

# EVAPORATIVE CONDENSERS

## PMRC

PERFORMANCE MAINTENANCE RELIABILITY CONDENSER



Available with optional  
304L or 316L Stainless Steel

Capacities from  
**540 to 6,660 ammonia kW!**

Available with optional  
**evapco**  
WATER SYSTEMS

**evapco** for LIFE



**GLOBAL COLD CHAIN  
ALLIANCE**

Member of  
**iilar**  
International Institute of  
Ammonia Refrigeration  
[www.iilar.org](http://www.iilar.org)

**AHRI** Air-Conditioning, Heating,  
and Refrigeration Institute

# PMRC Design and Construction Features

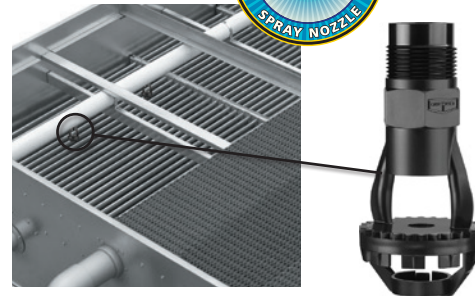


## About EVAPCO

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 26 locations spread throughout 10 countries and over 200 active patents worldwide, we are the team that engineers and contractors know they can count on for life.

## Contact

your local Evapco Representative  
or visit [evapco.eu](http://evapco.eu) to learn more.



### 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 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 (PMRC units)

- 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 15 m.



**Water Saver Drift Eliminators**

- Patented design reduces drift rate to 0.001%.
- Saves water and reduces water treatment cost.
- Greater structural integrity vs. old style blade-type.
- 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.

**Optional Design Features:**

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

**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.



Man-sized Access Door

# 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.

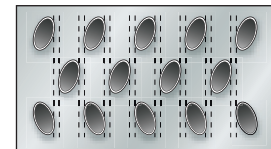
The PMRC features more plan area options and fan horsepower options for the system design engineer. With more condenser capacity, more plan area options, and greater flexibility in motor selection, the design engineer can now match the condenser performance to the specific application requirements. More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



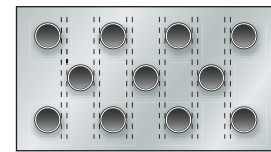
## Thermal-Pak II® Coil Design

### Lower Refrigerant Charge

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.



Thermal-Pak II® Coil by EVAPCO



Round Tube Coil by Others

## Energy Efficient for Lowest Operating Cost

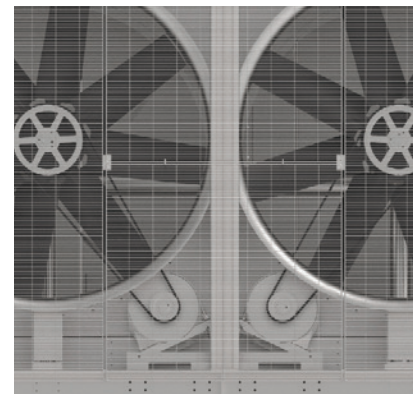
### Lower Horsepower Options

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 by-pass inside the unit. The individual motor-to-fan design ensures maximum operating redundancy in the condenser fan system when critical operation is necessary.



## Inverter Duty Motors as STANDARD

Inverter Duty motors are standard on PMRC Condensers. Inverter Duty motors are totally enclosed, offering premium IE3 and inverter capable (VFD by others).

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

# PMRC Design Features

## 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

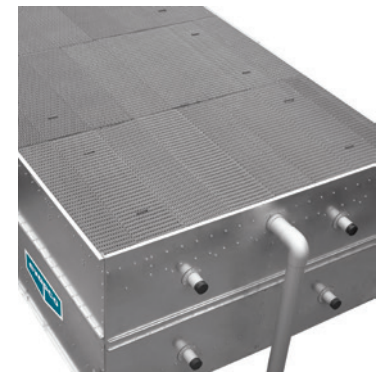
An external basin access step and grab bar shall be provided at each exterior access door for easier basin access. Also, an Internal walkway shall be provided at the level of the basin door to provide access to the interior of the unit for routine maintenance. The walk extends the length of the basin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



## Construction Features

### 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 which offers greater structural integrity and 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

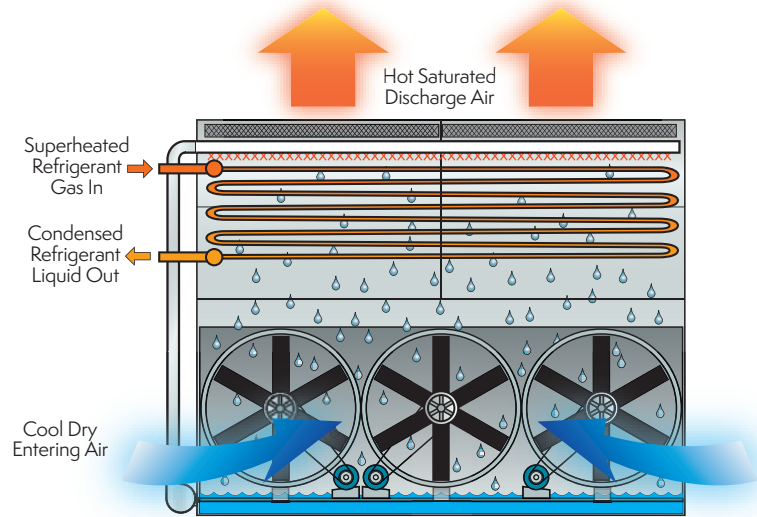
# PMRC Selection Procedure

## 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.

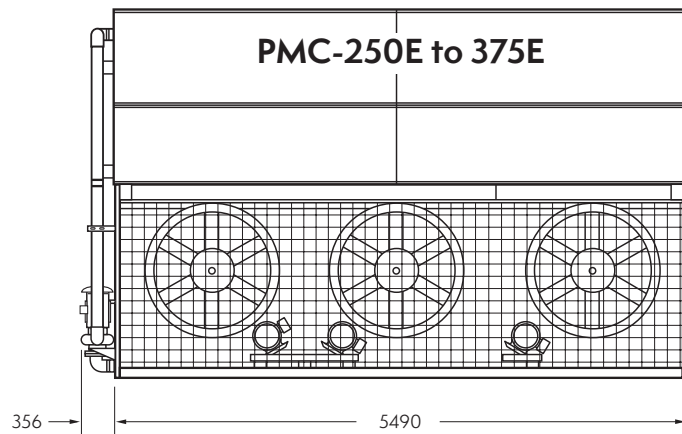
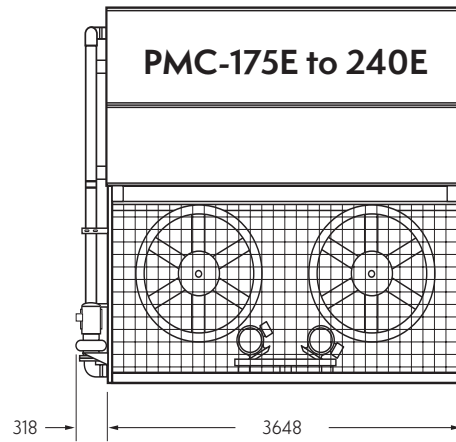
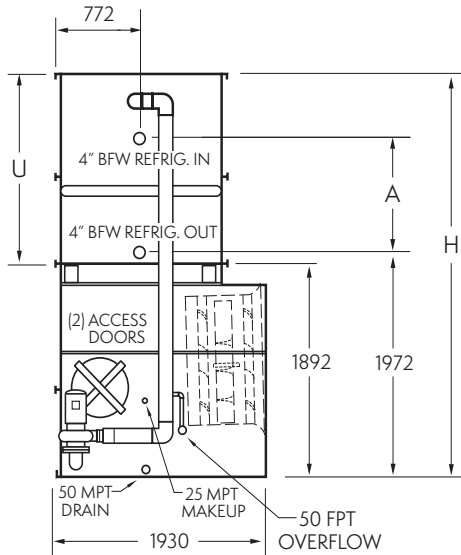
The hot, saturated air is driven through the drift eliminators, where any entrained water droplets are removed. The condenser's fan then discharges this air stream out of the top of the unit at a high velocity, where it can dissipate harmlessly into the atmosphere. The water which was not evaporated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



