	1.71	1.89	2.00	2.12	2.25	2.38	2.85	3.50	-	-
182	114	95	0.80	0.87	0.95	1.00	1.05	1.10	1.15	1.22	1.31	1.40	1.45	1.50	1.56	1.64	1.82	2.07	2.37	2.77
196	124	100	0.71	0.76	0.82	0.85	0.88	0.91	0.94	0.98	1.03	1.09	1.12	1.15	1.20	1.24	1.34	1.46	1.63	1.82
211	135	105	0.63	0.66	0.70	0.72	0.75	0.77	0.80	0.83	0.87	0.91	0.93	0.95	0.97	1.00	1.06	1.13	1.23	1.35
226	146	110	0.56	0.59	0.62	0.64	0.65	0.67	0.69	0.71	0.74	0.77	0.78	0.80	0.82	0.84	0.88	0.93	0.98	1.04

Table 2 — HCFC-22 and HFC-134a Heat Rejection Factors

COND. PRESSURE (psig)	COND. TEMP. (°F)	WET BULB TEMPERATURE (°F)																	
		50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84	86
152	85	0.98	1.09	1.24	1.34	1.44	1.56	1.72	1.90	2.16	2.48	2.70	2.94	3.25	3.57	-	-	-	-
166	90	0.83	0.91	1.02	1.08	1.14	1.21	1.29	1.40	1.53	1.69	1.79	1.89	2.01	2.12	2.54	3.12	-	-
181	95	0.71	0.78	0.85	0.89	0.94	0.98	1.03	1.09	1.17	1.25	1.29	1.34	1.39	1.47	1.63	1.85	2.12	2.47
185	96.3	0.69	0.75	0.82	0.86	0.90	0.94	0.98	1.03	1.10	1.18	1.22	1.26	1.31	1.37	1.51	1.71	1.94	2.25
197	100	0.63	0.68	0.73	0.76	0.79	0.81	0.84	0.87	0.92	0.97	1.00	1.03	1.07	1.11	1.20	1.30	1.46	1.63
214	105	0.56	0.59	0.62	0.64	0.67	0.69	0.71	0.74	0.78	0.81	0.83	0.85	0.87	0.89	0.95	1.01	1.10	1.21
232	110	0.50	0.53	0.55	0.57	0.58	0.60	0.62	0.63	0.66	0.69	0.70	0.71	0.73	0.75	0.79	0.83	0.87	0.93

Table 3 — Ammonia (R-717) Heat Rejection Factors

MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE
PMC-175E	2572.5	PMRC-492	7232.4	PMRC-668	9819.6	PMRC-863	12686.1	PMRC-1050	15435	PMRC-1376	20227.2
PMC-190E	2793	PMRC-495	7276.5	PMRC-675	9922.5	PMRC-888	13053.6	PMRC-1056	15523.2	PMRC-1382	20315.4
PMC-210E	3087	PMRC-501	7364.7	PMRC-678	9966.6	PMRC-889	13068.3	PMRC-1070	15729	PMRC-1438	21138.6
PMC-220E	3234	PMRC-503	7394.1	PMRC-679	9981.3	PMRC-894	13141.8	PMRC-1071	15743.7	PMRC-1446	21256.2
PMC-235E	3454.5	PMRC-513	7541.1	PMRC-688	10113.6	PMRC-895	13156.5	PMRC-1072	15758.4	PMRC-1466	21550.2
PMC-240E	3528	PMRC-515	7570.5	PMRC-690	10143	PMRC-900	13230	PMRC-1073	15773.1	PMRC-1473	21653.1
PMC-250E	3675	PMRC-519	7629.3	PMRC-691	10157.7	PMRC-905	13303.5	PMRC-1074	15787.8	PMRC-1549	22770.3
PMC-275E	4042.5	PMRC-530	7791	PMRC-715	10510.5	PMRC-913	13421.1	PMRC-1088	15993.6	PMRC-1556	22873.2
PMC-295E	4336.5	PMRC-536	7879.2	PMRC-719	10569.3	PMRC-929	13656.3	PMRC-1116	16405.2	PMRC-1586	23314.2
PMC-325E	4777.5	PMRC-537	7893.9	PMRC-723	10628.1	PMRC-939	13803.3	PMRC-1117	16419.9	PMRC-1599	23505.3
PMRC-332	4880.4	PMRC-545	8011.5	PMRC-725	10657.5	PMRC-940	13818	PMRC-1125	16537.5	PMRC-1625	23887.5
PMRC-362	5321.4	PMRC-546	8026.2	PMRC-731	10745.7	PMRC-949	13950.3	PMRC-1127	16566.9	PMRC-1705	25063.5
PMRC-369	5424.3	PMRC-558	8202.6	PMRC-732	10760.4	PMRC-954	14023.8	PMRC-1137	16713.9	PMRC-1712	25166.4
PMRC-376	5527.2	PMRC-559	8217.3	PMRC-735	10804.5	PMRC-955	14038.5	PMRC-1148	16875.6	PMRC-1776	26107.2
PMRC-386	5674.2	PMRC-564	8290.8	PMRC-737	10833.9	PMRC-956	14053.2	PMRC-1180	17346	PMRC-1788	26283.6
PMRC-397	5835.9	PMRC-568	8349.6	PMRC-751	11039.7	PMRC-959	14097.3	PMRC-1182	17375.4	PMRC-1811	26621.7
PMRC-400	5880	PMRC-579	8511.3	PMRC-772	11348.4	PMRC-962	14141.4	PMRC-1189	17478.3	PMRC-1877	27591.9
PMRC-408	5997.6	PMRC-591	8687.7	PMRC-774	11377.8	PMRC-974	14317.8	PMRC-1201	17654.7	PMRC-1879	27621.3
PMRC-411	6041.7	PMRC-596	8761.2	PMRC-778	11436.6	PMRC-976	14347.2	PMRC-1203	17684.1	PMRC-1911	28091.7
PMRC-420	6174	PMRC-600	8820	PMRC-792	11642.4	PMRC-980	14406	PMRC-1211	17801.7	PMRC-1913	28121.1
PMRC-426	6262.2	PMRC-601	8834.7	PMRC-796	11701.2	PMRC-983	14450.1	PMRC-1258	18492.6	PMRC-1985	29179.5
PMRC-427	6276.9	PMRC-602	8849.4	PMRC-800	11760	PMRC-989	14538.3	PMRC-1261	18536.7	PMRC-1988	29223.6
PMRC-428	6291.6	PMRC-605	8893.5	PMRC-801	11774.7	PMRC-992	14582.4	PMRC-1269	18654.3	PMRC-2019	29679.3
PMRC-431	6335.7	PMRC-616	9055.2	PMRC-803	11804.1	PMRC-994	14611.8	PMRC-1275	18742.5	PMRC-2024	29752.8
PMRC-450	6615	PMRC-631	9275.7	PMRC-811	11921.7	PMRC-1002	14729.4	PMRC-1286	18904.2	PMRC-2102	30899.4
PMRC-453	6659.1	PMRC-634	9319.8	PMRC-816	11995.2	PMRC-1004	14758.8	PMRC-1290	18963	PMRC-2138	31428.6
PMRC-456	6703.2	PMRC-636	9349.2	PMRC-819	12039.3	PMRC-1006	14788.2	PMRC-1296	19051.2		
PMRC-457	6717.9	PMRC-640	9408	PMRC-831	12215.7	PMRC-1012	14876.4	PMRC-1332	19580.4		
PMRC-464	6820.8	PMRC-641	9422.7	PMRC-840	12348	PMRC-1013	14891.1	PMRC-1333	19595.1		
PMRC-479	7041.3	PMRC-645	9481.5	PMRC-852	12524.4	PMRC-1021	15008.7	PMRC-1336	19639.2		
PMRC-481	7070.7	PMRC-647	9510.9	PMRC-853	12539.1	PMRC-1024	15052.8	PMRC-1358	19962.6		
PMRC-488	7173.6	PMRC-667	9804.9	PMRC-856	12583.2	PMRC-1038	15258.6	PMRC-1362	20021.4		

Table 4 — Unit Heat Rejection

Evaporator Ton Method

In the evaporator ton method, factors for the specified operating conditions (suction temperature, condensing temperature and wet bulb) are obtained from either Table 6 or 7 and multiplied times the heat load in tons. The resultant figure is used to select a unit from Table 5. The condenser model in Table 5 is equal to the unit capacity in evaporator tons for HCFC-22 or HFC-134a conditions of 105°F condensing, 40°F suction and 78°F wet bulb.

EXAMPLE

GIVEN: 300 ton evaporator load, R-717, condensing at 95° F, with +10° F suction and 76° F wet bulb temperatures.

SELECTION: The capacity factor from Table 7 for the given condensing and wet bulb conditions is 1.38, and the capacity factor for the suction temperature of +10° F is 1.03, so the corrected capacity required may be determined as:

300 X 1.38 X 1.03 = 426 corrected tons. Therefore, select a model PMRC-428, PMRC-431 or PMRC-450 depending on unit type desired, and any layout or horsepower considerations.

