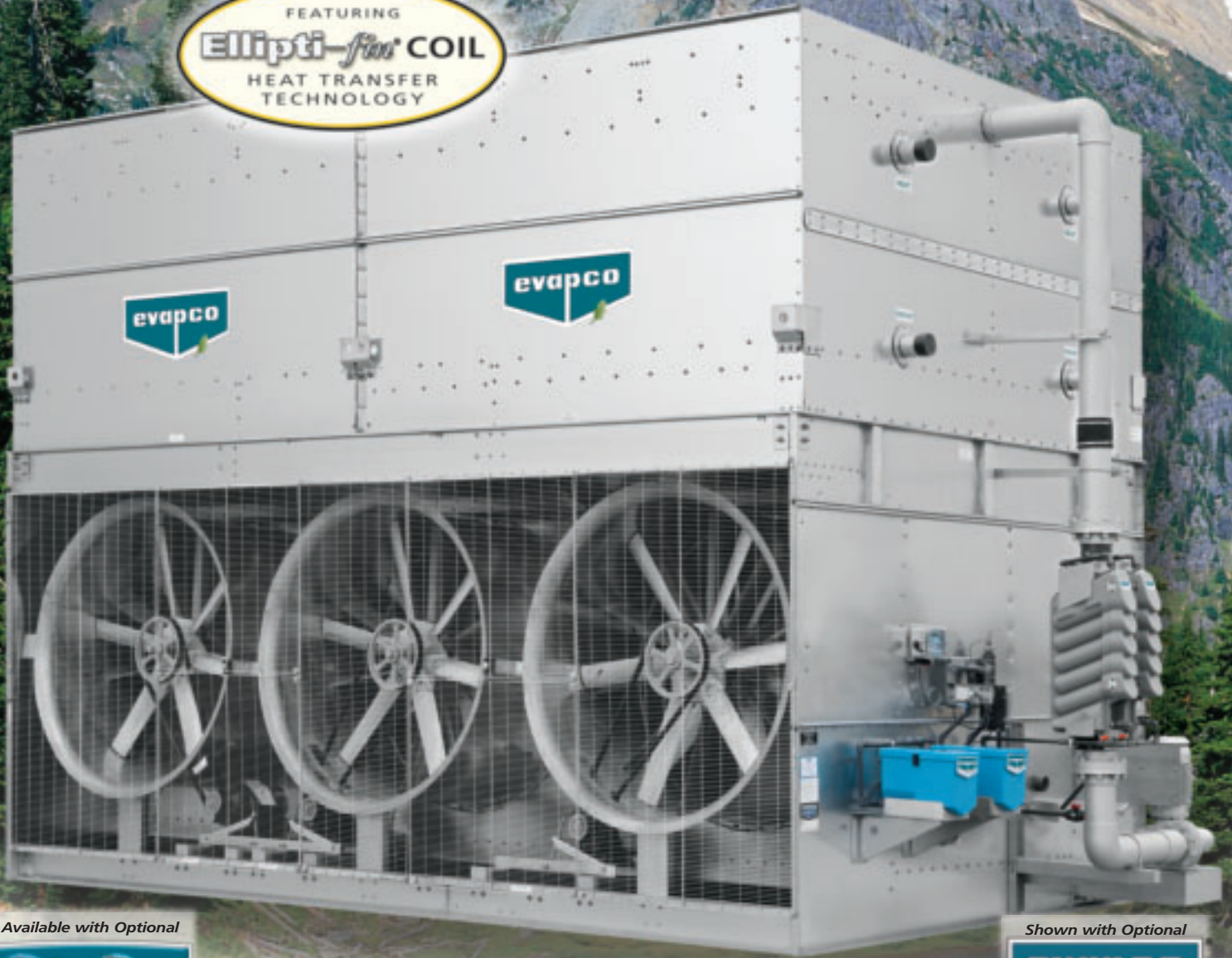




# eco-PMC

## EVAPORATIVE CONDENSERS



Available with Optional



Water Treatment System

Shown with Optional



Water Treatment System

*Forced Draft, Axial Fan Models Available in Capacities from **130** to **1,554** Ammonia Tons!*

### ENVIRONMENTALLY CONSCIOUS OPERATION



**IARW** International Association of Refrigerated Warehouses

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

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





# eco-PMC Design and

The eco-PMC line of evaporative condensers represents EVAPCO's newest advancement in thermal heat transfer research and development. Utilizing the **Ellipti-fin**® heat transfer coil, the eco-PMC offers improved heat transfer during wet operation and offers significant water savings due to extended periods of dry operation. The eco-PMC is another chapter in EVAPCO's on-going commitment to quality, environmentally friendly products.

### Water Saver Drift Eliminators

- New 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.

U.S. Patent No. 6,315,804

### 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:

- Man-sized Access Doors.
- External Service Platforms.
- Tandem Fan Drive System (Standard Fan Only).
- Stainless Steel Construction.



Optional Man-sized Access Door



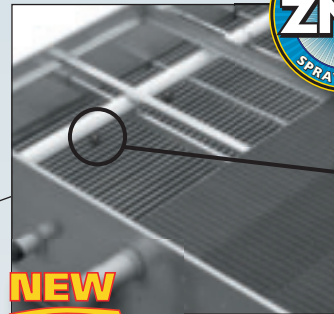
**NEW**

### Individual Fan Drive System

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



# Construction Features



**NEW**

### PVC Water Distribution with ZM<sup>®</sup> II Nozzles

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

### Ellipti-fin<sup>®</sup> Heat Transfer Technology

- Thermal Pak<sup>®</sup> coil with extended surface.
- Water savings through extended periods of dry operation.
- High heat transfer efficiency.
- Low refrigerant charge.



### Non-Chemical Water Treatment (Optional)

- Scale, corrosion and bacteria control.
- Factory mounted with single source responsibility.
- Environmentally safe, chemical-free water treatment.

U.S. Patent Nos. 7,704,364 & 7,981,288

### 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.

### Sloped Pan Bottom

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



**NEW**

### Solid Chemistry Water Treatment (Optional)

- Controlled release chemistry provides uniform treatment over a 30 day period.
- Factory mounted and wired.
- Easier and safer, eliminates the potential for liquid spills.



Since its founding in 1976, EVAPCO, Incorporated has become an industry leader in the engineering and manufacturing of quality heat transfer products around the world. EVAPCO's mission is to provide first class service and quality products for the following markets:

- Industrial Refrigeration
- Commercial HVAC
- Industrial Process
- Power

EVAPCO's powerful combination of financial strength and technical expertise has established the company as a recognized manufacturer of market-leading products on a worldwide basis. EVAPCO is also recognized for the superior technology of their environmentally friendly product innovations in sound reduction and water management.

EVAPCO is an employee owned company with a strong emphasis on research & development and modern manufacturing plants. EVAPCO has earned a reputation for technological innovation and superior product quality by featuring products that are designed to offer these operating advantages:

- Higher System Efficiency
- Environmentally Friendly
- Lower Annual Operating Costs
- Reliable, Simple Operation and Maintenance

With an ongoing commitment to Research & Development programs, EVAPCO provides the most advanced products in the industry – ***Technology for the Future, Available Today!***

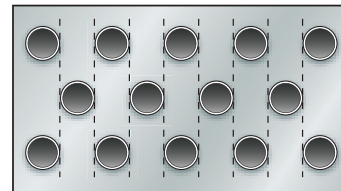


EVAPCO products are manufactured in 19 locations in 9 countries around the world and supplied through a sales network consisting of over 180 offices.

## Ellipti-*fin*<sup>®</sup> Heat Transfer Coil

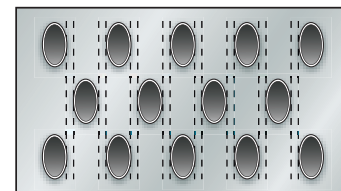
### Evolution of Heat Transfer Technology

EVAPCO has a long standing commitment to heat transfer research and development. This commitment has resulted in a number of advancements in heat transfer coil design. Up until the mid-1980's, evaporative condensers were manufactured



Round Tube Coil by Others

with tightly packed round tube coils. Through thousands of hours of testing and research, EVAPCO developed the Thermal-Pak<sup>®</sup> coil. The Thermal-Pak<sup>®</sup> coil was patented in 1987 and changed the thinking of system design engineers by changing the shape of the coil tubes. The elliptical tube design maximized the effective tube surface area while lowering airside pressure drop and allowing for higher water loading. The combination of the elliptical shape tube in the Thermal-Pak<sup>®</sup> orientation increased heat transfer efficiency and resulted in the most capacity per plan area of any evaporative condenser on the market.



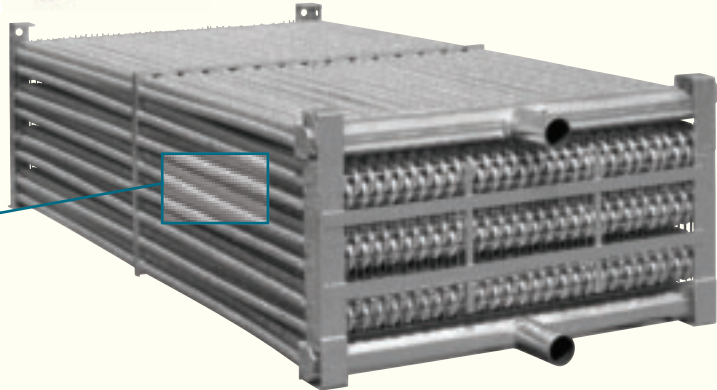
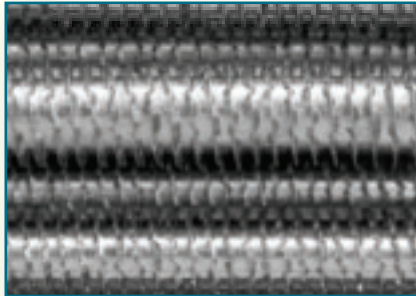
Thermal-Pak<sup>®</sup> Coil by EVAPCO

Throughout the late 1980's and into the 1990's EVAPCO was continuously looking for ways to improve heat transfer efficiency. This research resulted in the development of the Thermal-Pak<sup>®</sup> II heat transfer coil. The Thermal-Pak<sup>®</sup> II coil utilized the same elliptical shape tube introduced in the original Thermal-Pak coil, but changed the orientation of the tubes to improve the tubes air to water interface for increased heat transfer efficiency.

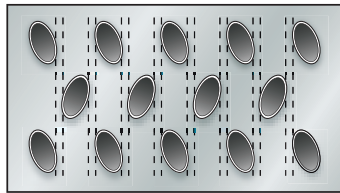
The development of the Thermal-Pak<sup>®</sup> II coil resulted in a reduction in refrigerant charge as well as a reduction in operating weight through reduced coil volume while maintaining the same thermal performance as the original Thermal-Pak<sup>®</sup> coil design.



**NEW**  
**Ellipti-fin® Heat Transfer Coil**



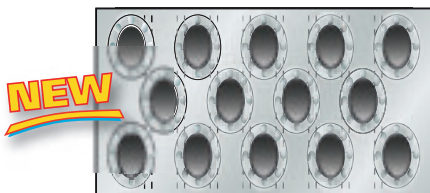
- Elliptical Tubes with Spiral Wound Fins
- Improved Dry and Wet Operation
- All Rows Finned



Thermal-Pak® II Coil by EVAPCO

Research and development is an on-going process at EVAPCO. Through the success of the Thermal-Pak II coil, EVAPCO saw the potential for new coil configurations and the need for new manufacturing technology to improve processes and efficiency. During this same time, it became evident that a need exists for more environmentally conscious evaporative cooling products.