## PMRC/PMCE



# Engineering Dimensions & Data Models PMC-175E to 375E



Model No.	R-717 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Spray Pump			Remote Sump		Dimensions (m)			
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †		Coil Vol, l	kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMC-175E	545	(2) 4	15	3,670	4,720	2,370	75	623	1.5	21.8	5,663	200	4,245	3,312	1,457	781
PMC-190E	593	(2) 4	16	3,670	4,720	2,370	75	623	1.5	21.8	5,663	200	4,245	3,312	1,457	781
PMC-210E	655	(2) 4	16	4,105	5,170	2,805	90	765	1.5	21.8	5,663	200	4,695	3,527	1,673	997
PMC-220E	686	(2) 4	16	4,560	5,645	3,255	110	934	1.5	21.8	5,663	200	5,165	3,743	1,889	1,213
PMC-235E	734	(2) 5.5	17	4,150	5,215	2,805	90	765	1.5	21.8	5,663	200	4,740	3,527	1,673	997
PMC-240E	747	(2) 5.5	17	4,605	5,690	3,255	110	934	1.5	21.8	5,663	200	5,210	3,743	1,889	1,213
PMC-250E	778	(3) 4	26	4,795	6,345	2,815	85	708	2.2	32.5	7,362	250	5,460	3,096	1,241	565
PMC-275E	857	(3) 4	23	5,480	7,060	3,500	110	934	2.2	32.5	7,362	250	6,170	3,312	1,457	781
MC-295E	919	(3) 4	25	5,480	7,060	3,500	110	934	2.2	32.5	7,362	250	6,170	3,312	1,457	781
PMC-325E	1,011	(3) 4	24	6,135	7,745	4,160	135	1,161	2.2	32.5	7,362	250	6,855	3,527	1,673	997
PMC-335E	1,046	(3) 4	24	6,815	8,450	4,840	165	1,388	2.2	32.5	7,362	250	7,560	3,743	1,889	1,213
PMC-360E	1,121	(3) 5.5	27	6,210	7,815	4,160	135	1,161	2.2	32.5	7,362	250	6,925	3,527	1,673	997
PMC-375E	1,169	(3) 5.5	27	6,890	8,525	4,840	165	1,388	2.2	32.5	7,362	250	7,635	3,743	1,889	1,213

† Heaviest section is the upper Coil Section. When 5.12 seismic design is required consult the factory for specific weights.

\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

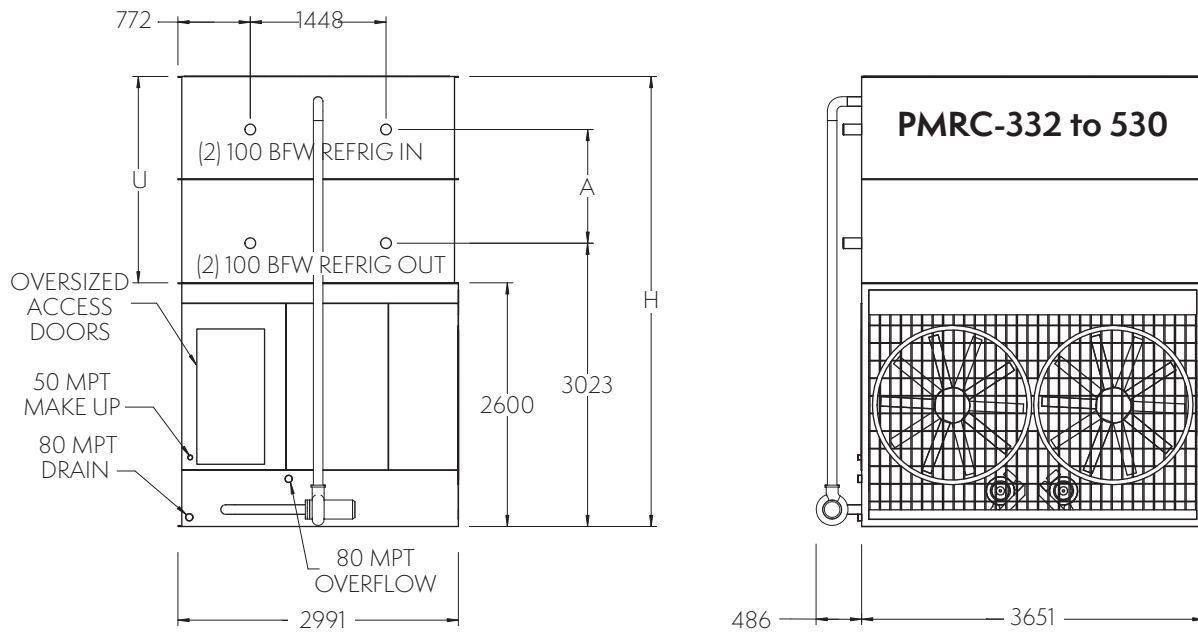
\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol, l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-332	1,033	(2) 4	29	6,235	7,795	3,895	115	963	4,0	43,2	14,158	250	7,780	4,150	1,549	565
PMRC-362	1,130	(2) 4	28	7,130	8,720	4,790	145	1,246	4,0	43,2	14,158	250	8,710	4,366	1,765	781
PMRC-369	1,152	(2) 5,5	33	6,295	7,850	3,895	115	963	4,0	43,2	14,158	250	7,840	4,150	1,549	565
PMRC-386	1,204	(2) 4	28	7,975	9,600	5,635	185	1,557	4,0	43,2	14,158	250	9,590	4,582	1,981	997
PMRC-397	1,239	(2) 7,5	36	6,315	7,870	3,895	115	963	4,0	43,2	14,158	250	7,855	4,150	1,549	565
PMRC-400	1,248	(2) 5,5	33	7,190	8,775	4,790	145	1,246	4,0	43,2	14,158	250	8,770	4,366	1,765	781
PMRC-411	1,279	(2) 4	28	8,860	10,520	6,520	220	1,869	4,0	43,2	14,158	250	10,505	4,797	2,197	1,213
PMRC-426	1,327	(2) 5,5	32	8,035	9,655	5,635	185	1,557	4,0	43,2	14,158	250	9,650	4,582	1,981	997
PMRC-428	1,336	(2) 11	42	6,430	7,990	3,895	115	963	4,0	43,2	14,158	250	7,975	4,150	1,549	565
PMRC-431	1,345	(2) 7,5	36	7,210	8,795	4,790	145	1,246	4,0	43,2	14,158	250	8,785	4,366	1,765	781
PMRC-453	1,411	(2) 5,5	32	8,920	10,580	6,520	220	1,869	4,0	43,2	14,158	250	10,565	4,797	2,197	1,213
PMRC-457	1,424	(2) 7,5	35	8,050	9,675	5,635	185	1,557	4,0	43,2	14,158	250	9,665	4,582	1,981	997
PMRC-464	1,446	(2) 11	41	7,325	8,915	4,790	145	1,246	4,0	43,2	14,158	250	8,905	4,366	1,765	781
PMRC-481	1,499	(2) 7,5	35	8,935	10,595	6,520	220	1,869	4,0	43,2	14,158	250	10,580	4,797	2,197	1,213
PMRC-491	1,530	(2) 7,5	34	10,000	11,700	7,585	255	2,152	4,0	43,2	14,158	250	11,685	4,797	2,197	1,213
PMRC-492	1,534	(2) 11	41	8,170	9,795	5,635	185	1,557	4,0	43,2	14,158	250	9,785	4,582	1,981	997
PMRC-519	1,617	(2) 11	40	9,055	10,715	6,520	220	1,869	4,0	43,2	14,158	250	10,700	4,797	2,197	1,213
PMRC-530	1,653	(2) 11	39	10,120	11,815	7,585	255	2,152	4,0	43,2	14,158	250	11,800	4,797	2,197	1,213

† Heaviest section is the Casing Section. When 5.12 seismic design is required consult the factory for specific weights.