PMRC MODELS

MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY
PMC-175E	175	PMRC-492	492	PMRC-668	668	PMRC-863	863	PMRC-1050	1050	PMRC-1376	1376
PMC-190E	190	PMRC-495	495	PMRC-675	675	PMRC-888	888	PMRC-1056	1056	PMRC-1382	1382
PMC-210E	210	PMRC-501	501	PMRC-678	678	PMRC-889	889	PMRC-1070	1070	PMRC-1438	1438
PMC-220E	220	PMRC-503	503	PMRC-679	679	PMRC-894	894	PMRC-1071	1071	PMRC-1446	1446
PMC-235E	235	PMRC-513	513	PMRC-688	688	PMRC-895	895	PMRC-1072	1072	PMRC-1466	1466
PMC-240E	240	PMRC-515	515	PMRC-690	690	PMRC-900	900	PMRC-1073	1073	PMRC-1473	1473
PMC-250E	250	PMRC-519	519	PMRC-691	691	PMRC-905	905	PMRC-1074	1074	PMRC-1549	1549
PMC-275E	275	PMRC-530	530	PMRC-715	715	PMRC-913	913	PMRC-1088	1088	PMRC-1556	1556
PMC-295E	295	PMRC-536	536	PMRC-719	719	PMRC-929	929	PMRC-1116	1116	PMRC-1586	1586
PMC-325E	325	PMRC-537	537	PMRC-723	723	PMRC-939	939	PMRC-1117	1117	PMRC-1599	1599
PMRC-332	332	PMRC-545	545	PMRC-725	725	PMRC-940	940	PMRC-1125	1125	PMRC-1625	1625
PMRC-362	362	PMRC-546	546	PMRC-731	731	PMRC-949	949	PMRC-1127	1127	PMRC-1705	1705
PMRC-369	369	PMRC-558	558	PMRC-732	732	PMRC-954	954	PMRC-1137	1137	PMRC-1712	1712
PMRC-376	376	PMRC-559	559	PMRC-735	735	PMRC-955	955	PMRC-1148	1148	PMRC-1776	1776
PMRC-386	386	PMRC-564	564	PMRC-737	737	PMRC-956	956	PMRC-1180	1180	PMRC-1788	1788
PMRC-397	397	PMRC-568	568	PMRC-751	751	PMRC-959	959	PMRC-1182	1182	PMRC-1811	1811
PMRC-400	400	PMRC-579	579	PMRC-772	772	PMRC-962	962	PMRC-1189	1189	PMRC-1877	1877
PMRC-408	408	PMRC-591	591	PMRC-774	774	PMRC-974	974	PMRC-1201	1201	PMRC-1879	1879
PMRC-411	411	PMRC-596	596	PMRC-778	778	PMRC-976	976	PMRC-1203	1203	PMRC-1911	1911
PMRC-420	420	PMRC-600	600	PMRC-792	792	PMRC-980	980	PMRC-1211	1211	PMRC-1913	1913
PMRC-426	426	PMRC-601	601	PMRC-796	796	PMRC-983	983	PMRC-1258	1258	PMRC-1985	1985
PMRC-427	427	PMRC-602	602	PMRC-800	800	PMRC-989	989	PMRC-1261	1261	PMRC-1988	1988
PMRC-428	428	PMRC-605	605	PMRC-801	801	PMRC-992	992	PMRC-1269	1269	PMRC-2019	2019
PMRC-431	431	PMRC-616	616	PMRC-803	803	PMRC-994	994	PMRC-1275	1275	PMRC-2024	2024
PMRC-450	450	PMRC-631	631	PMRC-811	811	PMRC-1002	1002	PMRC-1286	1286	PMRC-2102	2102
PMRC-453	453	PMRC-634	634	PMRC-816	816	PMRC-1004	1004	PMRC-1290	1290	PMRC-2138	2138
PMRC-456	456	PMRC-636	636	PMRC-819	819	PMRC-1006	1006	PMRC-1296	1296		
PMRC-457	457	PMRC-640	640	PMRC-831	831	PMRC-1012	1012	PMRC-1332	1332		
PMRC-464	464	PMRC-641	641	PMRC-840	840	PMRC-1013	1013	PMRC-1333	1333		
PMRC-479	479	PMRC-645	645	PMRC-852	852	PMRC-1021	1021	PMRC-1336	1336		
PMRC-481	481	PMRC-647	647	PMRC-853	853	PMRC-1024	1024	PMRC-1358	1358		
PMRC-488	488	PMRC-667	667	PMRC-856	856	PMRC-1038	1038	PMRC-1362	1362		

Table 5 — Unit Sizes

COND. PRESSURE (psig)		COND. TEMP. (°F)	WET-BULB TEMPERATURE (°F)																	
HCFC-22	HFC-134a		50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84	86
156	95	85	1.05	1.16	1.32	1.43	1.53	1.66	1.83	2.02	2.30	2.64	2.87	3.13	3.46	3.80	-	-	-	-
168	104	90	0.90	0.98	1.10	1.17	1.24	1.31	1.40	1.52	1.65	1.82	1.93	2.05	2.17	2.30	2.75	3.38	-	-
182	114	95	0.78	0.85	0.93	0.98	1.02	1.07	1.12	1.19	1.28	1.37	1.42	1.46	1.52	1.60	1.78	2.02	2.31	2.70
196	124	100	0.70	0.75	0.81	0.84	0.87	0.90	0.93	0.97	1.02	1.08	1.11	1.14	1.19	1.23	1.33	1.44	1.61	1.80
211	135	105	0.63	0.66	0.70	0.72	0.75	0.77	0.80	0.83	0.87	0.97	0.93	0.95	0.97	1.00	1.06	1.13	1.23	1.35
226	146	110	0.57	0.60	0.63	0.65	0.66	0.68	0.70	0.72	0.75	0.78	0.79	0.81	0.83	0.85	0.89	0.94	0.99	1.05

SUCTION TEMP. °F		-20°	-10°	0°	+10°	+20°	+30°	+40°	+50°
SUCTION PRESS. (psig)	HCFC-22	10.1	16.5	24.0	32.8	43.0	54.9	68.5	84.0
	HFC-134a	-1.8	1.9	6.5	11.9	18.4	26.1	35.0	45.4
CAPACITY FACTOR		1.22	1.17	1.13	1.09	1.06	1.03	1.00	0.97

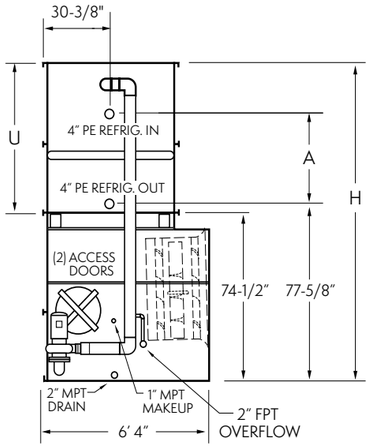
Table 6 — HCFC-22 and HFC-134a Capacity Factors

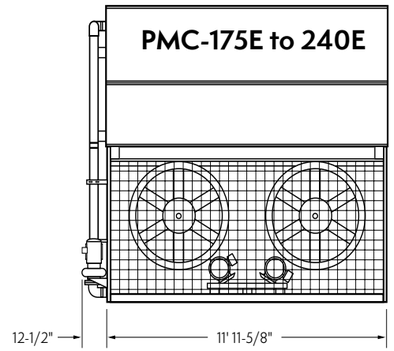
COND. PRESSURE (psig)	COND. TEMP. (°F)	WET-BULB TEMPERATURE (°F)																	
		50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84	86
152	85	0.99	1.09	1.25	1.34	1.44	1.57	1.73	1.91	2.17	2.49	2.71	2.95	3.26	3.59	-	-	-	-
166	90	0.84	0.93	1.03	1.10	1.16	1.23	1.32	1.42	1.55	1.71	1.81	1.92	2.04	2.16	2.59	3.17	-	-
181	95	0.74	0.80	0.87	0.92	0.97	1.01	1.06	1.12	1.21	1.29	1.33	1.38	1.44	1.51	1.68	1.91	2.18	2.55
185	96.3	0.72	0.78	0.85	0.89	0.93	0.97	1.01	1.07	1.14	1.22	1.26	1.30	1.35	1.41	1.56	1.76	2.01	2.33
197	100	0.66	0.71	0.76	0.79	0.82	0.85	0.87	0.91	0.96	1.01	1.04	1.07	1.12	1.15	1.25	1.36	1.52	1.69
214	105	0.59	0.62	0.66	0.68	0.71	0.73	0.75	0.78	0.82	0.86	0.88	0.90	0.91	0.94	1.00	1.07	1.16	1.27
232	110	0.53	0.56	0.59	0.61	0.62	0.64	0.66	0.68	0.71	0.73	0.74	0.76	0.78	0.80	0.84	0.89	0.93	0.99

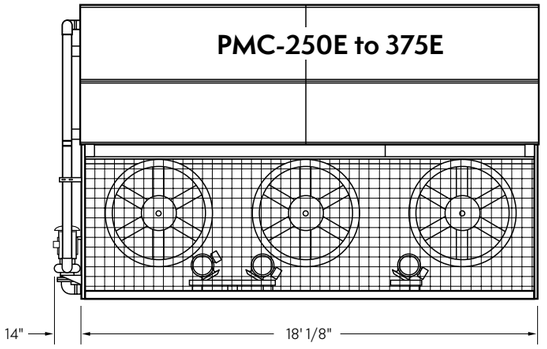
SUCTION TEMP. °F	-30°	-20°	-10°	0°	+10°	+20°	+30°	+40°
SUCTION PRESS. (psig)	-1.6	3.6	9.0	15.7	23.8	33.5	45.0	58.6
CAPACITY FACTOR	1.18	1.14	1.10	1.07	1.03	1.00	0.97	0.95