EVAPCO used the experience gained through the development of the Thermal-Pak and Thermal-Pak II heat transfer coils and combined with new manufacturing procedures to develop the **Ellipti-fin®** heat transfer coil. The **Ellipti-fin®** coil utilizes elliptical shape tube with extended surface fins for maximum heat transfer efficiency. **The extended surface increases the heat transfer efficiency in the evaporative (or wet) mode of operation and the dry mode of operation.**



**NEW**  
**Ellipti-fin®** Finned Elliptical Tube by EVAPCO

The **Ellipti-fin®** coil incorporates features of both the Thermal-Pak and Thermal-Pak II coils as the tubes are oriented vertically yet spaced so as not to increase the airside pressure drop. As such, eco-PMC condensers are not subject to the performance penalties normally associated with round tube extended surface coils. Additionally, EVAPCO ensures proper evaporative operation by thoroughly wetting the coil surface with the highest water loading in the industry for conventional evaporative condensers.

**Ellipti-fin®** coils are manufactured from high quality carbon steel tubing following the most stringent quality control procedures and in accordance with the ASME B31.5 Refrigerant Piping Code. Each circuit is inspected to assure the material quality and tested before fins are wound onto the surface of the tube. Each circuit is then assembled into a complete coil. Finally, the assembled coil is tested at 400 P.S.I.G. air pressure under water to make sure it is leak free. To protect the coil against corrosion, and complete the bond between tube and fin, the entire assembly is dipped in molten zinc (hot dip galvanized) at a temperature of approximately 800°F.

EVAPCO'S new **Ellipti-fin®** condensing coils are designed for maximum heat transfer efficiency. This unique coil design utilizes counterflow heat transfer. The rows of the finned elliptical tubes are positioned vertically in the direction of airflow to enhance turbulence, which increases heat transfer while minimizing airside pressure drop. The design features of EVAPCO's **Ellipti-fin®** condensing coils ensure the end user will receive the highest evaporative heat transfer efficiency wet or dry. These characteristics and other engineering advancements of the **Ellipti-fin®** have been proven in EVAPCO'S world-class research and development laboratory.



## eco-PMC Design Features *Proven Performance and Design Flexibility*

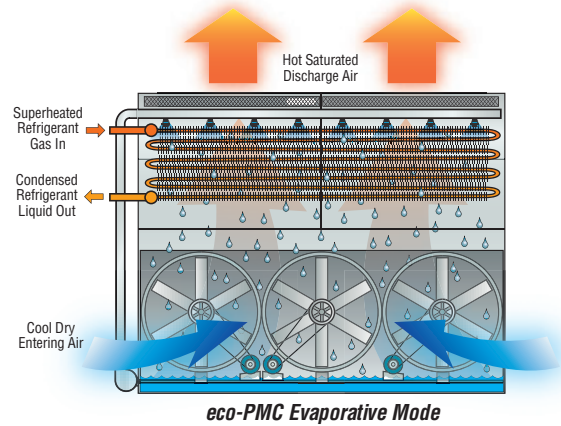
### Principle of Operation

#### Evaporative Mode

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.

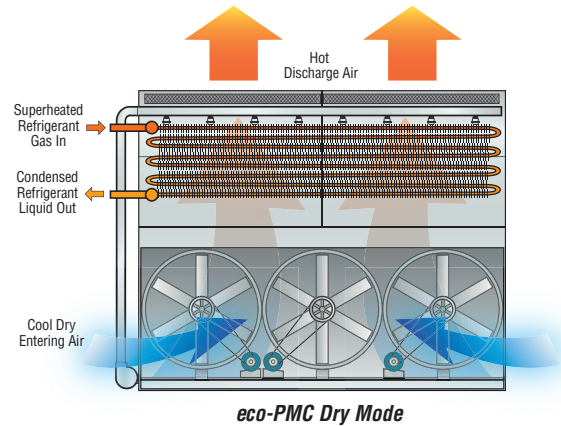
The evaporative process cools the spray water, which in turn cools the tubes containing the refrigerant gas. The cool tube walls cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the coil's sloping tubes to the high pressure liquid receiver for return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

The hot, saturated air is driven through the drift eliminators, where any entrained water droplets are removed. The hot saturated air discharges 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.



#### Dry Mode

The refrigerant gas is discharged from the compressor into the inlet connection of the eco-PMC condenser. Cool ambient air is forced into the unit and moves over the **Ellipti-fin**® heat transfer coil. The air is warmed as 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 into a high pressure receiver for return to the system. The hot discharge air continues through the drift eliminators and where it can dissipate harmlessly into the atmosphere.



## IBC Compliant Designs

### IBC Compliance

EVAPCO has been applying advanced structural technology to evaporative condensers for many years. Following seismic events in the mid 1990's EVAPCO introduced the UB Series of induced draft cooling towers, fluid coolers and evaporative condensers. These products were designed, built and independently certified for extreme seismic and wind forces. With the advent of the International Building Code, EVAPCO is now offering a new line of eco-PMC Evaporative Condensers that are IBC compliant as standard construction to an importance factor,  $I_p = 1.0$ .

### Importance Factor ( $I_p$ )

A major parameter that must be determined prior to calculating the seismic design force is the component importance factor ( $I_p$ ). ASCE 7-10 defines the component importance factor as:

Importance Factor, $I_p$	Risk Category
1.5	<ul style="list-style-type: none"> <li>Life safety component required to function after seismic event.</li> <li>Components containing hazardous content where the quantity, if released, exceeds a threshold limit that is sufficient to pose a threat to the public.</li> <li>Components installed at Risk Category IV (essential) facilities</li> </ul>
1.0	All other components

According to the American Society of Civil Engineers (ASCE) Manual 7-10 edition, section 13.1.3, components containing hazardous contents that could release an amount in excess of code limits require an importance factor of 1.5. **However, per ASCE 7-10, Section 1.5.3, the importance factor can be reduced to 1.0 should the authority having jurisdiction deem an acceptable Risk Management Program (RMP) is in place.** The importance factor has significant impact on the design of the equipment necessary for the application. Please contact the factory for assistance in understanding your needs.

## eco-PMC Design Features *Proven Performance and Design Flexibility*

### Water and Energy Savings with eco-PMC Technology

#### Low Fan Motor Hp

The eco-PMC features the new EVAPCO **Ellipti-fin**<sup>®</sup> coil, which utilizes elliptical spiral fin coil technology. This technology results in a substantial increase in thermal performance when operating in the evaporative mode which offers model selections with either reduced plan area, lower energy consumption, or lower refrigerant charge.

#### Reduced Plan Area

Due to the increased thermal performance, eco-PMC condensers can be selected specifically to minimize the unit plan area while maximizing capacity for those applications where space is limited.

#### Significant Water Savings

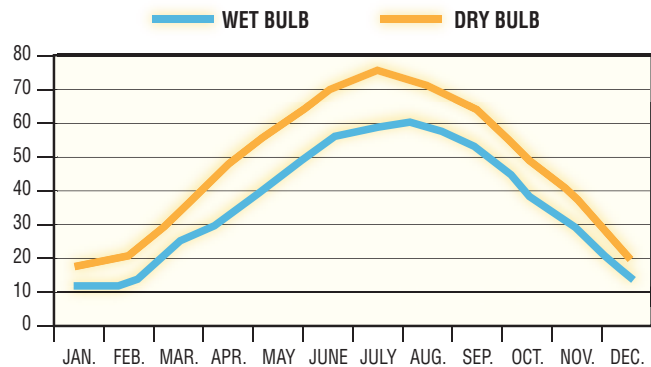
The **Ellipti-fin**<sup>®</sup> coil technology enables the eco-PMC to operate in a 100% dry mode at a significantly higher dry bulb switchover temperature than that of a typical bare tube coil evaporative condenser and even higher when compared to hybrid condensers utilizing a combination of reduced coil surface and PVC cooling tower fill material. This leads to a significant increase in the number of hours per year the condenser can operate in dry mode (spray pumps off), thus increasing your water savings. This combination of features allows the eco-PMC to be operated with both water and energy efficiency in mind, making it the ideal choice for most geographic locations.

Consider 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-PMC evaporative condenser and an PMC-E evaporative condenser are compared as follows:

EVAPCO Model	PMC-774E-1g	eco-PMC-785-1g
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

*Model Comparison*

In the example, the eco-PMC model requires lower fan motor horsepower than the equivalent PMC-E while maintaining the same plan area. The potential for reduced hp during wet operation is only one of the eco-PMC benefits. The enhanced dry performance of the eco-PMC is illustrated by using bin weather data for Minneapolis, MN shown below.



*Minneapolis Annual Weather Data\**

Assuming a load profile requiring full 100% heat rejection requirement for a full time operation of the refrigeration system yields the following comparison between the eco-PMC and the PMC-E:

EVAPCO Model	PMC-774E-1g	eco-PMC-785-1g
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%

The above example shows the eco-PMC-785-1g can be operated without spray water 34% of the year while maintaining 100% of the full load capacity. The additional dry operation means less opportunity for freeze-ups, reduced water management costs and reduced water treatment costs.

\* The Temperature Profile generated is based on 5 year weather data from the National Climatic Data Center (NCDC).



## eco-PMC Design Features *Proven Performance and Design Flexibility*

### Energy Efficient for Lowest Operating Cost

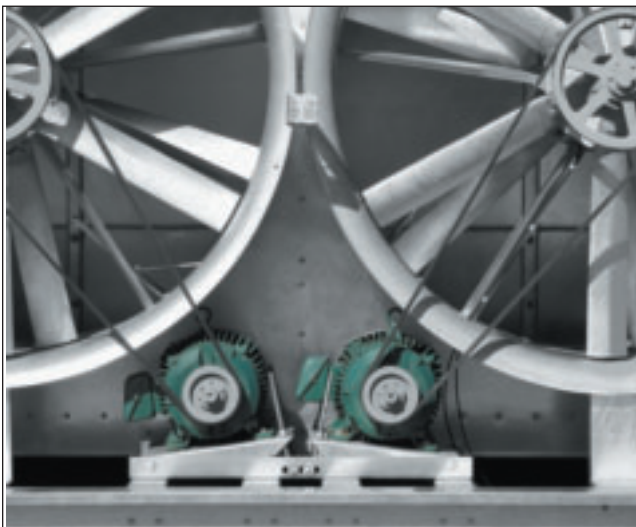
#### Lower Horsepower Options

The fan drive system of the eco-PMC utilizes large diameter vane-axial fans in a two 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. The eco-PMC condenser has been engineered to offer the highest water and energy savings. The eco-PMC product line includes 16 models ranging in nominal capacity from 130 TR (NH3) to 923 TR (NH3) using 3 horsepower fan motors.

### Individual Fan Drive System

#### Capacity Control Flexibility & Operating Redundancy

The eco-PMC fan drive system provides individual motor to fan configuration as standard equipment on all models. The dedicated fan to motor arrangement ensures less “wear & 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. **The eco-PMC comes standard with a 5 Year Motor and Drive Warranty.**



### Inverter-Ready Motors **STANDARD!**

Inverter Ready motors are standard on eco-PMC Condensers. Inverter-Ready motors are totally enclosed, premium efficiency and inverter capable (VFD by others).