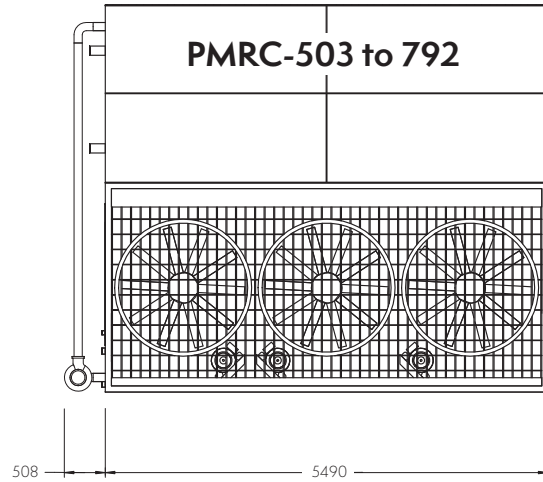
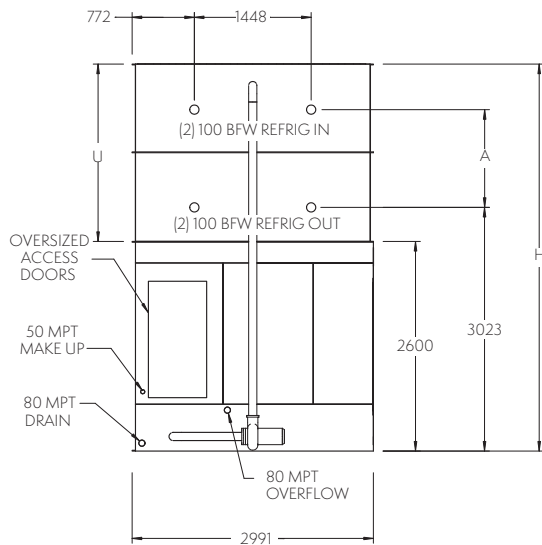
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A		
PMRC-503	1569	(3) 4	43	9,030	11,445	5,705	165	1,416	5.5	65	17,556	300	10,900	4,150	1,549	565
PMRC-546	1701	(3) 4	43	10,360	12,830	7,035	220	1,869	5.5	65	17,556	300	12,285	4,366	1,765	781
PMRC-558	1741	(3) 5.5	50	9,115	11,530	5,705	165	1,416	5.5	65	17,556	300	10,985	4,150	1,549	565
PMRC-579	1806	(3) 4	42	11,640	14,160	8,315	270	2,322	5.5	65	17,556	300	13,610	4,582	1,981	997
PMRC-596	1859	(3) 7.5	55	9,150	11,560	5,705	165	1,416	5.5	65	17,556	300	11,020	4,150	1,549	565
PMRC-602	1877	(3) 4	41	12,970	15,545	9,645	325	2,775	5.5	65	17,556	300	14,995	4,797	2,197	1,213
PMRC-605	1886	(3) 5.5	49	10,445	12,915	7,035	220	1,869	5.5	65	17,556	300	12,370	4,366	1,765	781
PMRC-636	1982	(3) 11	63	9,320	11,735	5,705	165	1,416	5.5	65	17,556	300	11,190	4,150	1,549	565
PMRC-641	2000	(3) 5.5	48	11,725	14,245	8,315	270	2,322	5.5	65	17,556	300	13,700	4,582	1,981	997
PMRC-645	2009	(3) 7.5	54	10,480	12,945	7,035	220	1,869	5.5	65	17,556	300	12,400	4,366	1,765	781
PMRC-668	2083	(3) 5.5	48	13,055	15,630	9,645	325	2,775	5.5	65	17,556	300	15,080	4,797	2,197	1,213
PMRC-690	2149	(3) 11	62	10,650	13,120	7,035	220	1,869	5.5	65	17,556	300	12,575	4,366	1,765	781
PMRC-691	2154	(3) 7.5	53	11,755	14,280	8,315	270	2,322	5.5	65	17,556	300	13,730	4,582	1,981	997
PMRC-719	2242	(3) 7.5	52	13,085	15,665	9,645	325	2,775	5.5	65	17,556	300	15,115	4,797	2,197	1,213
PMRC-731	2277	(3) 11	61	11,930	14,450	8,315	270	2,322	5.5	65	17,556	300	13,905	4,582	1,981	997
PMRC-732	2281	(3) 7.5	52	14,685	17,315	11,245	380	3,228	5.5	65	17,556	300	16,770	4,797	2,197	1,213
PMRC-778	2426	(3) 11	60	13,260	15,835	9,645	325	2,775	5.5	65	17,556	300	15,285	4,797	2,197	1,213
PMRC-792	2470	(3) 11	59	14,860	17,485	11,245	380	3,228	5.5	65	17,556	300	16,940	4,797	2,197	1,213

† Heaviest section is the Casing Section. When 5.12 seismic design is required consult the factory for specific weights.

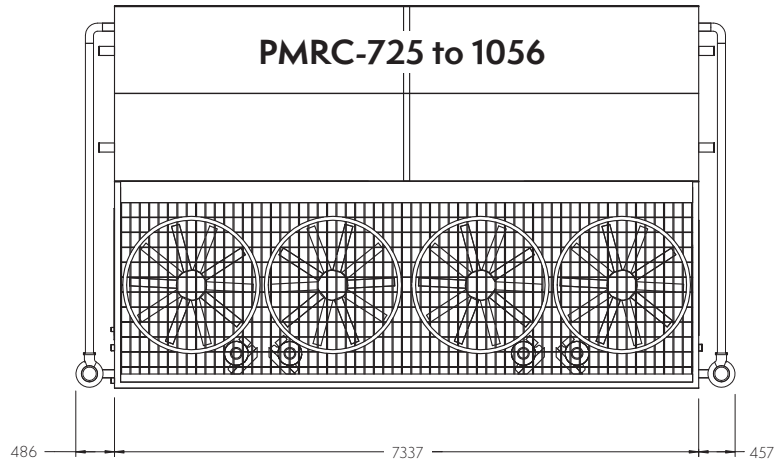
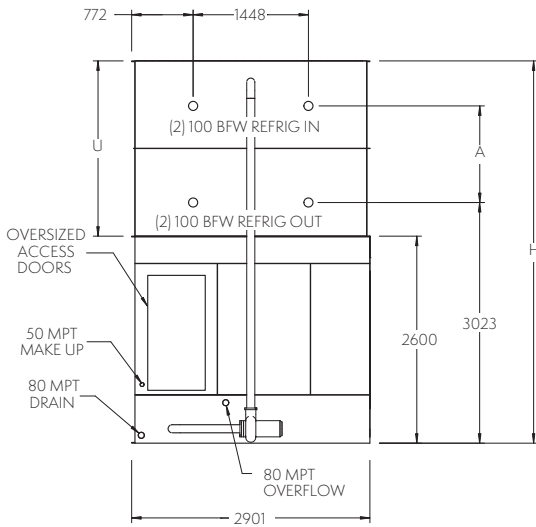
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-725	2,259	(4) 4	57	13,750	17,080	4,700 (C)	295	2,520	(2) 4	86.4	26,335	300	16,715	4,366	1,765	781
PMRC-735	2,290	(4) 5.5	66	11,980	15,240	4,460 (F)	225	1,926	(2) 4	86.4	26,335	300	14,880	4,150	1,549	565
PMRC-772	2,409	(4) 4	56	15,525	18,930	5,590 (C)	365	3,115	(2) 4	86.4	26,335	300	18,565	4,582	1,981	997
PMRC-801	2,497	(4) 5.5	65	13,855	17,190	4,700 (C)	295	2,520	(2) 4	86.4	26,335	300	16,825	4,366	1,765	781
PMRC-853	2,659	(4) 5.5	64	15,635	19,035	5,590 (C)	365	3,115	(2) 4	86.4	26,335	300	18,675	4,582	1,981	997
PMRC-863	2,690	(4) 7.5	72	13,905	17,235	4,700 (C)	295	2,520	(2) 4	86.4	26,335	300	16,870	4,366	1,765	781
PMRC-888	2,769	(4) 5.5	63	17,495	20,970	6,520 (C)	435	3,710	(2) 4	86.4	26,335	300	20,600	4,797	2,197	1,213
PMRC-929	2,897	(4) 11	83	14,135	17,470	4,735 (F)	295	2,520	(2) 4	86.4	26,335	300	17,100	4,366	1,765	781
PMRC-962	2,998	(4) 7.5	70	17,540	21,015	6,520 (C)	435	3,710	(2) 4	86.4	26,335	300	20,650	4,797	2,197	1,213
PMRC-980	3,055	(4) 7.5	69	19,670	23,215	7,585 (C)	505	4,304	(2) 4	86.4	26,335	300	22,850	4,797	2,197	1,213
PMRC-983	3,064	(4) 11	81	15,910	19,315	5,590 (C)	365	3,115	(2) 4	86.4	26,335	300	18,950	4,582	1,981	997
PMRC-1038	3,235	(4) 11	80	17,770	21,245	6,520 (C)	435	3,710	(2) 4	86.4	26,335	300	20,880	4,797	2,197	1,213
PMRC-1056	3,292	(4) 11	79	19,905	23,445	7,585 (C)	505	4,304	(2) 4	86.4	26,335	300	23,085	4,797	2,197	1,213

† Heaviest section is the Casing Section (C) or Fan Section (F). When 5.12 seismic design is required consult the factory for specific weights.