Table 7 — Ammonia (R-717) Capacity Factors

NOTE: *Consult factory for selections using other refrigerants.*





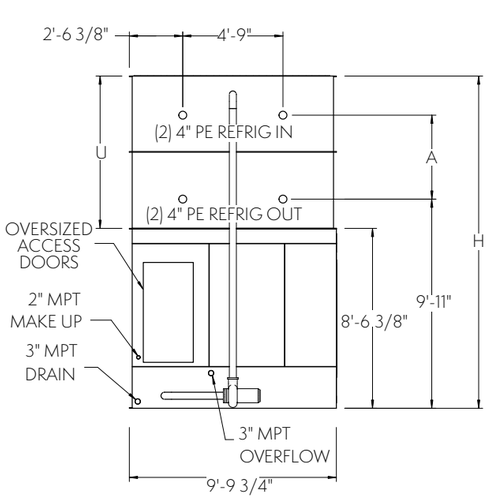


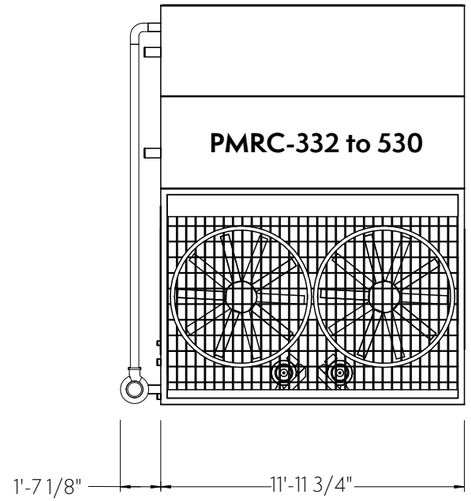
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-175E	124	(2) 5	31,300	8,090	5,220	10,410	165	22	2	345	200	8	9,360	130-3/8	57-3/8	30-3/4
PMC-190E	135	(2) 5	34,000	8,090	5,220	10,410	165	22	2	345	200	8	9,360	130-3/8	57-3/8	30-3/4
PMC-210E	149	(2) 5	33,500	9,050	6,180	11,400	200	28	2	345	200	8	10,350	138-7/8	65-7/8	39-1/4
PMC-220E	156	(2) 5	33,000	10,050	7,180	12,440	240	33	2	345	200	8	11,390	147-3/8	74-3/8	47-3/4
PMC-235E	167	(2) 7.5	36,600	9,150	6,180	11,500	200	28	2	345	200	8	10,450	138-7/8	65-7/8	39-1/4
PMC-240E	170	(2) 7.5	35,500	10,150	7,180	12,540	240	33	2	345	200	8	11,490	147-3/8	74-3/8	47-3/4
PMC-250E	177	(3) 5	54,000	10,570	6,210	13,990	185	25	3	515	260	10	12,040	121-7/8	48-7/8	22-1/4
PMC-275E	195	(3) 5	48,500	12,080	7,720	15,560	240	33	3	515	260	10	13,600	130-3/8	57-3/8	30-3/4
PMC-295E	209	(3) 5	51,900	12,080	7,720	15,560	240	33	3	515	260	10	13,600	130-3/8	57-3/8	30-3/4
PMC-325E	230	(3) 5	50,900	13,530	9,170	17,070	300	41	3	515	260	10	15,110	138-7/8	65-7/8	39-1/4
PMC-335E	238	(3) 5	50,300	15,030	10,670	18,630	360	49	3	515	260	10	16,670	147-3/8	74-3/8	47-3/4
PMC-360E	255	(3) 7.5	57,000	13,690	9,170	17,230	300	41	3	515	260	10	15,270	138-7/8	65-7/8	39-1/4
PMC-375E	266	(3) 7.5	56,300	15,190	10,670	18,790	360	49	3	515	260	10	16,830	147-3/8	74-3/8	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-332 to 530



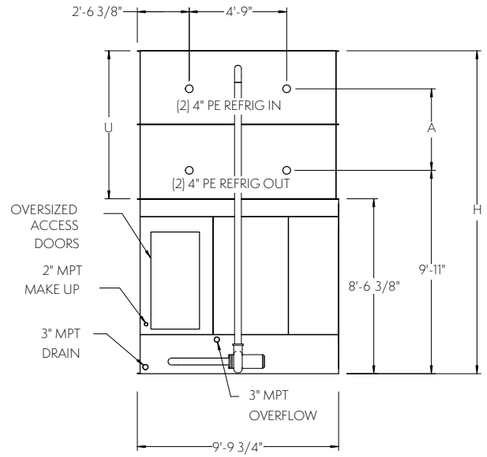


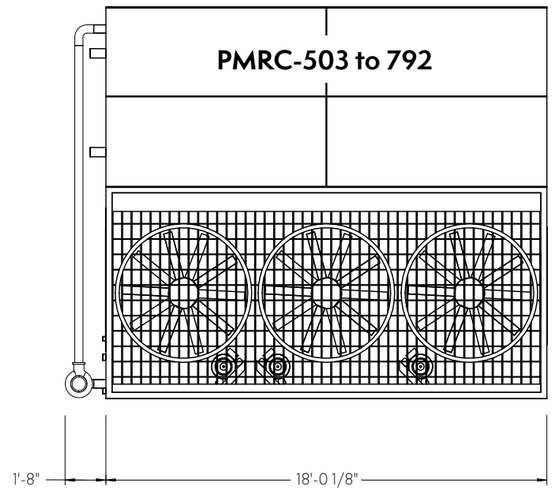
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-332	235	(2) 5	61,000	13,750	8,590	17,460	250	34	5	685	500	10	16,270	163-3/8	61	22-1/4
PMRC-362	257	(2) 5	60,100	15,720	10,560	19,510	325	44	5	685	500	10	18,320	171-7/8	69-1/2	30-3/4
PMRC-369	262	(2) 7.5	70,000	13,880	8,590	17,590	250	34	5	685	500	10	16,370	163-3/8	61	22-1/4
PMRC-386	274	(2) 5	59,200	17,580	12,420	21,450	405	55	5	685	500	10	20,260	180-3/8	78	39-1/4
PMRC-397	282	(2) 10	77,200	13,920	8,590	17,630	250	34	5	685	500	10	16,400	163-3/8	61	22-1/4
PMRC-400	284	(2) 7.5	69,000	15,850	10,560	19,640	325	44	5	685	500	10	18,420	171-7/8	69-1/2	30-3/4
PMRC-411	291	(2) 5	58,400	19,530	14,370	23,470	480	66	5	685	500	10	22,280	188-7/8	86-1/2	47-3/4
PMRC-426	302	(2) 7.5	67,900	17,710	12,420	21,580	405	55	5	685	500	10	20,360	180-3/8	78	39-1/4
PMRC-428	304	(2) 15	88,700	14,180	8,590	17,890	250	34	5	685	500	10	16,660	163-3/8	61	22-1/4
PMRC-431	306	(2) 10	76,000	15,890	10,560	19,680	325	44	5	685	500	10	18,450	171-7/8	69-1/2	30-3/4
PMRC-453	321	(2) 7.5	66,900	19,660	14,370	23,600	480	66	5	685	500	10	22,380	188-7/8	86-1/2	47-3/4
PMRC-457	324	(2) 10	74,900	17,750	12,420	21,620	405	55	5	685	500	10	20,390	180-3/8	78	39-1/4
PMRC-464	329	(2) 15	87,400	16,150	10,560	19,940	325	44	5	685	500	10	18,710	171-7/8	69-1/2	30-3/4
PMRC-481	341	(2) 10	73,800	19,700	14,370	23,640	480	66	5	685	500	10	22,410	188-7/8	86-1/2	47-3/4
PMRC-492	349	(2) 15	86,100	18,010	12,420	21,880	405	55	5	685	500	10	24,840	180-3/8	78	39-1/4
PMRC-519	368	(2) 15	84,800	19,960	14,370	23,900	480	66	5	685	500	10	20,650	188-7/8	86-1/2	47-3/4
PMRC-530	376	(2) 15	83,500	22,310	16,720	26,330	560	76	5	685	500	10	25,100	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-503 to 792