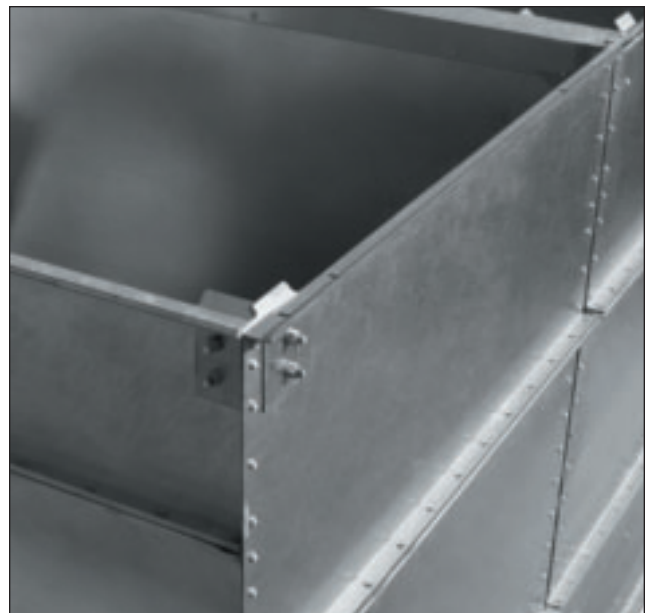
**Note: Systems utilizing Variable Frequency Drive control may require other component modification such as motor shaft grounding brushes, AC load reactors, low pass filters and tuned trap filters to ensure proper motor performance and service life.**

### Easy Field Assembly

#### Fewer Fasteners

#### Lower Installed Cost

The eco-PMC features a unique field seam design which ensures easy assembly and fewer field seam leaks. The field seam incorporates self-guiding channels to guide the coil casing section into the correct position when set on the bottom 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.





## eco-PMC Design Features *Proven Performance and Design Flexibility*

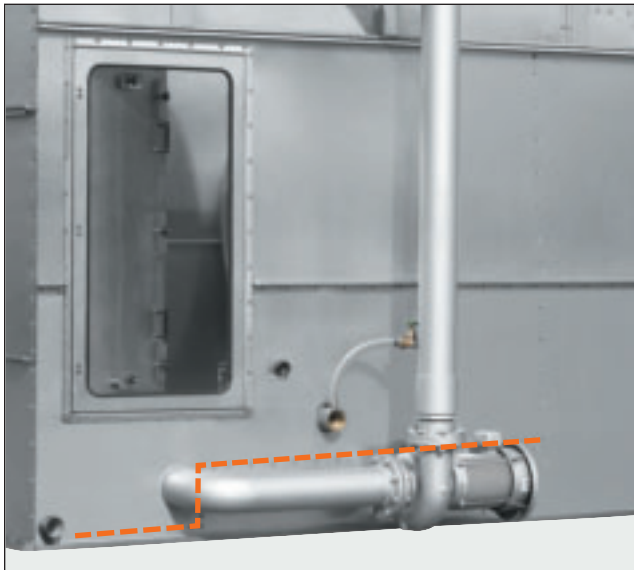
### Improved Maintenance

#### Fan Drive Accessibility

The drive components of the eco-PMC 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 are located at the front of the fan section and motors are positioned on a platform base to allow for easy belt tension adjustment.

#### Easy Clean Sloped Basin

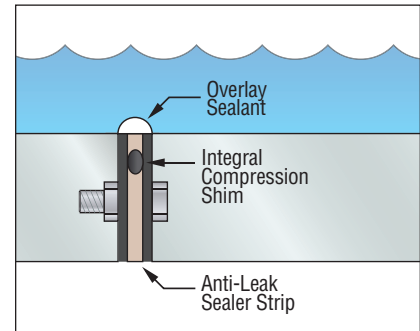
The eco-PMC basin is designed to improve maintenance access and make it easier for operating technicians to clean. The bottom of the pan is sloped to the unit drain to ensure that the basin will completely drain and allow sediment and debris that may collect in the basin to be easily flushed from the unit. The design helps to prevent buildup of sedimentary deposits, biological films and standing water. In addition, Evapco offers an optional “man-sized” access door to improve access to this critical area of the unit.



### Construction Features

#### Unique Seam Design—Eliminate Field Leaks

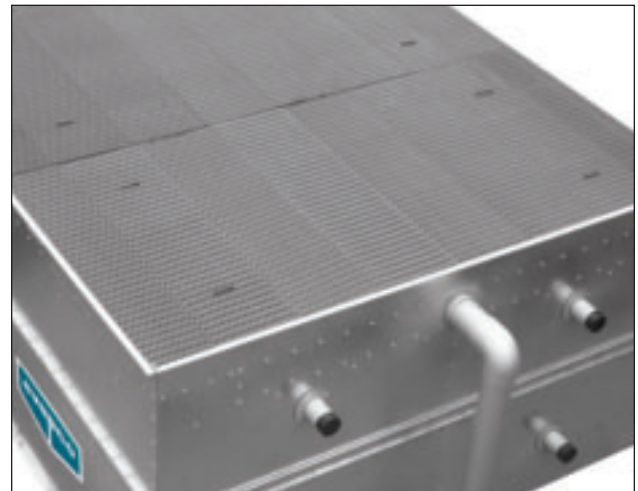
The eco-PMC features Evapco's standard panel construction design which includes a special butyl tape sealer with an integral sealing gasket. Each joint is then backed with a secondary caulking compound and encased in a double-brake flange for added strength and structural integrity. This unique sealing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



#### Superior Water Saver Drift Eliminators

The eco-PMC 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, eco-PMC 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. 6,315,804





# eco-PMC Selection Procedure

## 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 1 or 2 and multiplied times the heat of rejection.

The resultant figure is used to select a unit from Table 3. Unit capacities are given in Table 3 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:

$$\text{Heat of Rejection} = \text{Evaporator Load (BTU/Hr)} + \text{Compressor BHP} \times 2545$$

### Hermetic Compressors:

$$\text{Heat of Rejection} = \text{Evaporator Load (BTU/Hr)} + \text{K.W. Compressor Input} \times 3415$$

### EXAMPLE

Given: 450 ton load, ammonia refrigerant 96.3° condensing temperature, 78° W.B. temperature and 500 compressor BHP.

Selection: Heat of Rejection

$$\begin{aligned} 450 \text{ tons} \times 12000 &= 5,400,000 \text{ BTU/Hr} \\ 500 \text{ BHP} \times 2545 &= 1,272,500 \text{ BTU/Hr} \\ \text{Total} &= 6,672,500 \text{ BTU/Hr} \end{aligned}$$

From Table 2 the capacity factor for 96.3° condensing and 78° W.B. = 1.37 6,672,500 x 1.37 = 9,141,325 BTU/Hr or 9142 MBH. Therefore, select a model eco-PMC-623-1g.

**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.

**Table 1 - HCFC-22 and HFC-134a Heat Rejection Factors**

Condensing Pres. 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	
156	95	1.10	1.22	1.39	1.50	1.61	1.75	1.93	2.13	2.42	2.78	3.02	3.29	3.64	4.00	-	-	-	-	
168	104	.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	.80	.87	.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	.71	.76	.82	.85	.88	.91	.94	.98	1.03	1.09	1.12	1.15	1.20	1.24	1.34	1.46	1.63	1.82	
211	135	.63	.66	.70	.72	.75	.77	.80	.83	.87	.91	.93	.95	.97	1.00	1.06	1.13	1.23	1.35	
226	146	.56	.59	.62	.64	.65	.67	.69	.71	.74	.77	.78	.80	.82	.84	.88	.93	.98	1.04	

Note: Consult factory for selections using other refrigerants.

**Table 2 - Ammonia (R-717) Heat Rejection Factors**

Condensing Pres. 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	.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	.83	.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	.71	.78	.85	.89	.94	.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	.69	.75	.82	.86	.90	.94	.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	.63	.68	.73	.76	.79	.81	.84	.87	.92	.97	1.00	1.03	1.07	1.11	1.20	1.30	1.46	1.63	
214	105	.56	.59	.62	.64	.67	.69	.71	.74	.78	.81	.83	.85	.87	.89	.95	1.01	1.10	1.21	
232	110	.50	.53	.55	.57	.58	.60	.62	.63	.66	.69	.70	.71	.73	.75	.79	.83	.87	.93	