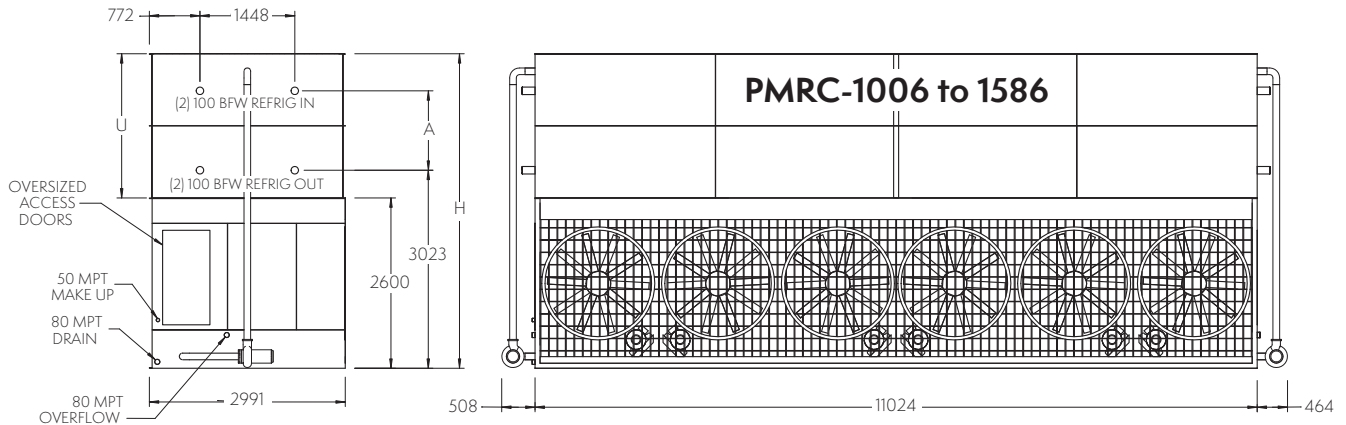
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-1006	3,134	(6) 4	87	17,330	22,300	6,265 (F)	335	2,832	(2) 5.5	130	39,644	350	21,725	4,150	1,549	565
PMRC-1088	3,393	(6) 4	85	20,110	25,185	6,920 (C)	440	3,738	(2) 5.5	130	39,644	350	24,610	4,366	1,765	781
PMRC-1116	3,477	(6) 5.5	99	17,500	22,465	6,430 (F)	335	2,832	(2) 5.5	130	39,644	350	21,895	4,150	1,549	565
PMRC-1148	3,578	(6) 4	84	22,785	27,965	8,260 (C)	545	4,644	(2) 5.5	130	39,644	350	27,390	4,582	1,981	997
PMRC-1189	3,705	(6) 7.5	110	17,565	22,530	6,495 (F)	335	2,832	(2) 5.5	130	39,644	350	21,960	4,150	1,549	565
PMRC-1211	3,776	(6) 5.5	98	20,275	25,350	6,920 (C)	440	3,738	(2) 5.5	130	39,644	350	24,780	4,366	1,765	781
PMRC-1275	3,973	(6) 5.5	97	22,950	28,130	8,260 (C)	545	4,644	(2) 5.5	130	39,644	350	27,560	4,582	1,981	997
PMRC-1290	4,022	(6) 7.5	108	20,340	25,415	6,920 (C)	440	3,738	(2) 5.5	130	39,644	350	24,845	4,366	1,765	781
PMRC-1333	4,154	(6) 5.5	95	25,720	31,005	9,645 (C)	650	5,550	(2) 5.5	130	39,644	350	30,430	4,797	2,197	1,213
PMRC-1382	4,307	(6) 7.5	106	23,015	28,195	8,260 (C)	545	4,644	(2) 5.5	130	39,644	350	27,625	4,582	1,981	997
PMRC-1438	4,483	(6) 7.5	105	25,780	31,065	9,645 (C)	650	5,550	(2) 5.5	130	39,644	350	30,495	4,797	2,197	1,213
PMRC-1466	4,571	(6) 7.5	103	28,985	34,380	11,245 (C)	755	6,456	(2) 5.5	130	39,644	350	33,805	4,797	2,197	1,213
PMRC-1556	4,852	(6) 11	121	26,125	31,410	9,645 (C)	650	5,550	(2) 5.5	130	39,644	350	30,840	4,797	2,197	1,213
PMRC-1586	4,945	(6) 11	119	29,330	34,720	11,245 (C)	755	6,456	(2) 5.5	130	39,644	350	34,150	4,797	2,197	1,213

† Heaviest section is the Casing Section (C) or Fan Section (F). When 5.12 seismic design is required consult the factory for specific weights.