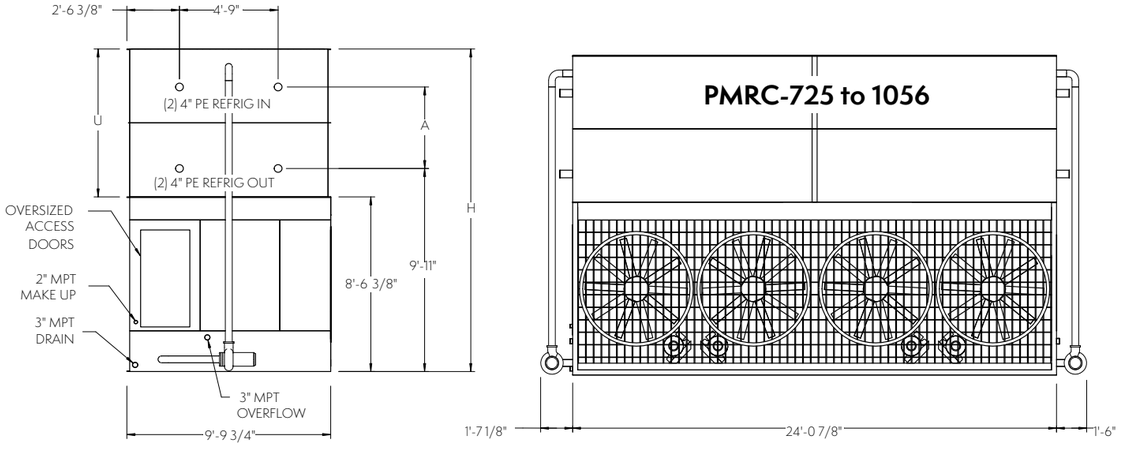


MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-503	357	(3) 5	91,800	19,910	12,580	25,660	365	50	7.5	1,030	620	12	24,030	163-3/8	61	22-1/4
PMRC-546	387	(3) 5	90,500	22,840	15,510	28,710	485	66	7.5	1,030	620	12	27,080	171-7/8	69-1/2	30-3/4
PMRC-558	396	(3) 7.5	105,300	20,100	12,580	25,850	365	50	7.5	1,030	620	12	24,220	163-3/8	61	22-1/4
PMRC-579	411	(3) 5	89,100	25,660	18,330	31,650	600	82	7.5	1,030	620	12	30,010	180-3/8	78	39-1/4
PMRC-596	423	(3) 10	116,100	20,170	12,580	25,920	365	50	7.5	1,030	620	12	24,290	163-3/8	61	22-1/4
PMRC-602	427	(3) 5	87,800	28,590	21,260	34,700	720	98	7.5	1,030	620	12	33,060	188-7/8	86-1/2	47-3/4
PMRC-605	429	(3) 7.5	103,800	23,030	15,510	28,900	485	66	7.5	1,030	620	12	27,270	171-7/8	69-1/2	30-3/4
PMRC-636	451	(3) 15	133,500	20,550	12,580	26,300	365	50	7.5	1,030	620	12	24,670	163-3/8	61	22-1/4
PMRC-641	455	(3) 7.5	102,200	25,850	18,330	31,840	600	82	7.5	1,030	620	12	30,200	180-3/8	78	39-1/4
PMRC-645	457	(3) 10	114,400	23,100	15,510	28,970	485	66	7.5	1,030	620	12	27,340	171-7/8	69-1/2	30-3/4
PMRC-668	474	(3) 7.5	100,700	28,780	21,260	34,890	720	98	7.5	1,030	620	12	33,250	188-7/8	86-1/2	47-3/4
PMRC-690	489	(3) 15	131,500	23,480	15,510	29,350	485	66	7.5	1,030	620	12	27,720	171-7/8	69-1/2	30-3/4
PMRC-691	490	(3) 10	112,700	25,920	18,330	31,910	600	82	7.5	1,030	620	12	30,270	180-3/8	78	39-1/4
PMRC-719	510	(3) 10	111,100	28,850	21,260	34,960	720	98	7.5	1,030	620	12	33,320	188-7/8	86-1/2	47-3/4
PMRC-731	518	(3) 15	129,600	26,300	18,330	32,290	600	82	7.5	1,030	620	12	30,650	180-3/8	78	39-1/4
PMRC-732	519	(3) 10	109,400	32,380	24,790	38,600	835	114	7.5	1,030	620	12	36,970	188-7/8	86-1/2	47-3/4
PMRC-778	552	(3) 15	127,600	29,230	21,260	35,340	720	98	7.5	1,030	620	12	33,700	188-7/8	86-1/2	47-3/4
PMRC-792	562	(3) 15	125,700	32,760	24,790	38,980	835	114	7.5	1,030	620	12	37,350	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-725 to 1056

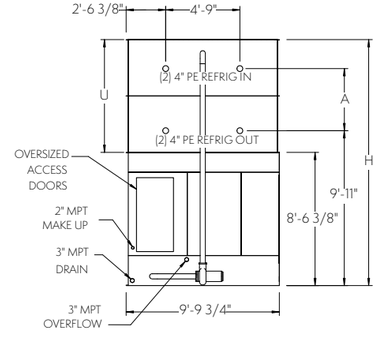


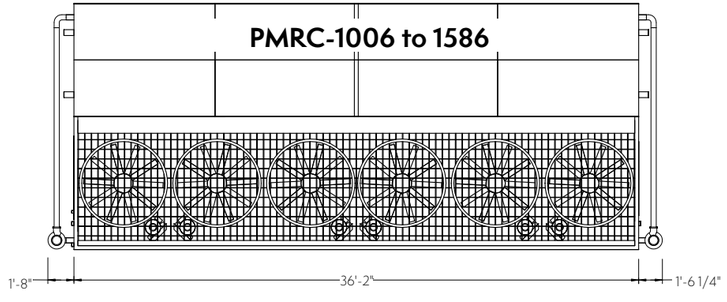
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-725	514	(4) 5	120,200	30,310	10,360	38,240	650	89	(2) 5	1,370	930	12	36,850	171-7/8	69-1/2	30-3/4
PMRC-735	521	(4) 7.5	140,000	26,410	9,830	34,180	495	68	(2) 5	1,370	930	12	32,800	163-3/8	61	22-1/4
PMRC-772	548	(4) 5	118,500	34,230	12,320	42,310	805	110	(2) 5	1,370	930	12	40,930	180-3/8	78	39-1/4
PMRC-801	568	(4) 7.5	137,900	30,550	10,360	38,480	650	89	(2) 5	1,370	930	12	37,090	171-7/8	69-1/2	30-3/4
PMRC-853	605	(4) 7.5	135,900	34,470	12,320	42,550	805	110	(2) 5	1,370	930	12	41,170	180-3/8	78	39-1/4
PMRC-863	612	(4) 10	152,100	30,650	10,360	38,580	650	89	(2) 5	1,370	930	12	37,190	171-7/8	69-1/2	30-3/4
PMRC-888	630	(4) 7.5	133,900	38,570	14,370	46,810	960	131	(2) 5	1,370	930	12	45,420	188-7/8	86-1/2	47-3/4
PMRC-929	659	(4) 15	174,800	31,160	10,440	39,090	650	89	(2) 5	1,370	930	12	37,700	171-7/8	69-1/2	30-3/4
PMRC-962	682	(4) 10	147,600	38,670	14,370	46,910	960	131	(2) 5	1,370	930	12	45,520	188-7/8	86-1/2	47-3/4
PMRC-980	695	(4) 10	145,400	43,370	16,720	51,760	1,115	152	(2) 5	1,370	930	12	50,380	188-7/8	86-1/2	47-3/4
PMRC-983	697	(4) 15	172,200	35,080	12,320	43,160	805	110	(2) 5	1,370	930	12	41,780	180-3/8	78	39-1/4
PMRC-1038	736	(4) 15	169,600	39,180	14,370	47,420	960	131	(2) 5	1,370	930	12	46,030	188-7/8	86-1/2	47-3/4
PMRC-1056	749	(4) 15	167,100	43,880	16,720	52,270	1,115	152	(2) 5	1,370	930	12	50,890	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-1006 to 1586



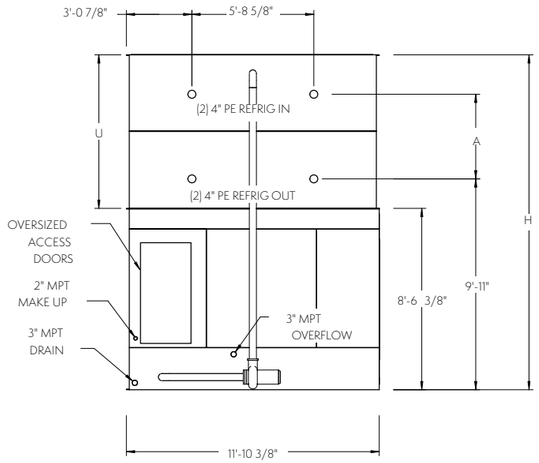


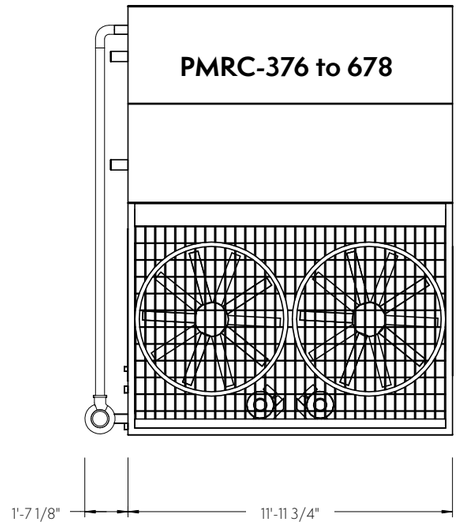
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-1006	713	(6) 5	183,700	38,210	13,810	50,030	735	100	(2) 7.5	2,060	1,400	14	47,900	163-3/8	61	22-1/4
PMRC-1088	772	(6) 5	181,000	44,330	15,260	56,390	970	132	(2) 7.5	2,060	1,400	14	54,260	171-7/8	69-1/2	30-3/4
PMRC-1116	791	(6) 7.5	210,600	38,580	14,180	50,400	735	100	(2) 7.5	2,060	1,400	14	48,270	163-3/8	61	22-1/4
PMRC-1148	814	(6) 5	178,300	50,230	18,210	62,520	1,205	164	(2) 7.5	2,060	1,400	14	60,390	180-3/8	78	39-1/4
PMRC-1189	843	(6) 10	232,300	38,720	14,320	50,540	735	100	(2) 7.5	2,060	1,400	14	48,410	163-3/8	61	22-1/4
PMRC-1211	859	(6) 7.5	207,500	44,700	15,260	56,760	970	132	(2) 7.5	2,060	1,400	14	54,630	171-7/8	69-1/2	30-3/4
PMRC-1275	904	(6) 7.5	204,500	50,600	18,210	62,890	1,205	164	(2) 7.5	2,060	1,400	14	60,760	180-3/8	78	39-1/4
PMRC-1290	915	(6) 10	228,900	44,840	15,260	56,900	970	132	(2) 7.5	2,060	1,400	14	54,770	171-7/8	69-1/2	30-3/4
PMRC-1333	945	(6) 7.5	201,400	56,700	21,260	69,220	1,435	196	(2) 7.5	2,060	1,400	14	67,090	188-7/8	86-1/2	47-3/4
PMRC-1382	980	(6) 10	225,500	50,740	18,210	63,030	1,205	164	(2) 7.5	2,060	1,400	14	60,900	180-3/8	78	39-1/4
PMRC-1438	1,020	(6) 10	222,100	56,840	21,260	69,360	1,435	196	(2) 7.5	2,060	1,400	14	67,230	188-7/8	86-1/2	47-3/4
PMRC-1466	1,040	(6) 10	218,800	63,900	24,790	76,660	1,670	228	(2) 7.5	2,060	1,400	14	74,530	188-7/8	86-1/2	47-3/4
PMRC-1556	1,104	(6) 15	255,300	57,600	21,260	70,120	1,435	196	(2) 7.5	2,060	1,400	14	67,990	188-7/8	86-1/2	47-3/4
PMRC-1586	1,125	(6) 15	251,500	64,660	24,790	77,420	1,670	228	(2) 7.5	2,060	1,400	14	75,290	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-376 to 678