**Table 3 - Unit Heat Rejection**

eco-PMC Model	MBH Base	eco-PMC Model	MBH Base	eco-PMC Model	MBH Base	eco-PMC Model	MBH Base	eco-PMC Model	MBH Base
eco-PMC-183-1g	2690.1	eco-PMC-516-1g	7585.2	eco-PMC-753-1g	11069.1	eco-PMC-957-1g	14067.9	eco-PMC-1378-1g	20256.6
eco-PMC-191-1g	2807.7	eco-PMC-519-1g	7629.3	eco-PMC-755-1g	11098.5	eco-PMC-958-1g	14082.6	eco-PMC-1386-1g	20374.2
eco-PMC-196-1g	2881.2	eco-PMC-526-1g	7732.2	eco-PMC-756-1g	11113.2	eco-PMC-959-1g	14097.3	eco-PMC-1406-1g	20668.2
eco-PMC-204-1g	2998.8	eco-PMC-535-1g	7864.5	eco-PMC-760-1g	11172.0	eco-PMC-964-1g	14170.8	eco-PMC-1415-1g	20800.5
eco-PMC-205-1g	3013.5	eco-PMC-538-1g	7908.6	eco-PMC-761-1g	11186.7	eco-PMC-993-1g	14597.1	eco-PMC-1418-1g	20844.6
eco-PMC-217-1g	3189.9	eco-PMC-539-1g	7923.3	eco-PMC-767-1g	11274.9	eco-PMC-995-1g	14626.5	eco-PMC-1421-1g	20888.7
eco-PMC-220-1g	3234.0	eco-PMC-549-1g	8070.3	eco-PMC-768-1g	11289.6	eco-PMC-1000-1g	14700.0	eco-PMC-1439-1g	21153.3
eco-PMC-226-1g	3322.2	eco-PMC-551-1g	8099.7	eco-PMC-774-1g	11377.8	eco-PMC-1001-1g	14714.7	eco-PMC-1445-1g	21241.5
eco-PMC-233-1g	3425.1	eco-PMC-555-1g	8158.5	eco-PMC-784-1g	11524.8	eco-PMC-1022-1g	15023.4	eco-PMC-1481-1g	21770.7
eco-PMC-235-1g	3454.5	eco-PMC-558-1g	8202.6	eco-PMC-785-1g	11539.5	eco-PMC-1024-1g	15052.8	eco-PMC-1482-1g	21785.4
eco-PMC-244-1g	3586.8	eco-PMC-559-1g	8217.3	eco-PMC-794-1g	11671.8	eco-PMC-1025-1g	15067.5	eco-PMC-1494-1g	21961.8
eco-PMC-252-1g	3704.4	eco-PMC-563-1g	8276.1	eco-PMC-799-1g	11745.3	eco-PMC-1026-1g	15082.2	eco-PMC-1502-1g	22079.4
eco-PMC-275-1g	4042.5	eco-PMC-573-1g	8423.1	eco-PMC-801-1g	11774.7	eco-PMC-1032-1g	15170.4	eco-PMC-1511-1g	22211.7
eco-PMC-279-1g	4101.3	eco-PMC-575-1g	8452.5	eco-PMC-807-1g	11862.9	eco-PMC-1038-1g	15258.6	eco-PMC-1513-1g	22241.1
eco-PMC-295-1g	4336.5	eco-PMC-592-1g	8702.4	eco-PMC-808-1g	11877.6	eco-PMC-1052-1g	15464.4	eco-PMC-1520-1g	22344.0
eco-PMC-301-1g	4424.7	eco-PMC-597-1g	8775.9	eco-PMC-811-1g	11921.7	eco-PMC-1067-1g	15684.9	eco-PMC-1521-1g	22358.7
eco-PMC-311-1g	4571.7	eco-PMC-599-1g	8805.3	eco-PMC-813-1g	11951.1	eco-PMC-1069-1g	15714.3	eco-PMC-1533-1g	22535.1
eco-PMC-314-1g	4615.8	eco-PMC-609-1g	8952.3	eco-PMC-815-1g	11980.5	eco-PMC-1076-1g	15817.2	eco-PMC-1550-1g	22785
eco-PMC-319-1g	4689.3	eco-PMC-616-1g	9055.2	eco-PMC-816-1g	11995.2	eco-PMC-1079-1g	15861.3	eco-PMC-1568-1g	23049.6
eco-PMC-336-1g	4939.2	eco-PMC-620-1g	9114.0	eco-PMC-819-1g	12039.3	eco-PMC-1095-1g	16096.5	eco-PMC-1598-1g	23490.6
eco-PMC-346-1g	5086.2	eco-PMC-623-1g	9158.1	eco-PMC-821-1g	12068.7	eco-PMC-1102-1g	16199.4	eco-PMC-1615-1g	23740.5
eco-PMC-348-1g	5115.6	eco-PMC-632-1g	9290.4	eco-PMC-829-1g	12186.3	eco-PMC-1111-1g	16331.7	eco-PMC-1617-1g	23769.9
eco-PMC-365-1g	5365.5	eco-PMC-639-1g	9393.3	eco-PMC-831-1g	12215.7	eco-PMC-1117-1g	16419.9	eco-PMC-1626-1g	23902.2
eco-PMC-372-1g	5468.4	eco-PMC-642-1g	9437.4	eco-PMC-838-1g	12318.6	eco-PMC-1118-1g	16434.6	eco-PMC-1631-1g	23975.7
eco-PMC-376-1g	5527.2	eco-PMC-644-1g	9466.8	eco-PMC-839-1g	12333.3	eco-PMC-1127-1g	16566.9	eco-PMC-1657-1g	24357.9
eco-PMC-387-1g	5688.9	eco-PMC-645-1g	9481.5	eco-PMC-844-1g	12406.8	eco-PMC-1148-1g	16875.6	eco-PMC-1662-1g	24431.4
eco-PMC-397-1g	5835.9	eco-PMC-646-1g	9496.2	eco-PMC-846-1g	12436.2	eco-PMC-1151-1g	16919.7	eco-PMC-1677-1g	24651.9
eco-PMC-405-1g	5953.5	eco-PMC-650-1g	9555.0	eco-PMC-855-1g	12568.5	eco-PMC-1185-1g	17419.5	eco-PMC-1687-1g	24798.9
eco-PMC-407-1g	5982.9	eco-PMC-660-1g	9702.0	eco-PMC-859-1g	12627.3	eco-PMC-1195-1g	17566.5	eco-PMC-1718-1g	25254.6
eco-PMC-410-1g	6027.0	eco-PMC-662-1g	9731.4	eco-PMC-869-1g	12774.3	eco-PMC-1197-1g	17595.9	eco-PMC-1738-1g	25548.6
eco-PMC-427-1g	6276.9	eco-PMC-668-1g	9819.6	eco-PMC-870-1g	12789.0	eco-PMC-1219-1g	17919.3	eco-PMC-1739-1g	25563.3
eco-PMC-438-1g	6438.6	eco-PMC-682-1g	10025.4	eco-PMC-876-1g	12877.2	eco-PMC-1225-1g	18007.5	eco-PMC-1780-1g	26166.0
eco-PMC-441-1g	6482.7	eco-PMC-688-1g	10113.6	eco-PMC-888-1g	13053.6	eco-PMC-1231-1g	18095.7	eco-PMC-1781-1g	26180.7
eco-PMC-451-1g	6629.7	eco-PMC-689-1g	10128.3	eco-PMC-889-1g	13068.3	eco-PMC-1239-1g	18213.3	eco-PMC-1782-1g	26195.4
eco-PMC-456-1g	6703.2	eco-PMC-692-1g	10172.4	eco-PMC-890-1g	13083.0	eco-PMC-1256-1g	18463.2	eco-PMC-1783-1g	26210.1
eco-PMC-465-1g	6835.5	eco-PMC-693-1g	10187.1	eco-PMC-891-1g	13097.7	eco-PMC-1263-1g	18566.1	eco-PMC-1837-1g	27003.9
eco-PMC-468-1g	6879.6	eco-PMC-696-1g	10231.2	eco-PMC-901-1g	13244.7	eco-PMC-1277-1g	18771.9	eco-PMC-1849-1g	27180.3
eco-PMC-474-1g	6967.8	eco-PMC-703-1g	10334.1	eco-PMC-912-1g	13406.4	eco-PMC-1283-1g	18860.1	eco-PMC-1904-1g	27988.8
eco-PMC-475-1g	6982.5	eco-PMC-708-1g	10407.6	eco-PMC-918-1g	13494.6	eco-PMC-1287-1g	18918.9	eco-PMC-1910-1g	28077.0
eco-PMC-479-1g	7041.3	eco-PMC-709-1g	10422.3	eco-PMC-924-1g	13582.8	eco-PMC-1290-1g	18963.0	eco-PMC-1914-1g	28135.8
eco-PMC-480-1g	7056.0	eco-PMC-710-1g	10437.0	eco-PMC-930-1g	13671.0	eco-PMC-1292-1g	18992.4	eco-PMC-1916-1g	28165.2
eco-PMC-482-1g	7085.4	eco-PMC-714-1g	10495.8	eco-PMC-935-1g	13744.5	eco-PMC-1301-1g	19124.7	eco-PMC-1986-1g	29194.2
eco-PMC-495-1g	7276.5	eco-PMC-722-1g	10613.4	eco-PMC-941-1g	13832.7	eco-PMC-1319-1g	19389.3	eco-PMC-1989-1g	29238.3
eco-PMC-500-1g	7350.0	eco-PMC-729-1g	10716.3	eco-PMC-948-1g	13935.6	eco-PMC-1323-1g	19448.1	eco-PMC-2047-1g	30090.9
eco-PMC-501-1g	7364.7	eco-PMC-741-1g	10892.7	eco-PMC-949-1g	13950.3	eco-PMC-1336-1g	19639.2	eco-PMC-2049-1g	30120.3
eco-PMC-511-1g	7511.7	eco-PMC-742-1g	10907.4	eco-PMC-952-1g	13994.4	eco-PMC-1365-1g	20065.5	eco-PMC-2134-1g	31369.8
eco-PMC-512-1g	7526.4	eco-PMC-748-1g	10995.6	eco-PMC-955-1g	14038.5	eco-PMC-1376-1g	20227.2	eco-PMC-2191-1g	32207.7





# eco-PMC Selection Procedure

## 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 4 or 5 and multiplied times the heat load in tons. The resultant figure is used to select a unit from Table 6. The condenser model in Table 6 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° 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 6 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:

$300 \times 1.38 \times 1.03 = 426$  corrected tons. Therefore, select a model eco-PMC-427-1g or eco-PMC-438-1g depending on unit type desired, and any layout or horsepower considerations.

**Table 4 - HCFC-22 and HFC-134a Capacity Factors**

Condensing Pres. 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	.90	.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	.78	.85	.93	.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	.70	.75	.81	.84	.87	.90	.93	.97	1.02	1.08	1.11	1.14	1.19	1.23	1.33	1.44	1.61	1.80
211	135	105	.63	.66	.70	.72	.75	.77	.80	.83	.87	.91	.93	.95	.97	1.00	1.06	1.13	1.23	1.35
226	146	110	.57	.60	.63	.65	.66	.68	.70	.72	.75	.78	.79	.81	.83	.85	.89	.94	.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 5 - Ammonia (R-717) Capacity Factors**

Condensing Pres. 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	.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	.84	.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	.74	.80	.87	.92	.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	.72	.78	.85	.89	.93	.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	.66	.71	.76	.79	.82	.85	.87	.91	.96	1.01	1.04	1.07	1.12	1.15	1.25	1.36	1.52	1.69	
214	105	.59	.62	.66	.68	.71	.73	.75	.78	.82	.86	.88	.90	.91	.94	1.00	1.07	1.16	1.27	
232	110	.53	.56	.59	.61	.62	.64	.66	.68	.71	.73	.74	.76	.78	.80	.84	.89	.93	.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

Note: Consult factory for selections using other refrigerants.

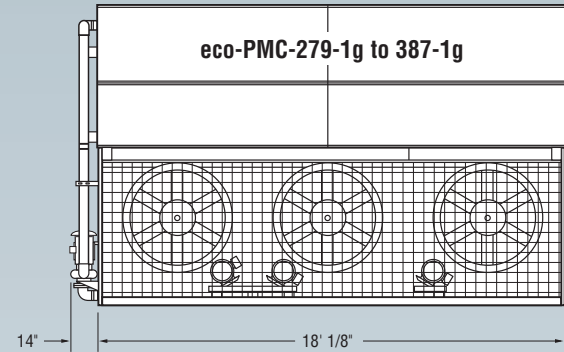
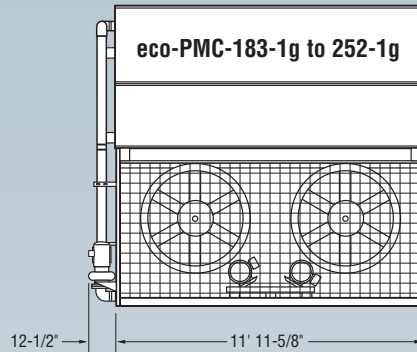
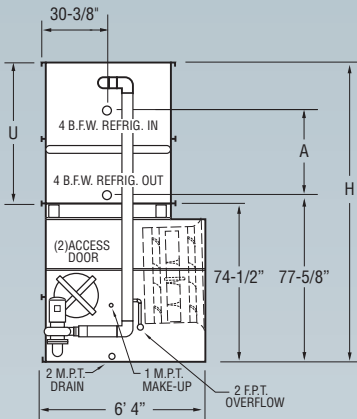
**Table 6 - Unit Sizes**