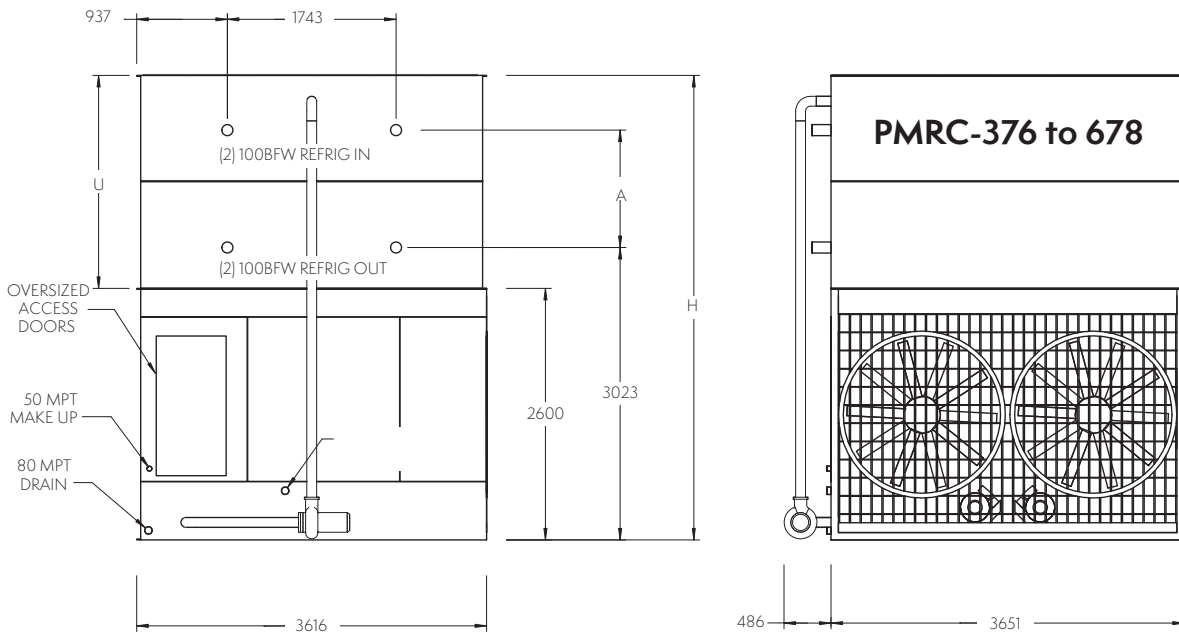
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd***	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-376	1,174	(2) 4	35	7,055	8,990	4,520	140	1,189	4.0	50.5	1,614	250	8,870	4,150	1,549	565
PMRC-408	1,270	(2) 4	34	8,135	10,115	5,605	180	1,557	4.0	50.5	1,614	250	10,000	4,366	1,765	781
PMRC-420	1,310	(2) 5.5	37	7,110	9,050	4,520	140	1,189	4.0	50.5	1,614	250	8,930	4,150	1,549	565
PMRC-427	1,332	(2) 4	34	9,165	11,190	6,635	225	1,926	4.0	50.5	1,614	250	11,070	4,582	1,981	997
PMRC-450	1,402	(2) 7.5	40	7,130	9,065	4,520	140	1,189	4.0	50.5	1,614	250	8,950	4,150	1,549	565
PMRC-456	1,420	(2) 5.5	37	8,195	10,175	5,605	180	1,557	4.0	50.5	1,614	250	10,060	4,366	1,765	781
PMRC-479	1,494	(2) 5.5	36	9,225	11,250	6,635	225	1,926	4.0	50.5	1,614	250	11,130	4,582	1,981	997
PMRC-488	1,521	(2) 7.5	39	8,215	10,190	5,605	180	1,557	4.0	50.5	1,614	250	10,080	4,366	1,765	781
PMRC-495	1,543	(2) 11	46	7,250	9,185	4,520	140	1,189	4.0	50.5	1,614	250	9,065	4,150	1,549	565
PMRC-501	1,560	(2) 5.5	36	10,240	12,305	7,650	270	2,294	4.0	50.5	1,614	250	12,190	4,797	2,197	1,213
PMRC-513	1,600	(2) 7.5	39	9,245	11,265	6,635	225	1,926	4.0	50.5	1,614	250	11,150	4,582	1,981	997
PMRC-515	1,604	(2) 15	47	7,320	9,260	4,520	140	1,189	4.0	50.5	1,614	250	9,140	4,150	1,549	565
PMRC-536	1,670	(2) 11	45	8,330	10,310	5,605	180	1,557	4.0	50.5	1,614	250	10,195	4,366	1,765	781
PMRC-537	1,675	(2) 7.5	38	10,255	12,325	7,650	270	2,294	4.0	50.5	1,614	250	12,205	4,797	2,197	1,213
PMRC-545	1,701	(2) 7.5	38	11,510	13,615	8,900	315	2,662	4.0	50.5	1,614	250	13,505	4,797	2,197	1,213
PMRC-559	1,741	(2) 15	47	8,405	10,385	5,605	180	1,557	4.0	50.5	1,614	250	10,270	4,366	1,765	781
PMRC-564	1,758	(2) 11	45	9,360	11,385	6,635	225	1,926	4.0	50.5	1,614	250	11,265	4,582	1,981	997
PMRC-591	1,842	(2) 11	44	10,375	12,440	7,650	270	2,294	4.0	50.5	1,614	250	12,325	4,797	2,197	1,213
PMRC-601	1,872	(2) 15	47	9,435	11,460	6,635	225	1,926	4.0	50.5	1,614	250	11,340	4,582	1,981	997
PMRC-600	1,872	(2) 11	43	11,625	13,735	8,900	315	2,662	4.0	50.5	1,614	250	13,620	4,797	2,197	1,213
PMRC-631	1,969	(2) 15	47	10,445	12,515	7,650	270	2,294	4.0	50.5	1,614	250	12,395	4,797	2,197	1,213
PMRC-640	1,995	(2) 15	46	11,700	13,805	8,900	315	2,662	4.0	50.5	1,614	250	13,695	4,797	2,197	1,213
PMRC-667	2,079	(2) 18.5	49	10,485	12,555	7,650	270	2,294	4.0	50.5	1,614	250	12,440	4,797	2,197	1,213
PMRC-678	2,114	(2) 18.5	49	11,740	13,850	8,900	315	2,662	4.0	50.5	1,614	250	13,735	4,797	2,197	1,213

† Heaviest section is the Casing Section. When 5.12 seismic design is required consult the factory for specific weights.

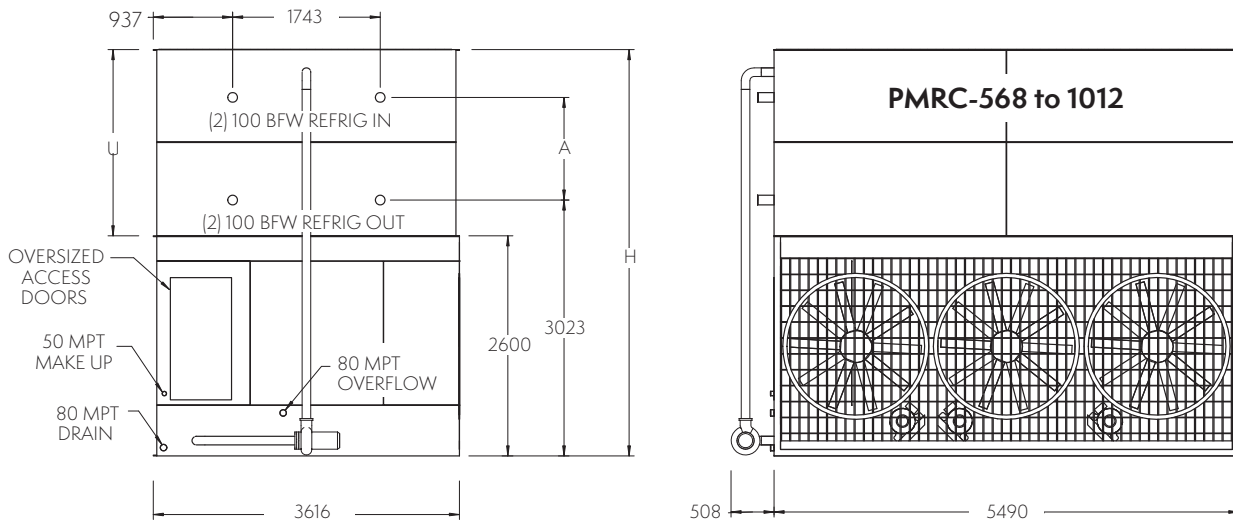
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-568	1,771	(3) 4	52	10,460	13,250	6,770	205	1,756	5.5	75.7	20,954	300	12,580	4,150	1,549	565
PMRC-616	1,921	(3) 4	51	12,080	14,935	8,385	270	2,294	5.5	75.7	20,954	300	14,260	4,366	1,765	781
PMRC-634	1,978	(3) 5.5	56	10,545	13,335	6,770	205	1,756	5.5	75.7	20,954	300	12,665	4,150	1,549	565
PMRC-647	2,017	(3) 4	51	13,640	16,560	9,945	335	2,860	5.5	75.7	20,954	300	15,890	4,582	1,981	997
PMRC-675	2,105	(3) 4	50	15,095	18,085	11,405	400	3,426	5.5	75.7	20,954	300	17,410	4,797	2,197	1,213
PMRC-679	2,119	(3) 7.5	60	10,580	13,365	6,770	205	1,756	5.5	75.7	20,954	300	12,695	4,150	1,549	565
PMRC-688	2,145	(3) 5.5	55	12,165	15,025	8,385	270	2,294	5.5	75.7	20,954	300	14,345	4,366	1,765	781
PMRC-723	2,255	(3) 5.5	54	13,725	16,645	9,945	335	2,860	5.5	75.7	20,954	300	15,975	4,582	1,981	997
PMRC-737	2,299	(3) 7.5	59	12,195	15,055	8,385	270	2,294	5.5	75.7	20,954	300	14,380	4,366	1,765	781
PMRC-751	2,343	(3) 5.5	54	15,180	18,170	11,405	400	3,426	5.5	75.7	20,954	300	17,495	4,797	2,197	1,213
PMRC-774	2,413	(3) 7.5	58	13,755	16,680	9,945	335	2,860	5.5	75.7	20,954	300	16,005	4,582	1,981	997
PMRC-800	2,492	(3) 11	68	12,370	15,225	8,385	270	2,294	5.5	75.7	20,954	300	14,550	4,366	1,765	781
PMRC-803	2,505	(3) 7.5	57	15,215	18,205	11,405	400	3,426	5.5	75.7	20,954	300	17,525	4,797	2,197	1,213
PMRC-819	2,554	(3) 7.5	56	17,080	20,135	13,270	465	3,964	5.5	75.7	20,954	300	19,465	4,797	2,197	1,213
PMRC-831	2,589	(3) 15	70	12,480	15,335	8,385	270	2,294	5.5	75.7	20,954	300	14,660	4,366	1,765	781
PMRC-856	2,668	(3) 11	67	13,930	16,850	9,945	335	2,860	5.5	75.7	20,954	300	16,180	4,582	1,981	997
PMRC-889	2,769	(3) 11	66	15,385	18,375	11,405	400	3,426	5.5	75.7	20,954	300	17,700	4,797	2,197	1,213
PMRC-894	2,787	(3) 15	71	14,040	16,960	9,945	335	2,860	5.5	75.7	20,954	300	16,290	4,582	1,981	997
PMRC-905	2,822	(3) 11	65	17,255	20,305	13,270	465	3,964	5.5	75.7	20,954	300	19,635	4,797	2,197	1,213
PMRC-939	2,927	(3) 15	70	15,495	18,485	11,405	400	3,426	5.5	75.7	20,954	300	17,810	4,797	2,197	1,213
PMRC-955	2,976	(3) 15	69	17,365	20,415	13,270	465	3,964	5.5	75.7	20,954	300	19,745	4,797	2,197	1,213
PMRC-994	3,099	(3) 18.5	74	15,555	18,545	11,405	400	3,426	5.5	75.7	20,954	300	17,865	4,797	2,197	1,213
PMRC-1012	3,156	(3) 18.5	73	17,420	20,475	13,270	465	3,964	5.5	75.7	20,954	300	19,805	4,797	2,197	1,213