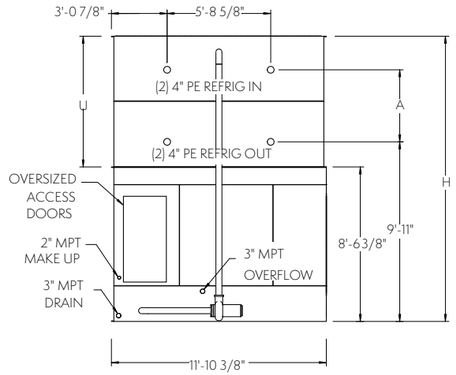


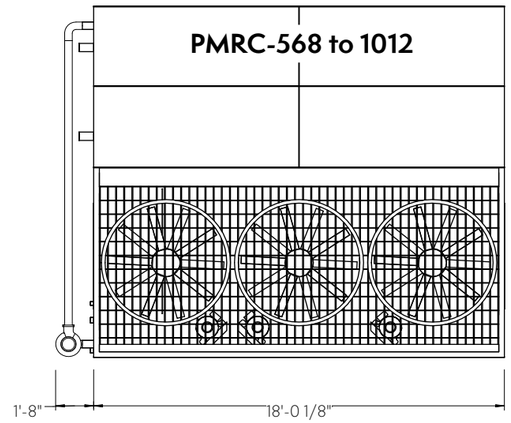
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC†	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-376	267	(2) 5	73,523	15,550	9,970	20,240	305	42	5	800	570	10	19,560	163-3/8	61	22-1/4
PMRC-408	289	(2) 5	72,409	17,940	12,360	22,730	400	55	5	800	570	10	22,050	171-7/8	69-1/2	30-3/4
PMRC-420	298	(2) 7.5	79,200	15,680	9,970	20,370	305	42	5	800	570	10	19,690	163-3/8	61	22-1/4
PMRC-427	303	(2) 5	71,480	20,210	14,630	25,090	495	68	5	800	570	10	24,410	180-3/8	78	39-1/4
PMRC-450	319	(2) 10	84,500	15,720	9,970	20,410	305	42	5	800	570	10	19,730	163-3/8	61	22-1/4
PMRC-456	323	(2) 7.5	78,000	18,070	12,360	22,860	400	55	5	800	570	10	22,180	171-7/8	69-1/2	30-3/4
PMRC-479	340	(2) 7.5	77,000	20,340	14,630	25,220	495	68	5	800	570	10	24,540	180-3/8	78	39-1/4
PMRC-488	346	(2) 10	83,200	18,110	12,360	22,900	400	55	5	800	570	10	22,220	171-7/8	69-1/2	30-3/4
PMRC-495	351	(2) 15	97,100	15,980	9,970	20,670	305	42	5	800	570	10	19,990	163-3/8	61	22-1/4
PMRC-501	355	(2) 7.5	75,700	22,570	16,860	27,550	595	81	5	800	570	10	26,870	188-7/8	86-1/2	47-3/4
PMRC-513	364	(2) 10	82,000	20,380	14,630	25,260	495	68	5	800	570	10	24,580	180-3/8	78	39-1/4
PMRC-515	365	(2) 20	100,300	16,140	9,970	20,830	305	42	5	800	570	10	20,150	163-3/8	61	22-1/4
PMRC-536	380	(2) 15	95,600	18,370	12,360	23,160	400	55	5	800	570	10	22,480	171-7/8	69-1/2	30-3/4
PMRC-537	381	(2) 10	80,800	22,610	16,860	27,590	595	81	5	800	570	10	26,910	188-7/8	86-1/2	47-3/4
PMRC-545	387	(2) 10	79,600	25,370	19,620	30,450	690	94	5	800	570	10	29,770	188-7/8	86-1/2	47-3/4
PMRC-559	396	(2) 20	98,700	18,530	12,360	23,320	400	55	5	800	570	10	22,640	171-7/8	69-1/2	30-3/4
PMRC-564	400	(2) 15	94,400	20,640	14,630	25,520	495	68	5	800	570	10	24,840	180-3/8	78	39-1/4
PMRC-591	419	(2) 15	92,800	22,870	16,860	27,850	595	81	5	800	570	10	27,170	188-7/8	86-1/2	47-3/4
PMRC-601	426	(2) 20	100,300	20,800	14,630	25,680	495	68	5	800	570	10	25,000	180-3/8	78	39-1/4
PMRC-600	426	(2) 15	91,400	25,630	19,620	30,710	690	94	5	800	570	10	30,030	188-7/8	86-1/2	47-3/4
PMRC-631	448	(2) 20	98,800	23,030	16,860	28,010	595	81	5	800	570	10	27,330	188-7/8	86-1/2	47-3/4
PMRC-640	454	(2) 20	97,300	25,790	19,620	30,870	690	94	5	800	570	10	30,190	188-7/8	86-1/2	47-3/4
PMRC-667	473	(2) 25	104,700	23,120	16,860	28,100	595	81	5	800	570	10	27,420	188-7/8	86-1/2	47-3/4
PMRC-678	481	(2) 25	103,100	25,880	19,620	30,960	690	94	5	800	570	10	30,280	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
† *Heaviest section is the upper coil section. When 5.12 seismic design is required consult the factory for specific weights.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-568 to 1012



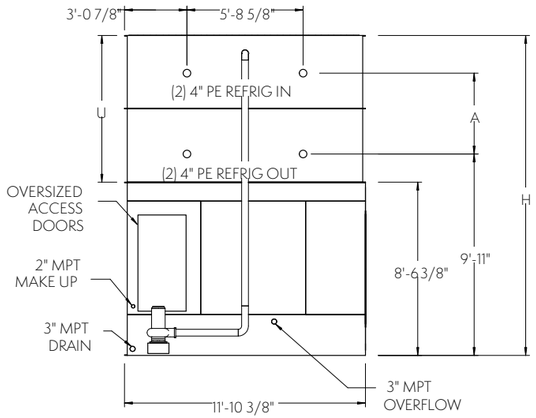


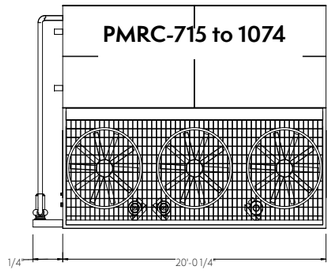
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-568	403	(3) 5	109,913	23,060	14,920	29,860	450	62	7.5	1,200	740	12	27,730	163-3/8	61	22-1/4
PMRC-616	437	(3) 5	108,335	26,630	18,490	33,570	595	81	7.5	1,200	740	12	31,440	171-7/8	69-1/2	30-3/4
PMRC-634	450	(3) 7.5	118,400	23,250	14,920	30,050	450	62	7.5	1,200	740	12	27,920	163-3/8	61	22-1/4
PMRC-647	459	(3) 5	106,942	30,070	21,930	37,160	740	101	7.5	1,200	740	12	35,030	180-3/8	78	39-1/4
PMRC-675	479	(3) 5	105,178	33,280	25,140	40,510	885	121	7.5	1,200	740	12	38,380	188-7/8	86-1/2	47-3/4
PMRC-679	482	(3) 10	126,300	23,320	14,920	30,120	450	62	7.5	1,200	740	12	27,990	163-3/8	61	22-1/4
PMRC-688	488	(3) 7.5	116,700	26,820	18,490	33,760	595	81	7.5	1,200	740	12	31,630	171-7/8	69-1/2	30-3/4
PMRC-723	513	(3) 7.5	115,200	30,260	21,930	37,350	740	101	7.5	1,200	740	12	35,220	180-3/8	78	39-1/4
PMRC-737	523	(3) 10	124,500	26,890	18,490	33,830	595	81	7.5	1,200	740	12	31,700	171-7/8	69-1/2	30-3/4
PMRC-751	533	(3) 7.5	113,300	33,470	25,140	40,700	885	121	7.5	1,200	740	12	38,570	188-7/8	86-1/2	47-3/4
PMRC-774	549	(3) 10	122,600	30,330	21,930	37,420	740	101	7.5	1,200	740	12	35,290	180-3/8	78	39-1/4
PMRC-800	567	(3) 15	143,000	27,270	18,490	34,210	595	81	7.5	1,200	740	12	32,080	171-7/8	69-1/2	30-3/4
PMRC-803	570	(3) 10	120,800	33,540	25,140	40,770	885	121	7.5	1,200	740	12	38,640	188-7/8	86-1/2	47-3/4
PMRC-819	581	(3) 10	119,000	37,660	29,260	45,040	1,030	140	7.5	1,200	740	12	42,910	188-7/8	86-1/2	47-3/4
PMRC-831	589	(3) 20	147,600	27,510	18,490	34,450	595	81	7.5	1,200	740	12	32,320	171-7/8	69-1/2	30-3/4
PMRC-856	607	(3) 15	141,200	30,710	21,930	37,800	740	101	7.5	1,200	740	12	35,670	180-3/8	78	39-1/4
PMRC-889	630	(3) 15	138,800	33,920	25,140	41,150	885	121	7.5	1,200	740	12	39,020	188-7/8	86-1/2	47-3/4
PMRC-894	634	(3) 20	149,900	30,950	21,930	38,040	740	101	7.5	1,200	740	12	35,910	180-3/8	78	39-1/4
PMRC-905	642	(3) 15	136,700	38,040	29,260	45,420	1,030	140	7.5	1,200	740	12	43,290	188-7/8	86-1/2	47-3/4
PMRC-939	666	(3) 20	147,700	34,160	25,140	41,390	885	121	7.5	1,200	740	12	39,260	188-7/8	86-1/2	47-3/4
PMRC-955	677	(3) 20	145,500	38,280	29,260	45,660	1,030	140	7.5	1,200	740	12	43,530	188-7/8	86-1/2	47-3/4
PMRC-994	705	(3) 25	156,500	34,290	25,140	41,520	885	121	7.5	1,200	740	12	39,390	188-7/8	86-1/2	47-3/4
PMRC-1012	718	(3) 25	154,200	38,410	29,260	45,790	1,030	140	7.5	1,200	740	12	43,660	188-7/8	86-1/2	47-3/4

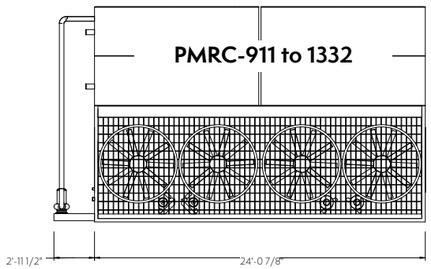
* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-715 to 1332