eco-PMC Model	Capacity	eco-PMC Model	Capacity	eco-PMC Model	Capacity	eco-PMC Model	Capacity	eco-PMC Model	Capacity
eco-PMC-183-1g	183	eco-PMC-516-1g	516	eco-PMC-753-1g	753	eco-PMC-957-1g	957	eco-PMC-1378-1g	1378
eco-PMC-191-1g	191	eco-PMC-519-1g	519	eco-PMC-755-1g	755	eco-PMC-958-1g	958	eco-PMC-1386-1g	1386
eco-PMC-196-1g	196	eco-PMC-526-1g	526	eco-PMC-756-1g	756	eco-PMC-959-1g	959	eco-PMC-1406-1g	1406
eco-PMC-204-1g	204	eco-PMC-535-1g	535	eco-PMC-760-1g	760	eco-PMC-964-1g	964	eco-PMC-1415-1g	1415
eco-PMC-205-1g	205	eco-PMC-538-1g	538	eco-PMC-761-1g	761	eco-PMC-993-1g	993	eco-PMC-1418-1g	1418
eco-PMC-217-1g	217	eco-PMC-539-1g	539	eco-PMC-767-1g	767	eco-PMC-995-1g	995	eco-PMC-1421-1g	1421
eco-PMC-220-1g	220	eco-PMC-549-1g	549	eco-PMC-768-1g	768	eco-PMC-1000-1g	1000	eco-PMC-1439-1g	1439
eco-PMC-226-1g	226	eco-PMC-551-1g	551	eco-PMC-774-1g	774	eco-PMC-1001-1g	1001	eco-PMC-1445-1g	1445
eco-PMC-233-1g	233	eco-PMC-555-1g	555	eco-PMC-784-1g	784	eco-PMC-1022-1g	1022	eco-PMC-1481-1g	1481
eco-PMC-235-1g	235	eco-PMC-558-1g	558	eco-PMC-785-1g	785	eco-PMC-1024-1g	1024	eco-PMC-1482-1g	1482
eco-PMC-244-1g	244	eco-PMC-559-1g	559	eco-PMC-794-1g	794	eco-PMC-1025-1g	1025	eco-PMC-1494-1g	1494
eco-PMC-252-1g	252	eco-PMC-563-1g	563	eco-PMC-799-1g	799	eco-PMC-1026-1g	1026	eco-PMC-1502-1g	1502
eco-PMC-275-1g	275	eco-PMC-573-1g	573	eco-PMC-801-1g	801	eco-PMC-1032-1g	1032	eco-PMC-1511-1g	1511
eco-PMC-279-1g	279	eco-PMC-575-1g	575	eco-PMC-807-1g	807	eco-PMC-1038-1g	1038	eco-PMC-1513-1g	1513
eco-PMC-295-1g	295	eco-PMC-592-1g	592	eco-PMC-808-1g	808	eco-PMC-1052-1g	1052	eco-PMC-1520-1g	1520
eco-PMC-301-1g	301	eco-PMC-597-1g	597	eco-PMC-811-1g	811	eco-PMC-1067-1g	1067	eco-PMC-1521-1g	1521
eco-PMC-311-1g	311	eco-PMC-599-1g	599	eco-PMC-813-1g	813	eco-PMC-1069-1g	1069	eco-PMC-1533-1g	1533
eco-PMC-314-1g	314	eco-PMC-609-1g	609	eco-PMC-815-1g	815	eco-PMC-1076-1g	1076	eco-PMC-1550-1g	1550
eco-PMC-319-1g	319	eco-PMC-616-1g	616	eco-PMC-816-1g	816	eco-PMC-1079-1g	1079	eco-PMC-1568-1g	1568
eco-PMC-336-1g	336	eco-PMC-620-1g	620	eco-PMC-819-1g	819	eco-PMC-1095-1g	1095	eco-PMC-1598-1g	1598
eco-PMC-346-1g	346	eco-PMC-623-1g	623	eco-PMC-821-1g	821	eco-PMC-1102-1g	1102	eco-PMC-1615-1g	1615
eco-PMC-348-1g	348	eco-PMC-632-1g	632	eco-PMC-829-1g	829	eco-PMC-1111-1g	1111	eco-PMC-1617-1g	1617
eco-PMC-365-1g	365	eco-PMC-639-1g	639	eco-PMC-831-1g	831	eco-PMC-1117-1g	1117	eco-PMC-1626-1g	1626
eco-PMC-372-1g	372	eco-PMC-642-1g	642	eco-PMC-838-1g	838	eco-PMC-1118-1g	1118	eco-PMC-1631-1g	1631
eco-PMC-376-1g	376	eco-PMC-644-1g	644	eco-PMC-839-1g	839	eco-PMC-1127-1g	1127	eco-PMC-1657-1g	1657
eco-PMC-387-1g	387	eco-PMC-645-1g	645	eco-PMC-844-1g	844	eco-PMC-1148-1g	1148	eco-PMC-1662-1g	1662
eco-PMC-397-1g	397	eco-PMC-646-1g	646	eco-PMC-846-1g	846	eco-PMC-1151-1g	1151	eco-PMC-1677-1g	1677
eco-PMC-405-1g	405	eco-PMC-650-1g	650	eco-PMC-855-1g	855	eco-PMC-1185-1g	1185	eco-PMC-1687-1g	1687
eco-PMC-407-1g	407	eco-PMC-660-1g	660	eco-PMC-859-1g	859	eco-PMC-1195-1g	1195	eco-PMC-1718-1g	1718
eco-PMC-410-1g	410	eco-PMC-662-1g	662	eco-PMC-869-1g	869	eco-PMC-1197-1g	1197	eco-PMC-1738-1g	1738
eco-PMC-427-1g	427	eco-PMC-668-1g	668	eco-PMC-870-1g	870	eco-PMC-1219-1g	1219	eco-PMC-1739-1g	1739
eco-PMC-438-1g	438	eco-PMC-682-1g	682	eco-PMC-876-1g	876	eco-PMC-1225-1g	1225	eco-PMC-1780-1g	1780
eco-PMC-441-1g	441	eco-PMC-688-1g	688	eco-PMC-888-1g	888	eco-PMC-1231-1g	1231	eco-PMC-1781-1g	1781
eco-PMC-451-1g	451	eco-PMC-689-1g	689	eco-PMC-889-1g	889	eco-PMC-1239-1g	1239	eco-PMC-1782-1g	1782
eco-PMC-456-1g	456	eco-PMC-692-1g	692	eco-PMC-890-1g	890	eco-PMC-1256-1g	1256	eco-PMC-1783-1g	1783
eco-PMC-465-1g	465	eco-PMC-693-1g	693	eco-PMC-891-1g	891	eco-PMC-1263-1g	1263	eco-PMC-1837-1g	1837
eco-PMC-468-1g	468	eco-PMC-696-1g	696	eco-PMC-901-1g	901	eco-PMC-1277-1g	1277	eco-PMC-1849-1g	1849
eco-PMC-474-1g	474	eco-PMC-703-1g	703	eco-PMC-912-1g	912	eco-PMC-1283-1g	1283	eco-PMC-1904-1g	1904
eco-PMC-475-1g	475	eco-PMC-708-1g	708	eco-PMC-918-1g	918	eco-PMC-1287-1g	1287	eco-PMC-1910-1g	1910
eco-PMC-479-1g	479	eco-PMC-709-1g	709	eco-PMC-924-1g	924	eco-PMC-1290-1g	1290	eco-PMC-1914-1g	1914
eco-PMC-480-1g	480	eco-PMC-710-1g	710	eco-PMC-930-1g	930	eco-PMC-1292-1g	1292	eco-PMC-1916-1g	1916
eco-PMC-482-1g	482	eco-PMC-714-1g	714	eco-PMC-935-1g	935	eco-PMC-1301-1g	1301	eco-PMC-1986-1g	1986
eco-PMC-495-1g	495	eco-PMC-722-1g	722	eco-PMC-941-1g	941	eco-PMC-1319-1g	1319	eco-PMC-1989-1g	1989
eco-PMC-500-1g	500	eco-PMC-729-1g	729	eco-PMC-948-1g	948	eco-PMC-1323-1g	1323	eco-PMC-2047-1g	2047
eco-PMC-501-1g	501	eco-PMC-741-1g	741	eco-PMC-949-1g	949	eco-PMC-1336-1g	1336	eco-PMC-2049-1g	2049
eco-PMC-511-1g	511	eco-PMC-742-1g	742	eco-PMC-952-1g	952	eco-PMC-1365-1g	1365	eco-PMC-2134-1g	2134
eco-PMC-512-1g	512	eco-PMC-748-1g	748	eco-PMC-955-1g	955	eco-PMC-1376-1g	1376	eco-PMC-2191-1g	2191



# Engineering & Dimensions Data

## eco-PMC-183-1g to 387-1g



**Table 7 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-183-1g	130	(2) 3	30,500	8,290	10,570	5,440	125	17	2	345	200	8	9,520	121-7/8	48-7/8	22-1/4
eco-PMC-191-1g	135	(2) 5	31,800	8,310	10,590	5,440	125	17	2	345	200	8	9,540	121-7/8	48-7/8	22-1/4
eco-PMC-196-1g	139	(2) 3	30,100	9,600	11,920	6,750	165	22	2	345	200	8	10,870	130-3/8	57-3/8	30-3/4
eco-PMC-204-1g	145	(2) 3	29,900	10,920	13,270	8,070	200	27	2	345	200	8	12,220	138-7/8	65-7/8	39-1/4
eco-PMC-205-1g	145	(2) 5	31,300	9,620	11,940	6,750	165	22	2	345	200	8	10,890	130-3/8	57-3/8	30-3/4
eco-PMC-217-1g	154	(2) 5	34,000	9,620	11,940	6,750	165	22	2	345	200	8	10,890	130-3/8	57-3/8	30-3/4
eco-PMC-220-1g	156	(2) 5	31,100	12,310	14,700	9,440	240	33	2	345	200	8	13,650	147-3/8	74-3/8	47-3/4
eco-PMC-226-1g	160	(2) 5	33,500	10,940	13,290	8,070	200	27	2	345	200	8	12,240	138-7/8	65-7/8	39-1/4
eco-PMC-233-1g	165	(2) 5	33,000	12,310	14,700	9,440	240	33	2	345	200	8	13,650	147-3/8	74-3/8	47-3/4
eco-PMC-235-1g	167	(2) 7.5	37,200	9,720	12,040	6,750	165	22	2	345	200	8	10,990	130-3/8	57-3/8	30-3/4
eco-PMC-244-1g	173	(2) 7.5	36,600	11,040	13,390	8,070	200	27	2	345	200	8	12,340	138-7/8	65-7/8	39-1/4
eco-PMC-252-1g	179	(2) 7.5	35,500	12,410	14,800	9,440	240	33	2	345	200	8	13,750	147-3/8	74-3/8	47-3/4
eco-PMC-279-1g	198	(3) 5	51,100	12,300	15,720	7,940	185	25	3	515	260	10	13,770	121-7/8	48-7/8	22-1/4
eco-PMC-295-1g	209	(3) 5	54,000	12,300	15,720	7,940	185	25	3	515	260	10	13,770	121-7/8	48-7/8	22-1/4
eco-PMC-301-1g	213	(3) 5	48,500	14,370	17,850	10,010	240	33	3	515	260	10	15,890	130-3/8	57-3/8	30-3/4
eco-PMC-319-1g	226	(3) 5	51,900	14,370	17,850	10,010	240	33	3	515	260	10	15,890	130-3/8	57-3/8	30-3/4
eco-PMC-336-1g	238	(3) 5	50,900	16,380	19,920	12,020	300	41	3	515	260	10	17,960	138-7/8	65-7/8	39-1/4
eco-PMC-346-1g	245	(3) 5	50,300	18,450	22,050	14,090	360	49	3	515	260	10	20,090	147-3/8	74-3/8	47-3/4
eco-PMC-372-1g	264	(3) 7.5	57,000	16,540	20,080	12,020	300	41	3	515	260	10	18,120	138-7/8	65-7/8	39-1/4
eco-PMC-387-1g	274	(3) 7.5	56,300	18,610	22,210	14,090	360	49	3	515	260	10	20,250	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.

\*\* 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.)