† Heaviest section is the Casing Section. When 5.12 seismic design is required consult the factory for specific weights.

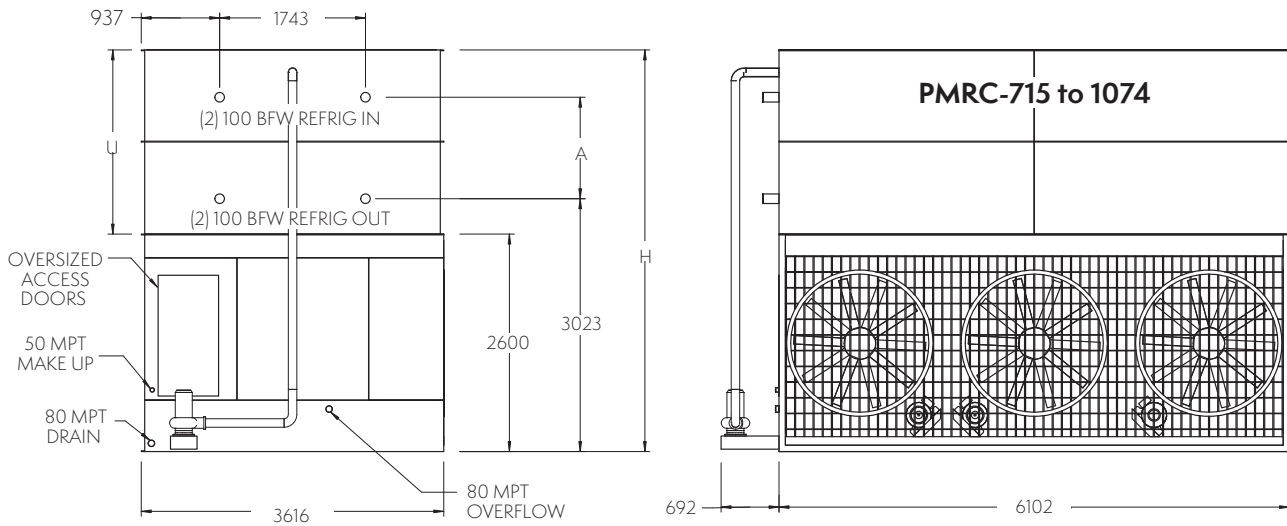
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm would normally be sufficient.)

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

# Engineering Dimensions & Data Models PMRC-715 to 1074



Model No.	R-717 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-715	2,228	(3) 4	53	16,730	20,140	12,785	445	3,794	7.5	88.3	22,937	350	19,375	4,797	2,197	1,213
PMRC-796	2,483	(3) 5.5	57	16,815	20,225	12,785	445	3,794	7.5	88.3	22,937	350	19,465	4,797	2,197	1,213
PMRC-811	2,527	(3) 7.5	61	15,000	18,340	10,940	370	3,171	7.5	88.3	22,937	350	17,575	4,582	1,981	997
PMRC-852	2,655	(3) 7.5	60	16,845	20,255	12,785	445	3,794	7.5	88.3	22,937	350	19,495	4,797	2,197	1,213
PMRC-895	2,791	(3) 11	71	15,175	18,510	10,940	370	3,171	7.5	88.3	22,937	350	17,750	4,582	1,981	997
PMRC-940	2,932	(3) 11	69	17,020	20,430	12,785	445	3,794	7.5	88.3	22,937	350	19,670	4,797	2,197	1,213
PMRC-949	2,958	(3) 15	75	15,280	18,620	10,940	370	3,171	7.5	88.3	22,937	350	17,860	4,582	1,981	997
PMRC-959	2,989	(3) 11	68	19,130	22,610	14,895	520	4,417	7.5	88.3	22,937	350	21,850	4,797	2,197	1,213
PMRC-992	3,094	(3) 15	74	17,130	20,540	12,785	445	3,794	7.5	88.3	22,937	350	19,775	4,797	2,197	1,213
PMRC-1013	3,156	(3) 15	73	19,235	22,720	14,895	520	4,417	7.5	88.3	22,937	350	21,960	4,797	2,197	1,213
PMRC-1050	3,275	(3) 18.5	78	17,185	20,600	12,785	445	3,794	7.5	88.3	22,937	350	19,835	4,797	2,197	1,213
PMRC-1074	3,349	(3) 18.5	77	19,295	22,780	14,895	520	4,417	7.5	88.3	22,937	350	22,015	4,797	2,197	1,213

† Heaviest section is the Casing Section. When 5.12 seismic design is required consult the factory for specific weights.

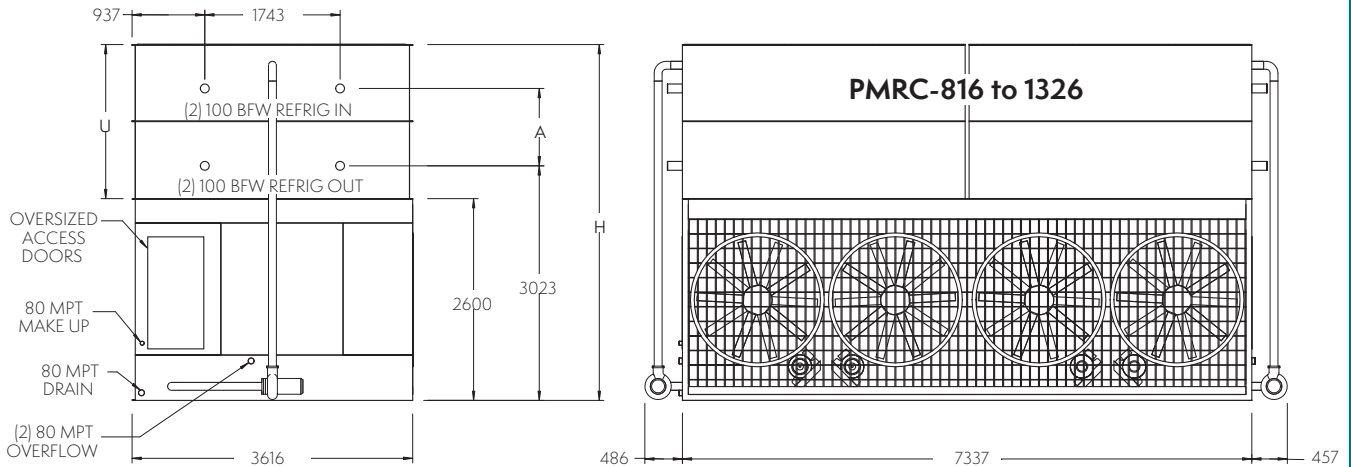
\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm would normally be sufficient.)