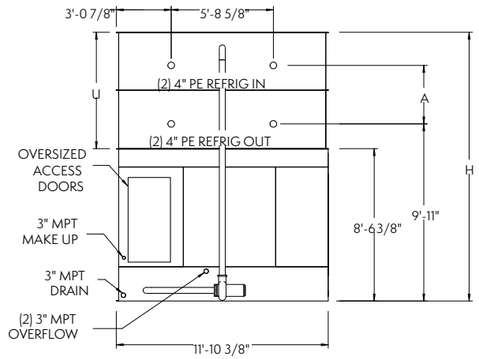


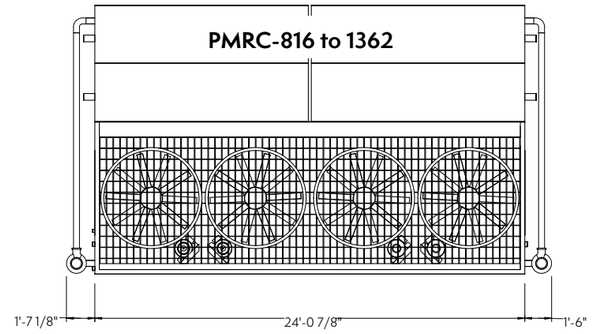


MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-715	507	(3) 5	111,398	36,880	28,190	45,120	985	134	10	1,400	810	14	42,720	188-7/8	86-1/2	47-3/4
PMRC-796	565	(3) 7.5	120,000	37,070	28,190	45,310	985	134	10	1,400	810	14	42,910	188-7/8	86-1/2	47-3/4
PMRC-811	575	(3) 10	130,000	33,070	24,120	41,140	820	112	10	1,400	810	14	38,750	180-3/8	78	39-1/4
PMRC-852	604	(3) 10	128,000	37,140	28,190	45,380	985	134	10	1,400	810	14	42,980	188-7/8	86-1/2	47-3/4
PMRC-895	635	(3) 15	149,600	33,450	24,120	41,520	820	112	10	1,400	810	14	39,130	180-3/8	78	39-1/4
PMRC-940	667	(3) 15	147,100	37,520	28,190	45,760	985	134	10	1,400	810	14	43,360	188-7/8	86-1/2	47-3/4
PMRC-949	673	(3) 20	158,900	33,690	24,120	41,760	820	112	10	1,400	810	14	39,370	180-3/8	78	39-1/4
PMRC-959	680	(3) 15	144,900	42,170	32,840	50,570	1,145	156	10	1,400	810	14	48,170	188-7/8	86-1/2	47-3/4
PMRC-992	704	(3) 20	156,600	37,760	28,190	46,000	985	134	10	1,400	810	14	43,600	188-7/8	86-1/2	47-3/4
PMRC-1013	718	(3) 20	154,300	42,410	32,840	50,810	1,145	156	10	1,400	810	14	48,410	188-7/8	86-1/2	47-3/4
PMRC-1050	745	(3) 25	165,900	37,890	28,190	46,130	985	134	10	1,400	810	14	43,730	188-7/8	86-1/2	47-3/4
PMRC-1074	762	(3) 25	163,500	42,540	32,840	50,940	1,145	156	10	1,400	810	14	48,540	188-7/8	86-1/2	47-3/4
PMRC-911	646	(4) 7.5	166,800	33,910	23,710	45,070	790	108	10P	1,600	1,080	14	42,270	178-7/8	76-1/2	38-3/4
PMRC-954	677	(4) 7.5	164,300	39,160	28,300	49,790	985	134	10P	1,600	1,080	14	47,710	188-7/8	86-1/2	48-3/4
PMRC-974	691	(4) 10	166,800	34,660	23,710	45,100	790	108	10P	1,600	1,080	14	43,010	178-7/8	76-1/2	38-3/4
PMRC-1002	711	(4) 7.5	161,900	44,020	33,160	54,850	1,180	161	10P	1,600	1,080	14	52,760	198-7/8	96-1/2	58-3/4
PMRC-1021	724	(4) 10	164,300	39,250	28,300	49,880	985	134	10P	1,600	1,080	14	47,800	188-7/8	86-1/2	48-3/4
PMRC-1070	759	(4) 10	161,900	44,110	33,160	54,940	1,180	161	10P	1,600	1,080	14	52,850	198-7/8	96-1/2	58-3/4
PMRC-1071	760	(4) 15	191,600	35,170	23,710	45,610	790	108	10P	1,600	1,080	14	43,520	178-7/8	76-1/2	38-3/4
PMRC-1125	798	(4) 15	189,100	39,760	28,300	50,390	985	134	10P	1,600	1,080	14	48,310	188-7/8	86-1/2	48-3/4
PMRC-1180	837	(4) 15	186,000	44,620	33,160	55,450	1,180	161	10P	1,600	1,080	14	53,360	198-7/8	96-1/2	58-3/4
PMRC-1201	852	(4) 20	200,900	40,080	28,300	50,710	985	134	10P	1,600	1,080	14	48,630	188-7/8	86-1/2	48-3/4
PMRC-1258	892	(4) 20	197,900	44,940	33,160	55,770	1,180	161	10P	1,600	1,080	14	53,680	198-7/8	96-1/2	58-3/4
PMRC-1332	945	(4) 25	209,700	45,120	33,160	55,950	1,180	161	10P	1,600	1,080	14	53,860	198-7/8	96-1/2	58-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*
‡ ***These units are available for ammonia applications only.*** *Dimensions are subject to change. Do not use for prefabrication.*

Engineering Dimensions & Data
Models PMRC-816 to 1362



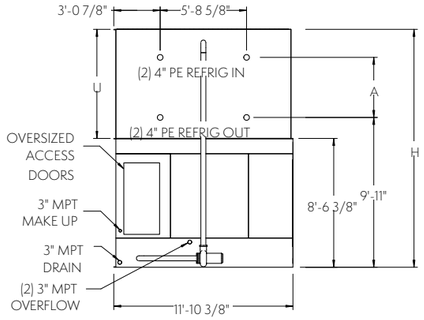


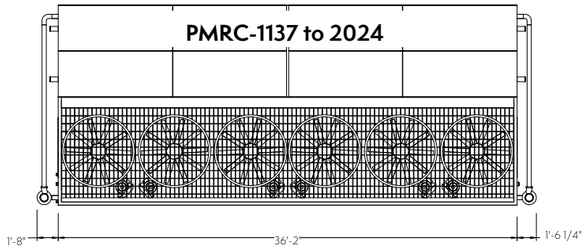
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-816	579	(4) 5	144,910	34,750	12,150	44,600	805	109	(2) 5	1,600	1,080	14	42,520	171-7/8	69-1/2	30-3/4
PMRC-840	596	(4) 7.5	158,400	29,980	10,700	39,630	610	83	(2) 5	1,600	1,080	14	37,550	163-3/8	61	22-1/4
PMRC-900	638	(4) 10	169,000	30,070	10,790	39,720	610	83	(2) 5	1,600	1,080	14	37,640	163-3/8	61	22-1/4
PMRC-913	648	(4) 7.5	156,100	35,000	12,150	44,850	805	109	(2) 5	1,600	1,080	14	42,770	171-7/8	69-1/2	30-3/4
PMRC-956	678	(4) 7.5	154,000	39,760	14,530	49,800	995	135	(2) 5	1,600	1,080	14	47,720	180-3/8	78	39-1/4
PMRC-976	692	(4) 10	166,500	35,090	12,150	44,940	805	109	(2) 5	1,600	1,080	14	42,860	171-7/8	69-1/2	30-3/4
PMRC-989	701	(4) 15	194,200	30,580	11,300	40,230	610	83	(2) 5	1,600	1,080	14	38,150	163-3/8	61	22-1/4
PMRC-1004	712	(4) 7.5	151,500	44,420	16,860	54,650	1,185	161	(2) 5	1,600	1,080	14	52,570	188-7/8	86-1/2	47-3/4
PMRC-1024	726	(4) 10	164,000	39,850	14,530	49,890	995	135	(2) 5	1,600	1,080	14	47,810	180-3/8	78	39-1/4
PMRC-1072	760	(4) 10	161,600	44,510	16,860	54,740	1,185	161	(2) 5	1,600	1,080	14	52,660	188-7/8	86-1/2	47-3/4
PMRC-1073	761	(4) 15	191,300	35,600	12,150	45,450	805	109	(2) 5	1,600	1,080	14	43,370	171-7/8	69-1/2	30-3/4
PMRC-1117	792	(4) 20	197,400	35,920	12,150	45,770	805	109	(2) 5	1,600	1,080	14	43,690	171-7/8	69-1/2	30-3/4
PMRC-1127	799	(4) 15	188,800	40,360	14,530	50,400	995	135	(2) 5	1,600	1,080	14	48,320	180-3/8	78	39-1/4
PMRC-1182	838	(4) 15	185,700	45,020	16,860	55,250	1,185	161	(2) 5	1,600	1,080	14	53,170	188-7/8	86-1/2	47-3/4
PMRC-1203	853	(4) 20	200,500	40,680	14,530	50,720	995	135	(2) 5	1,600	1,080	14	48,640	180-3/8	78	39-1/4
PMRC-1205	855	(4) 15	182,900	49,960	19,620	61,100	1,375	188	(2) 5	1,600	1,080	14	58,300	188-7/8	86-1/2	47-3/4
PMRC-1261	894	(4) 20	197,600	45,340	16,860	55,570	1,185	161	(2) 5	1,600	1,080	14	53,490	188-7/8	86-1/2	47-3/4
PMRC-1286	912	(4) 20	194,600	50,860	19,620	61,280	1,375	188	(2) 5	1,600	1,080	14	59,200	188-7/8	86-1/2	47-3/4
PMRC-1336	948	(4) 25	209,400	45,520	16,860	55,750	1,185	161	(2) 5	1,600	1,080	14	53,670	188-7/8	86-1/2	47-3/4
PMRC-1362	966	(4) 25	206,200	51,040	19,620	61,460	1,375	188	(2) 5	1,600	1,080	14	59,380	188-7/8	86-1/2	47-3/4