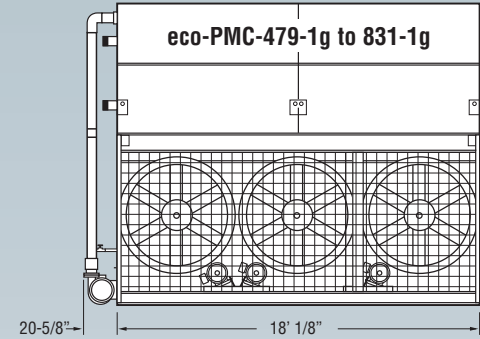
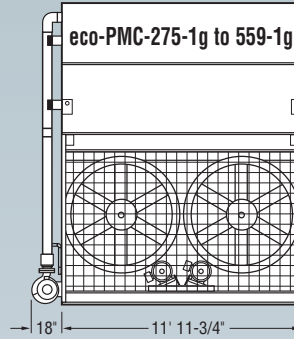
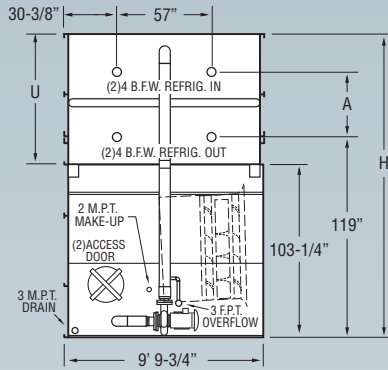
† Heaviest section is the upper coil section. **When 5.12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering & Dimensions Data

## eco-PMC-275-1g to 831-1g



**Table 8 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-275-1g	195	(2) 3	52,100	12,550	16,550	8,300	170	23	5	685	500	10	15,870	154-7/8	52-1/2	13-3/4
eco-PMC-311-1g	221	(2) 5	61,900	12,580	16,580	8,300	170	23	5	685	500	10	15,900	154-7/8	52-1/2	13-3/4
eco-PMC-348-1g	247	(2) 7.5	71,000	12,680	16,680	8,300	170	23	5	685	500	10	16,000	154-7/8	52-1/2	13-3/4
eco-PMC-365-1g	259	(2) 5	61,000	15,170	19,250	10,890	250	34	5	685	500	10	18,570	163-3/8	61	22-1/4
eco-PMC-376-1g	267	(2) 10	78,300	12,710	16,710	8,300	170	23	5	685	500	10	16,030	154-7/8	52-1/2	13-3/4
eco-PMC-405-1g	287	(2) 5	59,200	20,490	24,730	16,210	405	55	5	685	500	10	24,050	180-3/8	78	39-1/4
eco-PMC-407-1g	289	(2) 7.5	70,000	15,270	19,350	10,890	250	34	5	685	500	10	18,670	163-3/8	61	22-1/4
eco-PMC-410-1g	291	(2) 15	90,000	12,970	16,970	8,300	170	23	5	685	500	10	16,290	154-7/8	52-1/2	13-3/4
eco-PMC-438-1g	311	(2) 7.5	69,000	17,990	22,150	13,610	325	44	5	685	500	10	21,470	171-7/8	69-1/2	30-3/4
eco-PMC-441-1g	313	(2) 10	77,200	15,300	19,380	10,890	250	34	5	685	500	10	18,700	163-3/8	61	22-1/4
eco-PMC-456-1g	323	(2) 7.5	67,900	20,590	24,830	16,210	405	55	5	685	500	10	24,150	180-3/8	78	39-1/4
eco-PMC-474-1g	336	(2) 10	76,000	18,020	22,180	13,610	325	44	5	685	500	10	21,500	171-7/8	69-1/2	30-3/4
eco-PMC-480-1g	340	(2) 15	88,700	15,560	19,640	10,890	250	34	5	685	500	10	18,960	163-3/8	61	22-1/4
eco-PMC-495-1g	351	(2) 10	74,900	20,620	24,860	16,210	405	55	5	685	500	10	24,180	180-3/8	78	39-1/4
eco-PMC-512-1g	363	(2) 10	73,800	23,310	27,620	18,900	480	66	5	685	500	10	26,940	188-7/8	86-1/2	47-3/4
eco-PMC-516-1g	366	(2) 15	87,400	18,280	22,440	13,610	325	44	5	685	500	10	21,760	171-7/8	69-1/2	30-3/4
eco-PMC-539-1g	382	(2) 15	86,100	20,880	25,120	16,210	405	55	5	685	500	10	24,440	180-3/8	78	39-1/4
eco-PMC-559-1g	396	(2) 15	84,800	23,570	27,880	18,900	480	66	5	685	500	10	27,200	188-7/8	86-1/2	47-3/4
eco-PMC-479-1g	340	(3) 3	77,200	23,020	29,340	16,040	365	50	7.5	1,030	620	12	27,140	163-3/8	61	22-1/4
eco-PMC-526-1g	373	(3) 7.5	106,900	19,280	25,480	12,110	250	34	7.5	1,030	620	12	23,280	154-7/8	52-1/2	13-3/4
eco-PMC-551-1g	391	(3) 5	91,800	23,050	29,370	16,040	365	50	7.5	1,030	620	12	27,170	163-3/8	61	22-1/4
eco-PMC-563-1g	399	(3) 10	117,800	19,330	25,530	12,110	250	34	7.5	1,030	620	12	23,330	154-7/8	52-1/2	13-3/4
eco-PMC-592-1g	420	(3) 5	90,400	27,110	33,550	20,100	485	66	7.5	1,030	620	12	31,350	171-7/8	69-1/2	30-3/4
eco-PMC-609-1g	432	(3) 15	135,400	19,720	25,920	12,110	250	34	7.5	1,030	620	12	23,720	154-7/8	52-1/2	13-3/4
eco-PMC-616-1g	437	(3) 7.5	105,300	23,210	29,530	16,040	365	50	7.5	1,030	620	12	27,330	163-3/8	61	22-1/4
eco-PMC-660-1g	468	(3) 10	116,100	23,260	29,580	16,040	365	50	7.5	1,030	620	12	27,380	163-3/8	61	22-1/4
eco-PMC-662-1g	470	(3) 7.5	103,800	27,270	33,710	20,100	485	66	7.5	1,030	620	12	31,510	171-7/8	69-1/2	30-3/4
eco-PMC-689-1g	489	(3) 7.5	102,200	31,200	37,750	24,030	600	82	7.5	1,030	620	12	35,550	180-3/8	78	39-1/4
eco-PMC-709-1g	503	(3) 10	114,400	27,320	33,760	20,100	485	66	7.5	1,030	620	12	31,560	171-7/8	69-1/2	30-3/4
eco-PMC-714-1g	506	(3) 15	133,500	23,650	29,970	16,040	365	50	7.5	1,030	620	12	27,770	163-3/8	61	22-1/4
eco-PMC-741-1g	526	(3) 10	112,700	31,250	37,800	24,030	600	82	7.5	1,030	620	12	35,600	180-3/8	78	39-1/4
eco-PMC-767-1g	544	(3) 15	131,500	27,710	34,150	20,100	485	66	7.5	1,030	620	12	31,950	171-7/8	69-1/2	30-3/4
eco-PMC-768-1g	545	(3) 10	111,100	35,310	41,980	28,090	720	98	7.5	1,030	620	12	39,780	188-7/8	86-1/2	47-3/4
eco-PMC-801-1g	568	(3) 15	129,600	31,640	38,190	24,030	600	82	7.5	1,030	620	12	35,990	180-3/8	78	39-1/4
eco-PMC-831-1g	589	(3) 15	127,600	35,700	42,370	28,090	720	98	7.5	1,030	620	12	40,170	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.

\*\* 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.)

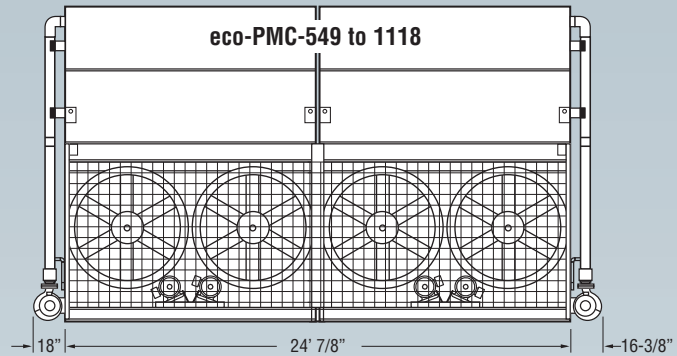
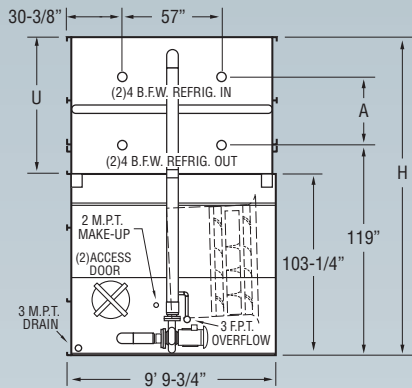
† Heaviest section is the upper coil section. When 5.12 seismic design is required consult the factory for specific weights.

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering & Dimensions Data

## eco-PMC-549-1g to 1118-1g



**Table 9 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-549-1g	389	(4) 3	104,300	24,970	33,340	L 9,170	340	47	(2) 5	1,370	930	12	31,200	154-7/8	52-1/2	13-3/4
eco-PMC-623-1g	442	(4) 5	123,800	25,010	33,380	L 9,210	340	47	(2) 5	1,370	930	12	31,240	154-7/8	52-1/2	13-3/4
eco-PMC-692-1g	491	(4) 3	101,200	35,990	44,670	U 13,410	650	89	(2) 5	1,370	930	12	42,530	171-7/8	69-1/2	30-3/4
eco-PMC-696-1g	494	(4) 7.5	142,000	25,220	33,590	L 9,420	340	47	(2) 5	1,370	930	12	31,450	154-7/8	52-1/2	13-3/4
eco-PMC-710-1g	504	(4) 3	99,700	41,390	50,230	U 16,110	805	110	(2) 5	1,370	930	12	48,090	180-3/8	78	39-1/4
eco-PMC-729-1g	517	(4) 5	122,000	30,390	38,920	U 10,590	495	68	(2) 5	1,370	930	12	36,780	163-3/8	61	22-1/4
eco-PMC-753-1g	534	(4) 10	156,600	25,290	33,660	L 9,490	340	47	(2) 5	1,370	930	12	31,520	154-7/8	52-1/2	13-3/4
eco-PMC-784-1g	556	(4) 5	120,200	36,030	44,710	U 13,410	650	89	(2) 5	1,370	930	12	42,570	171-7/8	69-1/2	30-3/4
eco-PMC-811-1g	575	(4) 5	118,500	41,430	50,270	U 16,110	805	110	(2) 5	1,370	930	12	48,130	180-3/8	78	39-1/4
eco-PMC-815-1g	578	(4) 7.5	139,900	30,600	39,130	U 10,590	495	68	(2) 5	1,370	930	12	36,990	163-3/8	61	22-1/4
eco-PMC-819-1g	581	(4) 15	180,000	25,810	34,180	L 10,010	340	47	(2) 5	1,370	930	12	32,040	154-7/8	52-1/2	13-3/4
eco-PMC-876-1g	621	(4) 7.5	137,900	36,240	44,920	U 13,410	650	89	(2) 5	1,370	930	12	42,780	171-7/8	69-1/2	30-3/4
eco-PMC-912-1g	647	(4) 7.5	135,900	41,640	50,480	U 16,110	805	110	(2) 5	1,370	930	12	48,340	180-3/8	78	39-1/4
eco-PMC-941-1g	667	(4) 7.5	133,900	47,220	56,210	U 18,900	960	131	(2) 5	1,370	930	12	54,070	188-7/8	86-1/2	47-3/4
eco-PMC-948-1g	672	(4) 10	152,100	36,310	44,990	U 13,410	650	89	(2) 5	1,370	930	12	42,850	171-7/8	69-1/2	30-3/4
eco-PMC-1025-1g	727	(4) 10	146,700	47,290	56,280	U 18,900	960	131	(2) 5	1,370	930	12	54,140	188-7/8	86-1/2	47-3/4
eco-PMC-1032-1g	732	(4) 15	174,800	36,830	45,510	U 13,410	650	89	(2) 5	1,370	930	12	43,370	171-7/8	69-1/2	30-3/4
eco-PMC-1079-1g	765	(4) 15	172,200	42,230	51,070	U 16,110	805	110	(2) 5	1,370	930	12	48,930	180-3/8	78	39-1/4
eco-PMC-1118-1g	793	(4) 15	169,600	47,810	56,800	U 18,900	960	131	(2) 5	1,370	930	12	54,660	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.