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

# Engineering Dimensions & Data Models PMRC-816 to 1326



Model No.	R-717 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-816	2,545	(4) 4	68	15,760	19,840	5,510 (C)	365	3,087	(2) 4	100.9	30,582	350	19,285	4,366	1,765	781
PMRC-840	2,620	(4) 5.5	75	13,600	17,585	4,855 (F)	275	2,350	(2) 4	100.9	30,582	350	17,030	4,150	1,549	565
PMRC-900	2,804	(4) 7.5	80	13,640	17,625	4,895 (F)	275	2,350	(2) 4	100.9	30,582	350	17,075	4,150	1,549	565
PMRC-913	2,848	(4) 5.5	74	15,875	19,955	5,510 (C)	365	3,087	(2) 4	100.9	30,582	350	19,400	4,366	1,765	781
PMRC-956	2,980	(4) 5.5	73	18,035	22,200	6,590 (C)	450	3,823	(2) 4	100.9	30,582	350	21,645	4,582	1,981	997
PMRC-976	3,042	(4) 7.5	79	15,915	19,995	5,510 (C)	365	3,087	(2) 4	100.9	30,582	350	19,440	4,366	1,765	781
PMRC-989	3,081	(4) 11	92	13,870	17,860	5,125 (F)	275	2,350	(2) 4	100.9	30,582	350	17,305	4,150	1,549	565
PMRC-1004	3,129	(4) 5.5	72	20,150	24,400	7,650 (C)	540	4,559	(2) 4	100.9	30,582	350	23,845	4,797	2,197	1,213
PMRC-1024	3,191	(4) 7.5	77	18,075	22,240	6,590 (C)	450	3,823	(2) 4	100.9	30,582	350	21,685	4,582	1,981	997
PMRC-1072	3,340	(4) 7.5	76	20,190	24,440	7,650 (C)	540	4,559	(2) 4	100.9	30,582	350	23,885	4,797	2,197	1,213
PMRC-1073	3,345	(4) 11	90	16,150	20,225	5,510 (C)	365	3,087	(2) 4	100.9	30,582	350	19,670	4,366	1,765	781
PMRC-1117	3,481	(4) 15	93	16,295	20,370	5,510 (C)	365	3,087	(2) 4	100.9	30,582	350	19,815	4,366	1,765	781
PMRC-1127	3,512	(4) 11	89	18,305	22,470	6,590 (C)	450	3,823	(2) 4	100.9	30,582	350	21,920	4,582	1,981	997
PMRC-1182	3,683	(4) 11	88	20,420	24,670	7,650 (C)	540	4,559	(2) 4	100.9	30,582	350	24,120	4,797	2,197	1,213
PMRC-1203	3,749	(4) 15	95	18,450	22,615	6,590 (C)	450	3,823	(2) 4	100.9	30,582	350	22,065	4,582	1,981	997
PMRC-1205	3,758	(4) 11	86	22,925	27,260	8,900 (C)	625	5,324	(2) 4	100.9	30,582	350	26,710	4,797	2,197	1,213
PMRC-1261	3,929	(4) 15	93	20,565	24,815	7,650 (C)	540	4,559	(2) 4	100.9	30,582	350	24,265	4,797	2,197	1,213
PMRC-1286	4,009	(4) 15	92	23,070	27,405	8,900 (C)	625	5,324	(2) 4	100.9	30,582	350	26,855	4,797	2,197	1,213
PMRC-1336	4,167	(4) 18.5	99	20,650	24,900	7,650 (C)	540	4,559	(2) 4	100.9	30,582	350	24,345	4,797	2,197	1,213
PMRC-1362	4,246	(4) 18.5	97	23,150	27,490	8,900 (C)	625	5,324	(2) 4	100.9	30,582	350	26,935	4,797	2,197	1,213

† Heaviest section is the Casing Section (C) or Fan Section (F). When 5.12 seismic design is required consult the factory for specific weights.

\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

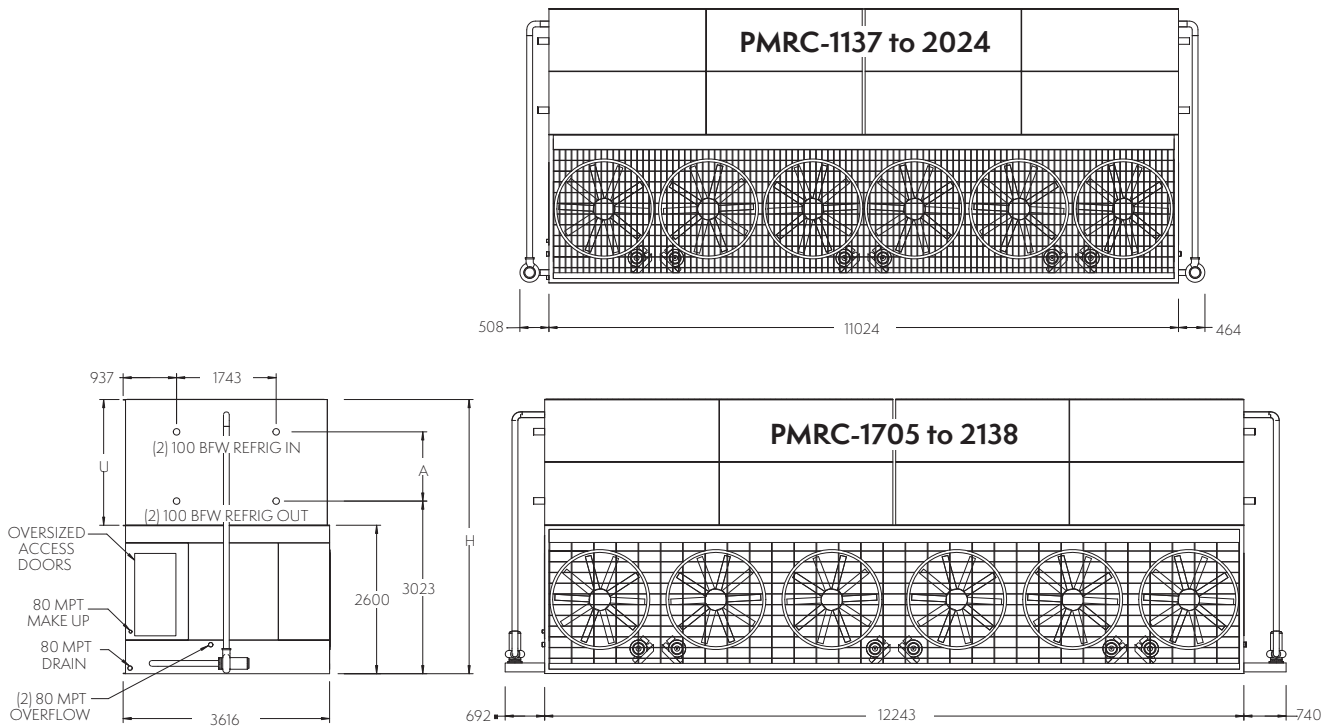
\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 Capacity kW*	Fans		Weight (kg)			NH <sub>3</sub> Operating Charge kg**	Coil Vol. l	Spray Pump		Remote Sump			Dimensions (m)		
		kW	m <sup>3</sup> /s	Shipping	Operation	Heaviest Section †			kW	l/s	Liters Req'd*** l	Conn. Size mm	Operating Weight kg	Height H	Upper U	Coil A
PMRC-1137	3,543	(6) 4	104	19,925	25,830	6,765 (F)	410	3,483	(2) 5.5	151.4	41,343	400	24,355	4,150	1,549	565
PMRC-1269	3,956	(6) 5.5	112	20,100	26,005	6,935 (F)	410	3,483	(2) 5.5	151.4	41,343	400	24,525	4,150	1,549	565
PMRC-1296	4,039	(6) 4	101	26,530	32,700	9,885 (C)	670	5,720	(2) 5.5	151.4	41,343	400	31,215	4,582	1,981	997
PMRC-1358	4,233	(6) 7.5	119	7,725	12,330	5,425 (F)	620	3,483	(2) 5.5	151.4	41,343	400	11,775	4,150	1,549	565
PMRC-1376	4,290	(6) 5.5	110	23,455	29,495	8,260 (C)	540	4,616	(2) 5.5	151.4	41,343	400	28,015	4,366	1,765	781
PMRC-1446	4,510	(6) 5.5	109	26,705	32,870	9,885 (C)	670	5,720	(2) 5.5	151.4	41,343	400	31,390	4,582	1,981	997
PMRC-1473	4,593	(6) 7.5	118	23,515	29,550	8,260 (C)	540	4,616	(2) 5.5	151.4	41,343	400	28,075	4,366	1,765	781
PMRC-1549	4,830	(6) 7.5	116	26,760	32,930	9,885 (C)	670	5,720	(2) 5.5	151.4	41,343	400	31,450	4,582	1,981	997
PMRC-1599	4,984	(6) 11	135	23,865	29,900	8,260 (C)	540	4,616	(2) 5.5	151.4	41,343	400	28,420	4,366	1,765	781
PMRC-1625	5,063	(6) 7.5	114	29,800	36,100	11,405 (C)	805	6,824	(2) 5.5	151.4	41,343	400	34,620	4,797	2,197	1,213
PMRC-1712	5,336	(6) 11	133	27,110	33,280	9,885 (C)	670	5,720	(2) 5.5	151.4	41,343	400	31,795	4,582	1,981	997
PMRC-1776	5,538	(6) 11	131	30,150	36,450	11,405 (C)	805	6,824	(2) 5.5	151.4	41,343	400	34,965	4,797	2,197	1,213
PMRC-1788	5,573	(6) 15	142	27,330	33,500	9,885 (C)	670	5,720	(2) 5.5	151.4	41,343	400	32,015	4,582	1,981	997
PMRC-1811	5,644	(6) 11	129	33,890	40,320	13,270 (C)	935	7,957	(2) 5.5	151.4	41,343	400	38,835	4,797	2,197	1,213
PMRC-1877	5,850	(6) 15	139	30,370	36,670	11,405 (C)	805	6,824	(2) 5.5	151.4	41,343	400	35,185	4,797	2,197	1,213
PMRC-1911	5,956	(6) 15	137	34,105	40,540	13,270 (C)	935	7,957	(2) 5.5	151.4	41,343	400	39,055	4,797	2,197	1,213
PMRC-1988	6,197	(6) 18.5	148	30,490	36,790	11,405 (C)	805	6,824	(2) 5.5	151.4	41,343	400	35,310	4,797	2,197	1,213
PMRC-2024	6,307	(6) 18.5	146	34,230	40,660	13,270 (C)	935	7,957	(2) 5.5	151.4	41,343	400	39,175	4,797	2,197	1,213
PMRC-1705	5,314	(6) 7.5	121	33,265	40,195	12,875 (C)	890	7,589	(2) 7.5	176.7	46,156	400	38,575	4,797	2,197	1,213
PMRC-1879	5,859	(6) 11	139	33,610	40,540	12,875 (C)	890	7,589	(2) 7.5	176.7	46,156	400	38,920	4,797	2,197	1,213
PMRC-1913	5,964	(6) 11	137	37,830	44,905	14,985 (C)	1,040	8,835	(2) 7.5	176.7	46,156	400	43,280	4,797	2,197	1,213
PMRC-1985	6,189	(6) 15	148	33,830	40,755	12,875 (C)	890	7,589	(2) 7.5	176.7	46,156	400	39,135	4,797	2,197	1,213
PMRC-2019	6,294	(6) 15	146	38,045	45,125	14,985 (C)	1,040	8,835	(2) 7.5	176.7	46,156	400	43,500	4,797	2,197	1,213
PMRC-2102	6,553	(6) 18.5	157	33,950	40,880	12,875 (C)	890	7,589	(2) 7.5	176.7	46,156	400	39,260	4,797	2,197	1,213
PMRC-2138	6,663	(6) 18.5	154	38,170	45,245	14,985 (C)	1,040	8,835	(2) 7.5	176.7	46,156	400	43,620	4,797	2,197	1,213