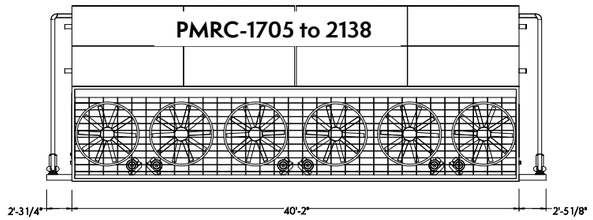
* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Engineering Dimensions & Data
Models PMRC-1137 to 2138







MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMRC-1137	806	(6) 5	219,826	43,930	14,910	58,260	905	123	(2) 7.5	2,400	1,460	16	53,690	163-3/8	61	22-1/4
PMRC-1269	900	(6) 7.5	236,800	44,310	15,290	58,640	905	123	(2) 7.5	2,400	1,460	16	54,070	163-3/8	61	22-1/4
PMRC-1296	919	(6) 5	213,792	58,490	21,790	73,390	1,480	202	(2) 7.5	2,400	1,460	16	68,820	180-3/8	78	39-1/4
PMRC-1358	963	(6) 10	252,600	17,030	11,960	28,050	1,370	123	(2) 7.5	2,400	1,080	16	25,960	163-3/8	61	22-1/4
PMRC-1376	976	(6) 7.5	233,300	51,710	18,210	66,330	1,195	163	(2) 7.5	2,400	1,460	16	61,760	171-7/8	69-1/2	30-3/4
PMRC-1446	1,026	(6) 7.5	230,300	58,870	21,790	73,770	1,480	202	(2) 7.5	2,400	1,460	16	69,200	180-3/8	78	39-1/4
PMRC-1473	1,045	(6) 10	248,900	51,840	18,210	66,460	1,195	163	(2) 7.5	2,400	1,460	16	61,890	171-7/8	69-1/2	30-3/4
PMRC-1549	1,099	(6) 10	245,200	59,000	21,790	73,900	1,480	202	(2) 7.5	2,400	1,460	16	69,330	180-3/8	78	39-1/4
PMRC-1599	1,134	(6) 15	286,000	52,610	18,210	67,230	1,195	163	(2) 7.5	2,400	1,460	16	62,660	171-7/8	69-1/2	30-3/4
PMRC-1625	1,152	(6) 10	241,600	65,700	25,140	80,890	1,770	241	(2) 7.5	2,400	1,460	16	76,320	188-7/8	86-1/2	47-3/4
PMRC-1712	1,214	(6) 15	282,300	59,770	21,790	74,670	1,480	202	(2) 7.5	2,400	1,460	16	70,100	180-3/8	78	39-1/4
PMRC-1776	1,260	(6) 15	277,600	66,470	25,140	81,660	1,770	241	(2) 7.5	2,400	1,460	16	77,090	188-7/8	86-1/2	47-3/4
PMRC-1788	1,268	(6) 20	299,800	60,250	21,790	75,150	1,480	202	(2) 7.5	2,400	1,460	16	70,580	180-3/8	78	39-1/4
PMRC-1811	1,284	(6) 15	273,400	74,710	29,260	90,190	2,060	281	(2) 7.5	2,400	1,460	16	85,620	188-7/8	86-1/2	47-3/4
PMRC-1877	1,331	(6) 20	295,400	66,950	25,140	82,140	1,770	241	(2) 7.5	2,400	1,460	16	77,570	188-7/8	86-1/2	47-3/4
PMRC-1911	1,355	(6) 20	291,000	75,190	29,260	90,670	2,060	281	(2) 7.5	2,400	1,460	16	86,100	188-7/8	86-1/2	47-3/4
PMRC-1988	1,410	(6) 25	313,100	67,220	25,140	82,410	1,770	241	(2) 7.5	2,400	1,460	16	77,840	188-7/8	86-1/2	47-3/4
PMRC-2024	1,435	(6) 25	308,400	75,460	29,260	90,940	2,060	281	(2) 7.5	2,400	1,460	16	86,370	188-7/8	86-1/2	47-3/4
PMRC-1705	1,209	(6) 10	256,100	73,340	28,390	90,060	1,965	268	(2) 10	2,800	1,630	16	85,040	188-7/8	86-1/2	47-3/4
PMRC-1879	1,333	(6) 15	294,300	74,100	28,390	90,820	1,965	268	(2) 10	2,800	1,630	16	85,800	188-7/8	86-1/2	47-3/4
PMRC-1913	1,357	(6) 15	289,900	83,400	33,040	100,450	2,290	312	(2) 10	2,800	1,630	16	95,420	188-7/8	86-1/2	47-3/4
PMRC-1985	1,408	(6) 20	313,100	74,580	28,390	91,300	1,965	268	(2) 10	2,800	1,630	16	86,280	188-7/8	86-1/2	47-3/4
PMRC-2019	1,432	(6) 20	308,400	83,880	33,040	100,930	2,290	312	(2) 10	2,800	1,630	16	95,900	188-7/8	86-1/2	47-3/4
PMRC-2102	1,491	(6) 25	331,800	74,850	28,390	91,570	1,965	268	(2) 10	2,800	1,630	16	86,550	188-7/8	86-1/2	47-3/4
PMRC-2138	1,516	(6) 25	326,900	84,150	33,040	101,200	2,290	312	(2) 10	2,800	1,630	16	96,170	188-7/8	86-1/2	47-3/4

* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
*** *Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)*

Dimensions are subject to change. Do not use for prefabrication.

Optional Equipment

Pulse~Pure®



Pulse~Pure® is an environmentally sensitive non-chemical water treatment system for evaporative condensers. Developed by EVAPCO, ***Pulse***~Pure® offers an alternative to chemical water treatment programs. By utilizing pulsed electric fields, ***Pulse***~Pure® is able to control microbiological growth, scale, and corrosion.

Smart Shield® Solid Chemistry Water Treatment System



EVAPCO's Smart Shield® solid chemistry water treatment system is an innovative solution to conventional liquid chemical programs. Smart Shield® was developed specifically for evaporative condensers and closed circuit coolers. The system comes factory mounted and includes all the components required for an effective water treatment system. Solid products eliminate the potential for liquid spills making it easier and safer to use. Controlled release chemistry provides uniform treatment over a 30-day period.

Self-Supporting Service Platforms

Condensers are available with self-supporting service platforms that include access ladders, which are designed for easy field installation. This option offers significant savings in comparison to field-constructed, externally supported catwalks. The EVAPCO service platform option may be installed on either side, or the end opposite the connections.

Remote Sump Configuration

For units operating in areas where temperatures may be very low, or where low temperatures may occur during periods when the unit is not operating, a sump located inside the building is the preferred means of ensuring that the basin water will not freeze. For these applications, the condenser will be supplied without the spray pump, suction strainers and all associated piping, but with an oversize bottom outlet.

Electric Water Level Control



Evaporative condensers may be ordered with an electric water level control in lieu of the standard mechanical float and makeup assembly. This package provides accurate control of water levels and does not require field adjustment.

Water Level Indicator

Condensers may be supplied with a water level indicator to provide a visual indication of basin water level without opening access doors or air inlet louvers. The level indicator can be furnished with optional low- and high-level alarm switches or a transmitter for continuous level monitoring.

Super Low Sound Fan



Super Low Sound Fan

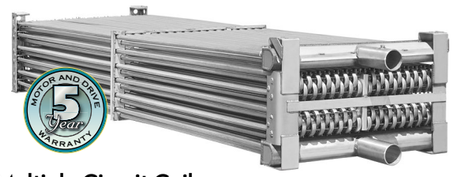
EVAPCO's Super Low Sound Fan utilizes an extremely wide chord blade design and is ideal for low energy, sound-sensitive installations without sacrificing thermal performance. This revolutionary technology is one-piece molded, heavy-duty fiberglass reinforced polyester hub and blade construction utilizing a forward swept blade design. The Super Low Sound Fan is capable of reducing the unit sound pressure levels 10 dB(A) to 13 dB(A) depending on specific unit selection and measurement location.

ASME Coils

Evaporative condensers can be furnished with condensing coils manufactured in accordance with the ASME Pressure Vessel Code Section VIII, Division I. Coils built with this option will bear a U-stamp indicating their compliance with the ASME code.

TITAN Coils — Stainless Steel Construction

EVAPCO offers the option of Type 304L or Type 316L stainless steel construction using the Thermal-Pak II® coil design. These highly efficient heat transfer coils offer the ultimate corrosion protection.

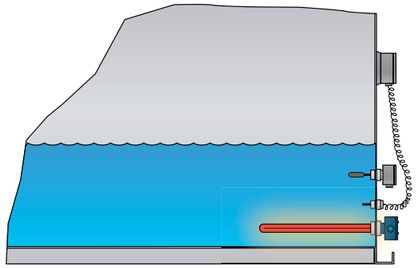


Multiple Circuit Coils

Condensers may be supplied with multiple circuit coils to match various system requirements such as split systems, or if a glycol or water circuit is desired for compressor head cooling.

Electric Heaters

Electric immersion heaters are available factory installed in the basin of the condenser. They are sized to maintain a +40° F pan water temperature with the fans off and an ambient air temperature of 0°F, -20°F, or -40°F. They are furnished with a combination thermostat/low water protection device to cycle the heater on when required and to prevent the heater elements from energizing unless they are completely submerged. All components are in weatherproof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.