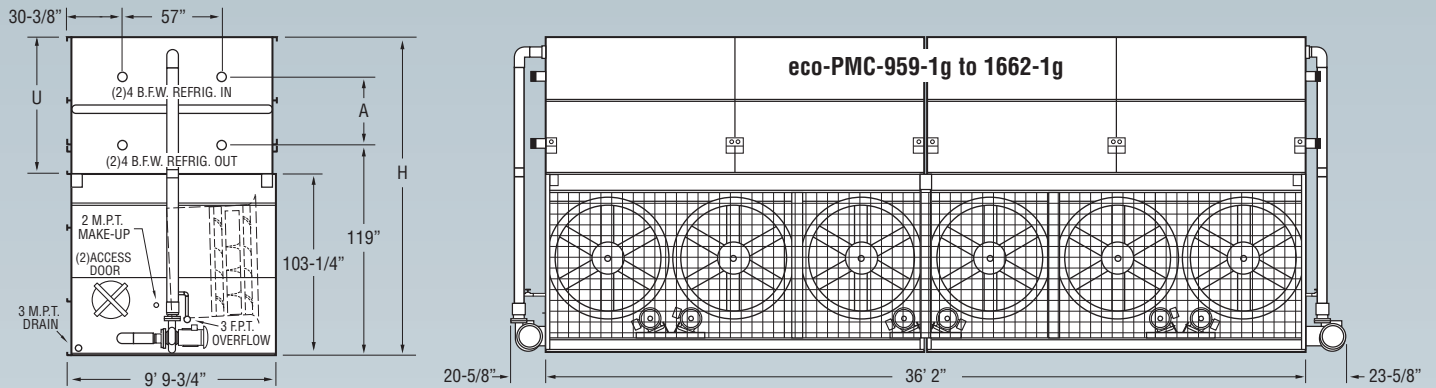
\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

† L = Lower Section, U = Upper Section. **When 5.12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.

# Engineering & Dimensions Data

## eco-PMC-959-1g to 1662-1g



**Table 10 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-959-1g	680	(6) 3	154,500	44,530	57,500	U 15,660	735	100	(2) 7.5	2,060	1,400	14	54,220	163-3/8	61	22-1/4
eco-PMC-1052-1g	746	(6) 7.5	213,700	36,790	49,520	L 13,590	500	68	(2) 7.5	2,060	1,400	14	46,250	154-7/8	52-1/2	13-3/4
eco-PMC-1102-1g	782	(6) 5	183,700	44,600	57,570	U 15,660	735	100	(2) 7.5	2,060	1,400	14	54,290	163-3/8	61	22-1/4
eco-PMC-1127-1g	799	(6) 10	235,700	36,890	49,620	L 13,690	500	68	(2) 7.5	2,060	1,400	14	46,350	154-7/8	52-1/2	13-3/4
eco-PMC-1185-1g	840	(6) 5	181,000	52,960	66,160	U 19,840	970	132	(2) 7.5	2,060	1,400	14	62,890	171-7/8	69-1/2	30-3/4
eco-PMC-1219-1g	865	(6) 15	270,800	37,670	50,400	L 14,470	500	68	(2) 7.5	2,060	1,400	14	47,130	154-7/8	52-1/2	13-3/4
eco-PMC-1225-1g	869	(6) 5	178,200	61,080	74,520	U 23,900	1,205	164	(2) 7.5	2,060	1,400	14	71,240	180-3/8	78	39-1/4
eco-PMC-1231-1g	873	(6) 7.5	210,600	44,910	57,880	U 15,660	735	100	(2) 7.5	2,060	1,400	14	54,600	163-3/8	61	22-1/4
eco-PMC-1256-1g	891	(6) 5	175,600	69,460	83,130	U 28,090	1,435	196	(2) 7.5	2,060	1,400	14	79,850	188-7/8	86-1/2	47-3/4
eco-PMC-1319-1g	935	(6) 10	232,300	45,010	57,980	U 15,660	735	100	(2) 7.5	2,060	1,400	14	54,700	163-3/8	61	22-1/4
eco-PMC-1323-1g	938	(6) 7.5	207,500	53,270	66,470	U 19,840	970	132	(2) 7.5	2,060	1,400	14	63,200	171-7/8	69-1/2	30-3/4
eco-PMC-1378-1g	977	(6) 7.5	204,500	61,390	74,830	U 23,900	1,205	164	(2) 7.5	2,060	1,400	14	71,550	180-3/8	78	39-1/4
eco-PMC-1418-1g	1,006	(6) 10	228,900	53,370	66,570	U 19,840	970	132	(2) 7.5	2,060	1,400	14	63,300	171-7/8	69-1/2	30-3/4
eco-PMC-1421-1g	1,008	(6) 7.5	201,400	69,770	83,440	U 28,090	1,435	196	(2) 7.5	2,060	1,400	14	80,160	188-7/8	86-1/2	47-3/4
eco-PMC-1481-1g	1,050	(6) 10	225,500	61,490	74,930	U 23,900	1,205	164	(2) 7.5	2,060	1,400	14	71,650	180-3/8	78	39-1/4
eco-PMC-1533-1g	1,087	(6) 10	222,100	69,870	83,540	U 28,090	1,435	196	(2) 7.5	2,060	1,400	14	80,260	188-7/8	86-1/2	47-3/4
eco-PMC-1662-1g	1,179	(6) 15	255,300	70,650	84,320	U 28,090	1,435	196	(2) 7.5	2,060	1,400	14	81,040	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.

\*\* 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.)

† L = Lower Section, U = Upper Section. **When 5.12 seismic design is required consult the factory for specific weights.**

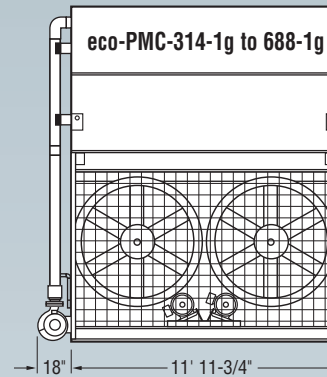
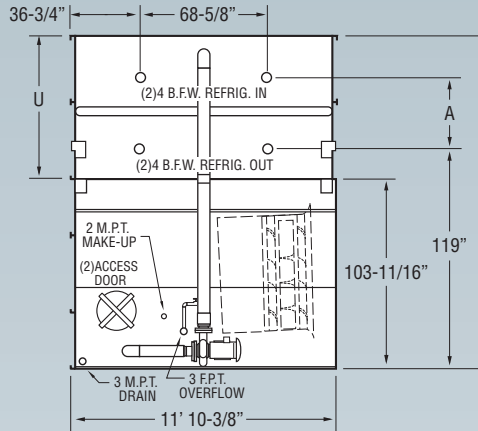
\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.





# Engineering & Dimensions Data

## eco-PMC-314-1g to 688-1g



**Table 11 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-314-1g	223	(2) 3	65,500	14,440	19,390	9,480	210	29	5	800	570	10	18,360	154-7/8	52-1/2	13-3/4
eco-PMC-397-1g	282	(2) 7.5	80,400	14,560	19,510	9,480	210	29	5	800	570	10	18,480	154-7/8	52-1/2	13-3/4
eco-PMC-427-1g	303	(2) 10	85,700	14,600	19,550	9,480	210	29	5	800	570	10	18,520	154-7/8	52-1/2	13-3/4
eco-PMC-451-1g	320	(2) 5	71,200	21,100	26,240	16,120	400	55	5	800	570	10	25,210	171-7/8	69-1/2	30-3/4
eco-PMC-465-1g	330	(2) 7.5	79,200	17,880	22,920	12,800	305	42	5	800	570	10	21,890	163-3/8	61	22-1/4
eco-PMC-468-1g	332	(2) 5	70,300	24,270	29,500	19,290	495	68	5	800	570	10	28,470	180-3/8	78	39-1/4
eco-PMC-475-1g	337	(2) 15	98,500	14,860	19,810	9,480	210	29	5	800	570	10	18,780	154-7/8	52-1/2	13-3/4
eco-PMC-482-1g	342	(2) 5	69,200	27,390	32,720	22,410	595	81	5	800	570	10	31,690	188-7/8	86-1/2	47-3/4
eco-PMC-500-1g	355	(2) 10	84,500	17,920	22,960	12,800	305	42	5	800	570	10	21,930	163-3/8	61	22-1/4
eco-PMC-501-1g	355	(2) 7.5	78,000	21,200	26,340	16,120	400	55	5	800	570	10	25,310	171-7/8	69-1/2	30-3/4
eco-PMC-511-1g	362	(2) 20	104,800	14,980	19,930	9,480	210	29	5	800	570	10	18,900	154-7/8	52-1/2	13-3/4
eco-PMC-519-1g	368	(2) 7.5	77,000	24,370	29,600	19,290	495	68	5	800	570	10	28,570	180-3/8	78	39-1/4
eco-PMC-535-1g	379	(2) 7.5	75,700	27,490	32,820	22,410	595	81	5	800	570	10	31,790	188-7/8	86-1/2	47-3/4
eco-PMC-538-1g	382	(2) 10	83,200	21,240	26,380	16,120	400	55	5	800	570	10	25,350	171-7/8	69-1/2	30-3/4
eco-PMC-555-1g	394	(2) 15	97,100	18,180	23,220	12,800	305	42	5	800	570	10	22,190	163-3/8	61	22-1/4
eco-PMC-558-1g	396	(2) 10	82,000	24,410	29,640	19,290	495	68	5	800	570	10	28,610	180-3/8	78	39-1/4
eco-PMC-575-1g	408	(2) 10	80,800	27,530	32,860	22,410	595	81	5	800	570	10	31,830	188-7/8	86-1/2	47-3/4
eco-PMC-597-1g	423	(2) 15	95,600	21,500	26,640	16,120	400	55	5	800	570	10	25,610	171-7/8	69-1/2	30-3/4
eco-PMC-599-1g	425	(2) 20	100,300	18,300	23,340	12,800	305	42	5	800	570	10	22,310	163-3/8	61	22-1/4
eco-PMC-620-1g	440	(2) 15	94,400	24,670	29,900	19,290	495	68	5	800	570	10	28,870	180-3/8	78	39-1/4
eco-PMC-639-1g	453	(2) 15	92,800	27,790	33,120	22,410	595	81	5	800	570	10	32,090	188-7/8	86-1/2	47-3/4
eco-PMC-644-1g	457	(2) 20	98,700	21,620	26,760	16,120	400	55	5	800	570	10	25,730	171-7/8	69-1/2	30-3/4
eco-PMC-668-1g	474	(2) 20	100,300	24,790	30,020	19,290	495	68	5	800	570	10	28,990	180-3/8	78	39-1/4
eco-PMC-688-1g	488	(2) 20	98,800	27,910	33,240	22,410	595	81	5	800	570	10	32,210	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.