† Heaviest section is the Casing Section (C) or Fan Section (F). When 5.12 seismic design is required consult the factory for specific weights.

\* kW at standard conditions: 35.7°C condensing, -6.67°C suction and 25.56°C W.B.

\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

\*\*\* Liters 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. (300 mm 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 an optional low and high level alarm switches or a transmitter for continuous level monitoring.

## Super Low Sound Fan

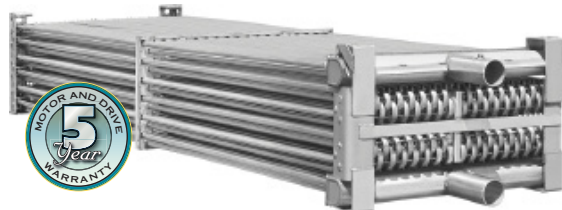
EVAPCO's Super Low Sound Fan utilizes an extremely wide chord blade design and is ideal for low energy, sound-sensitive installations without sacrificing thermal performance. This revolutionary technology is one-piece molded, heavy-duty fiberglass reinforced polyester hub and blade construction utilizing 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.



Super Low Sound Fan

## 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.



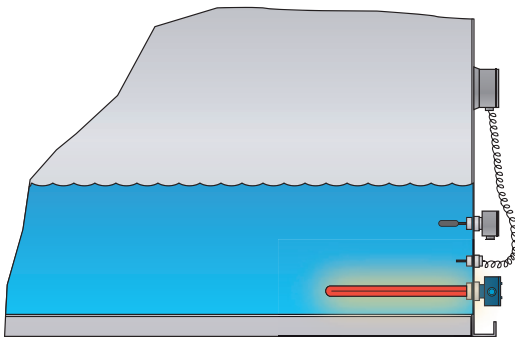
## Multiple Circuit Coils

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/Steel Support

## Electric Heaters

Electric immersion heaters are available factory installed in the basin of the condenser. They are sized to maintain a +4,4°C pan water temperature with the fans off and an ambient air temperature of -18°C, -29°C or -40°C. 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 weather proof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.

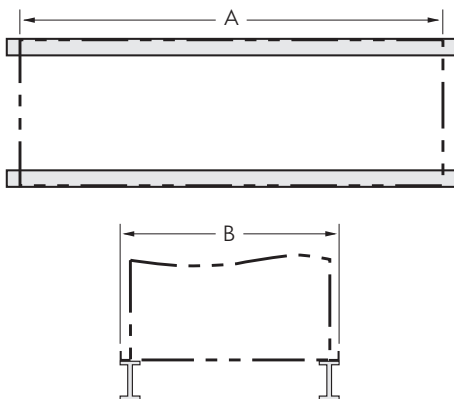


## PMRC Heater Sizes (kW)

Models	-18°C	-29°C	-40°C
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, 19 mm 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 3.2 mm in 1.8 m 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 (mm)

1.5 m Wide Models	A	B
PMC-175E to 240E	3,648	1,930
PMC-250E to 375E	5,490	1,930
3.0 m Wide Models	A	B
PMRC-332 to PMRC-530	3,651	2,991
PMRC-503 to PMRC-792	5,490	2,991
PMRC-725 to PMRC-1056	7,337	2,991
PMRC-1006 to PMRC-1586	11,024	2,991
3.6 m Wide Models	A	B
PMRC-376 to PMRC-678	3,651	3,616
PMRC-568 to PMRC-1012	5,490	3,616
PMRC-715 to PMRC-1074	6,102	3,616
PMRC-752 to PMRC-1362	7,337	3,616
PMRC-1137 to PMRC-1911	11,024	3,616
PMRC-1705 to PMRC-2138	12,243	3,616

## Design

EVAPCO units are heavy-duty construction and designed for long trouble-free operation. Proper equipment selection, installation and maintenance is, 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 roof top or on 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 137 and 344 kPa.

## 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 \_\_\_\_\_ kW heat rejection, operating with \_\_\_\_\_ refrigerant at \_\_\_\_\_°C condensing temperature and \_\_\_\_\_°C 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 Z-275 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

\_\_\_\_\_ kW totally enclosed fan cooled motor(s) 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 34.5 bar air pressure under water.

## Water Distribution System

The system shall provide a water flow rate of 4 l/s over each square meter 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 with large 32 mm diameter opening and internal sludge ring to eliminate 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. \_\_\_\_\_ kW 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 Z-275 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.







# WORLDWIDE MANUFACTURING FACILITIES



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