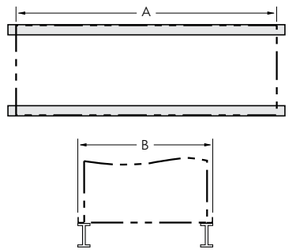


PMRC HEATER SIZES

MODELS	0°F	-20°F	-40°F
PMC-175E to PMC-240E	5	7	9
PMC-250E to PMC-375E	(2) 4	(2) 5	(2) 7
PMRC-332 to PMRC-530	8	12	16
PMRC-503 to PMRC-792	(2) 6	(2) 9	(2) 12
PMRC-725 to PMRC-1056	(2) 8	(2) 12	(2) 15
PMRC-1006 to PMRC-1586	(2) 12	(4) 9	(4) 12
PMRC-376 to PMRC-678	10	15	20
PMRC-568 to PMRC-1012	(2) 7	(2) 12	(2) 15
PMRC-715 to PMRC-1074	(2) 8	(2) 12	(2) 15
PMRC-911 to PMRC-1332	(2) 9	(2) 15	(2) 18
PMRC-752 to PMRC-1362	(2) 9	(2) 15	(2) 18
PMRC-1137 to PMRC-1911	(2) 15	(4) 10	(4) 15
PMRC-1705 to PMRC-2138	(2) 15	(4) 12	(4) 15

Steel Support

The recommended support for EVAPCO condensers is structural I-beams located under the outer flanges and running the entire length of the unit. Mounting holes, 3/4" in diameter, are located in the bottom channels of the pan section to provide for bolting to the structural steel. (Refer to certified drawings from the factory for bolt hole locations.) Beams should be level to within 1/8" in 6' before setting the unit in place. Do not level the unit by shimming between it and the I-beams as this will not provide proper longitudinal support.



PMRC DIMENSIONS

5' WIDE MODELS	A	B
PMC-175E to 240E	11' 11-5/8"	6' 4"
PMC-250E to 375E	18' 1/8"	6' 4"
10' WIDE MODELS	**A**	**B**
PMRC-332 to PMRC-530	11' 11-3/4"	9' 9-3/4"
PMRC-503 to PMRC-792	18' 1/8"	9' 9-3/4"
PMRC-725 to PMRC-1056	24' 7/8"	9' 9-3/4"
PMRC-1006 to PMRC-1586	36' 2"	9' 9-3/4"
12' WIDE MODELS	**A**	**B**
PMRC-376 to PMRC-678	11' 11-3/4"	11' 10-3/8"
PMRC-568 to PMRC-1012	18' 1/8"	11' 10-3/8"
PMRC-715 to PMRC-1074	20' 1/4"	11' 10-3/8"
PMRC-911 to PMRC-1332	24' 7/8"	11' 10-3/8"
PMRC-752 to PMRC-1362	24' 7/8"	11' 10-3/8"
PMRC-1137 to PMRC-1911	36' 2"	11' 10-3/8"
PMRC-1705 to PMRC-2138	40' 2"	11' 10-3/8"

Design

EVAPCO units feature heavy-duty construction and are designed for long trouble-free operation. Proper equipment selection, installation, and maintenance are, however, necessary to ensure good unit performance. Some of the major considerations in the application of a condenser are presented below. For additional information, contact the factory.

Air Circulation

In reviewing the system design and unit location, it is important that proper air circulation be provided. The best location is on an unobstructed rooftop or at ground level away from walls and other barriers. Care must be taken when locating condensers in wells or enclosures or next to high walls. The potential for recirculation of hot, moist discharge air back into the fan intake exists. Recirculation raises the wet bulb temperature of the entering air causing the condensing pressure to rise above the design. For these cases, a discharge hood or ductwork should be provided to raise the overall unit height even with the adjacent wall, thereby reducing the chance of recirculation. Good engineering practice dictates that the evaporative condenser's discharge air not be directed or located close to or in the vicinity of building air intakes. Engineering assistance is available from the factory to identify potential recirculation problems and recommend solutions.

For additional information regarding layout of evaporative condensers, see the EVAPCO bulletin entitled ***Equipment Layout Manual.***

Piping

Condenser piping should be designed and installed in accordance with generally accepted engineering practice. All piping should be anchored by properly designed hangers and supports with allowance made for possible expansion and contraction. No external loads should be placed upon condenser connections, nor should any of the pipe supports be anchored to the unit framework. For additional information concerning refrigerant pipe sizing and layout, see the EVAPCO bulletin entitled ***Piping Evaporative Condensers.***

Super Low Sound Fan

EVAPCO's Super Low Sound Fan on the PMRC condenser utilizes an extremely wide chord blade design available for sound sensitive applications where the lowest sound levels are desired. The fan is one-piece molded, heavy-duty FRP construction, utilizing a forward swept blade design. The Super Low Sound Fan reduces sound levels 10 to 13 dB(A) compared to the standard PMRC fan. For a detailed analysis, please contact your local EVAPCO sales representative.

Maintaining the Recirculated Water System

The heat rejection in a condenser is accomplished by the evaporation of a portion of the recirculated spray water. As this water evaporates, it leaves behind all of its mineral content and impurities. These impurities and contaminants, which continue to recirculate in the system, must be controlled in order to avoid excessive concentration that can lead to corrosion, scale, and/or biological fouling.

Bleed or Blowdown

Each unit supplied with a pump mounted on the side is furnished with a clear bleed or blowdown line for visual inspection and a valve which, when fully open, will bleed off the proper amount of concentrated (cycled up) water from the system. If the makeup water supplying the unit is relatively free of impurities, it may be possible to cut back the bleed, but the unit must be checked frequently to make sure scale is not forming. Makeup water pressure should be maintained between 20 and 50 psig.

Water Treatment

In some cases the makeup will be so high in mineral content that a normal bleed or blowdown will not prevent scaling. In this case, water treatment will be required and a reputable water treatment company familiar with the local water conditions should be consulted.

Any chemical water treatment used must be compatible with the construction of the unit. If acid is used for treatment, it should be accurately metered and the concentration properly controlled. The pH of the water should be maintained between 6.5 and 8.0. **Units constructed of galvanized steel operating with circulating water having a pH of 8.3 or higher will require periodic passivation of the galvanized steel to prevent the formation of "white rust".**

Batch chemical feeding is not recommended because it does not afford the proper degree of control. If acid cleaning is required, extreme caution must be exercised and only inhibited acids recommended for use with galvanized construction should be used. **For more information see the EVAPCO bulletin entitled *Maintenance Instructions*.**

Control of Biological Contamination

Water quality should be checked regularly for biological contamination. If biological contamination is detected, a more aggressive water treatment and mechanical cleaning program should be undertaken. The water treatment program should be performed in conjunction with a qualified water treatment company. It is important that all internal surfaces be kept clean of accumulated dirt and sludge. In addition, the drift eliminators should be maintained in good operating condition.

Mechanical Specifications

Furnish and install, as shown on the plans, an EVAPCO model _____ evaporative condenser. Each unit shall have condensing capacity of _____ BTUH heat rejection, operating with _____ refrigerant at _____°F condensing temperature and _____°F design wet bulb temperature.

IBC Compliance
The condenser shall be designed and constructed to meet the International Building Code specifications for installed components per ASCE 7-05. The manufacturer shall provide a certificate of compliance to demonstrate that the equipment/unit has been independently tested and certified in accordance with the IBC program.

Pan and Casing
The pan and casing shall be constructed of G-235 hot-dip galvanized steel for long life and durability. The heat transfer section shall be removable from the pan to provide easy handling and rigging.

The pan/fan section shall include fans, motors, and drives mounted and aligned at the factory. These items shall be located in the dry entering air stream to provide maximum service life and easy maintenance. The pan bottom shall be sloped to the drain to ensure easy draining and to facilitate cleaning. Standard pan accessories shall include circular access doors, stainless steel strainers, wastewater bleed line with adjustable valve and brass makeup valve, with an unsinkable foam filled plastic float.

PMRC Fan Drives
Fans shall be vane-axial type constructed of glass-reinforced polypropylene blades. They shall be arranged in a single-stage system installed in a closely fitted cowl with a venturi air inlet. Fan shaft bearings shall be a heavy-duty self-aligning ball type with grease fittings extended to the outside of the unit.

The fan drive shall be solid backed Power-Band constructed of neoprene with polyester cords designed for 150% of motor nameplate horsepower. Drives are to be mounted and aligned at the factory.

Each fan shall be driven individually by a dedicated fan motor. Fan motors may be cycled independently without harmful moist air bypass.

Fan Motor
_____ horsepower totally enclosed fan cooled motor(s) with 1.15 service factor shall be furnished suitable for outdoor service on _____ volts, _____ hertz, and _____ phase. Motor(s) shall be mounted on an adjustable base.

Heat Transfer Coil
The coil(s) shall be all prime surface steel, encased in steel framework with the entire assembly hot-dip galvanized after fabrication. Coil(s) shall be designed with sloping tubes for free drainage of liquid refrigerant and tested to 400 psig air pressure under water.

Water Distribution System
The system shall provide a water flow rate of 6 GPM over each square foot of the unit face area to ensure proper flooding of the coil. The spray header shall be constructed of Schedule 40 PVC pipe for corrosion resistance. All spray branches shall be removable and include a threaded end plug for cleaning. The water shall be distributed over the entire coil surface by heavy-duty ABS spray nozzles each with a large 1-1/4-inch-diameter opening and an internal sludge ring toeliminate clogging. Nozzles shall be threaded into a spray header to provide easy removal for maintenance.

Water Recirculation Pump
The pump(s) shall be a close-coupled, centrifugal type with mechanical seal, installed at the factory. _____ horsepower totally enclosed motor shall be furnished suitable for outdoor service on _____ volts, _____ hertz, and _____ phase.

Eliminators
The eliminators shall be constructed entirely of inert polyvinyl chloride (PVC) in easily handled sections. The eliminator design shall incorporate three changes in air direction to assure complete removal of all entrained moisture from the discharge air stream. Maximum drift rate shall be less than 0.001% of the circulating water rate.

Finish
All pan and casing materials shall be constructed of G-235 heavy gauge mill hot-dip galvanized steel for maximum protection against corrosion. During fabrication, all panel edges shall be coated with 95% pure zinc-rich compound.

Oversized Access Door
For enhanced basin accessibility, the *oversized access door* enables maintenance personnel to quickly and easily enter the basin for float valve adjustment and unit inspection.



Basin Access Package
(Internal Walkway, Basin Access Step, and Basin Entry Assist Handle)
An external basin access step and grab bar shall be provided at each exterior access door for easier basin access. Also, an internal walkway shall be provided at the level of the basin door to provide access to the interior of the unit for routine maintenance. The walk extends the length of the basin for easier travel through the unit.

Notes

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