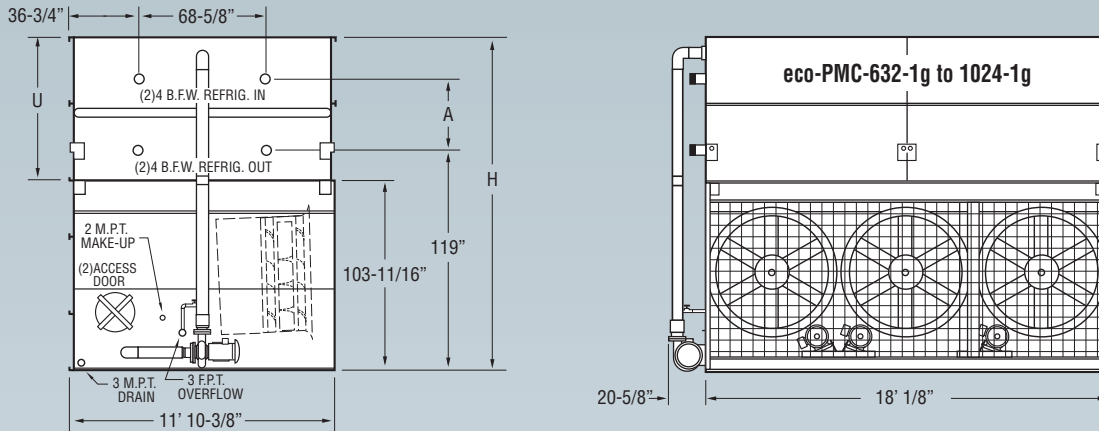
\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

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

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.

# Engineering & Dimensions Data

## eco-PMC-632-1g to 1024-1g



**Table 12 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-632-1g	448	(3) 3	93,800	36,740	44,360	28,930	740	101	7.5	1,200	740	12	41,700	180-3/8	78	39-1/4
eco-PMC-645-1g	457	(3) 5	108,100	27,010	34,340	19,170	450	62	7.5	1,200	740	12	31,680	163-3/8	61	22-1/4
eco-PMC-646-1g	458	(3) 10	128,200	22,260	29,450	14,210	310	42	7.5	1,200	740	12	26,790	154-7/8	52-1/2	13-3/4
eco-PMC-650-1g	461	(3) 3	92,200	41,280	49,050	33,470	885	121	7.5	1,200	740	12	46,390	188-7/8	86-1/2	47-3/4
eco-PMC-693-1g	491	(3) 5	106,500	31,960	39,440	24,120	595	81	7.5	1,200	740	12	36,780	171-7/8	69-1/2	30-3/4
eco-PMC-703-1g	499	(3) 7.5	118,400	27,170	34,500	19,170	450	62	7.5	1,200	740	12	31,840	163-3/8	61	22-1/4
eco-PMC-708-1g	502	(3) 15	147,300	22,650	29,840	14,210	310	42	7.5	1,200	740	12	27,180	154-7/8	52-1/2	13-3/4
eco-PMC-742-1g	526	(3) 5	103,400	41,310	49,080	33,470	885	121	7.5	1,200	740	12	46,420	188-7/8	86-1/2	47-3/4
eco-PMC-755-1g	535	(3) 7.5	116,700	32,120	39,600	24,120	595	81	7.5	1,200	740	12	36,940	171-7/8	69-1/2	30-3/4
eco-PMC-756-1g	536	(3) 10	126,300	27,220	34,550	19,170	450	62	7.5	1,200	740	12	31,890	163-3/8	61	22-1/4
eco-PMC-760-1g	539	(3) 20	156,800	22,840	30,030	14,210	310	42	7.5	1,200	740	12	27,370	154-7/8	52-1/2	13-3/4
eco-PMC-785-1g	557	(3) 7.5	115,200	36,930	44,550	28,930	740	101	7.5	1,200	740	12	41,890	180-3/8	78	39-1/4
eco-PMC-807-1g	572	(3) 7.5	113,300	41,470	49,240	33,470	885	121	7.5	1,200	740	12	46,580	188-7/8	86-1/2	47-3/4
eco-PMC-813-1g	577	(3) 10	124,500	32,170	39,650	24,120	595	81	7.5	1,200	740	12	36,990	171-7/8	69-1/2	30-3/4
eco-PMC-829-1g	588	(3) 15	145,200	27,610	34,940	19,170	450	62	7.5	1,200	740	12	32,280	163-3/8	61	22-1/4
eco-PMC-844-1g	599	(3) 10	122,600	36,980	44,600	28,930	740	101	7.5	1,200	740	12	41,940	180-3/8	78	39-1/4
eco-PMC-869-1g	616	(3) 10	120,800	41,520	49,290	33,470	885	121	7.5	1,200	740	12	46,630	188-7/8	86-1/2	47-3/4
eco-PMC-888-1g	630	(3) 20	154,500	27,800	35,130	19,170	450	62	7.5	1,200	740	12	32,470	163-3/8	61	22-1/4
eco-PMC-891-1g	632	(3) 15	143,000	32,560	40,040	24,120	595	81	7.5	1,200	740	12	37,380	171-7/8	69-1/2	30-3/4
eco-PMC-924-1g	655	(3) 15	141,200	37,370	44,990	28,930	740	101	7.5	1,200	740	12	42,330	180-3/8	78	39-1/4
eco-PMC-952-1g	675	(3) 15	138,800	41,910	49,680	33,470	885	121	7.5	1,200	740	12	47,020	188-7/8	86-1/2	47-3/4
eco-PMC-957-1g	679	(3) 20	147,600	32,750	40,230	24,120	595	81	7.5	1,200	740	12	37,570	171-7/8	69-1/2	30-3/4
eco-PMC-993-1g	704	(3) 20	149,900	37,560	45,180	28,930	740	101	7.5	1,200	740	12	42,520	180-3/8	78	39-1/4
eco-PMC-1024-1g	726	(3) 20	147,700	42,100	49,870	33,470	885	121	7.5	1,200	740	12	47,210	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.

\*\* 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.)

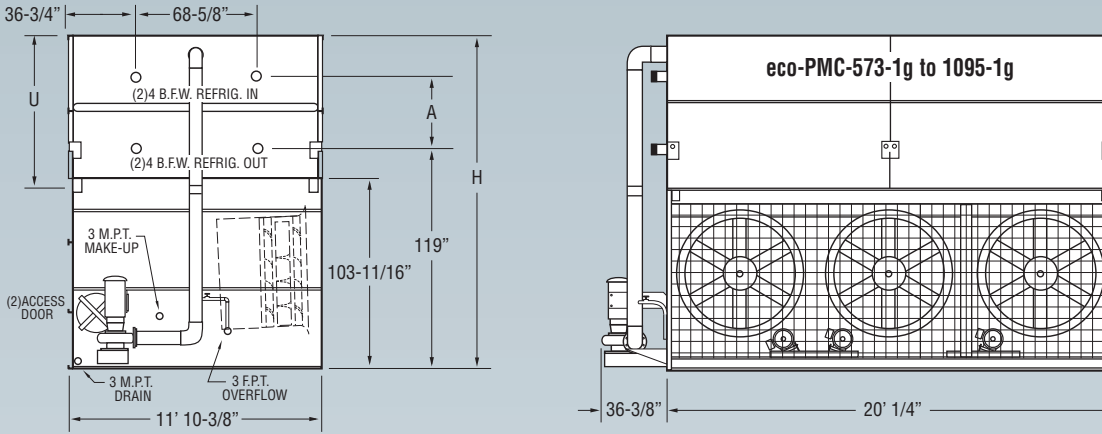
† Heaviest section is the upper coil section. **When 5.12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering & Dimensions Data

## eco-PMC-573-1g to 1095-1g



**Table 13 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-573-1g	406	(3) 5	116,300	24,080	32,270	15,590	340	46	10	1,400	810	14	29,280	154-7/8	52-1/2	13-3/4
eco-PMC-642-1g	455	(3) 7.5	127,400	24,240	32,430	15,590	340	46	10	1,400	810	14	29,440	154-7/8	52-1/2	13-3/4
eco-PMC-682-1g	484	(3) 10	135,900	24,290	32,480	15,590	340	46	10	1,400	810	14	29,490	154-7/8	52-1/2	13-3/4
eco-PMC-722-1g	512	(3) 5	112,900	35,030	43,540	26,540	660	90	10	1,400	810	14	40,550	171-7/8	69-1/2	30-3/4
eco-PMC-748-1g	530	(3) 5	111,500	40,390	49,060	31,900	820	112	10	1,400	810	14	46,070	180-3/8	78	39-1/4
eco-PMC-761-1g	540	(3) 15	156,200	24,680	32,870	15,590	340	46	10	1,400	810	14	29,880	154-7/8	52-1/2	13-3/4
eco-PMC-774-1g	549	(3) 5	109,600	46,020	54,850	37,530	985	134	10	1,400	810	14	51,860	188-7/8	86-1/2	47-3/4
eco-PMC-799-1g	567	(3) 10	133,900	29,790	38,140	21,090	500	68	10	1,400	810	14	35,150	163-3/8	61	22-1/4
eco-PMC-808-1g	573	(3) 7.5	123,700	35,190	43,700	26,540	660	90	10	1,400	810	14	40,710	171-7/8	69-1/2	30-3/4
eco-PMC-816-1g	579	(3) 20	166,200	24,870	33,060	15,590	340	46	10	1,400	810	14	30,070	154-7/8	52-1/2	13-3/4
eco-PMC-839-1g	595	(3) 7.5	122,100	40,550	49,220	31,900	820	112	10	1,400	810	14	46,230	180-3/8	78	39-1/4
eco-PMC-859-1g	609	(3) 10	131,900	35,240	43,750	26,540	660	90	10	1,400	810	14	40,760	171-7/8	69-1/2	30-3/4
eco-PMC-870-1g	617	(3) 7.5	120,000	46,810	55,010	37,530	985	134	7.5	1,400	810	14	52,020	188-7/8	86-1/2	47-3/4
eco-PMC-889-1g	630	(3) 15	153,900	30,180	38,530	21,090	500	68	10	1,400	810	14	35,540	163-3/8	61	22-1/4
eco-PMC-890-1g	631	(3) 10	130,000	40,600	49,270	31,900	820	112	10	1,400	810	14	46,280	180-3/8	78	39-1/4
eco-PMC-918-1g	651	(3) 10	128,000	46,230	55,060	37,530	985	134	10	1,400	810	14	52,070	188-7/8	86-1/2	47-3/4
eco-PMC-955-1g	677	(3) 20	163,700	30,370	38,720	21,090	500	68	10	1,400	810	14	35,730	163-3/8	61	22-1/4
eco-PMC-958-1g	679	(3) 15	151,600	35,630	44,140	26,540	660	90	10	1,400	810	14	41,150	171-7/8	69-1/2	30-3/4
eco-PMC-995-1g	706	(3) 15	149,600	40,990	49,660	31,900	820	112	10	1,400	810	14	46,670	180-3/8	78	39-1/4
eco-PMC-1026-1g	728	(3) 15	147,100	46,620	55,450	37,530	985	134	10	1,400	810	14	52,460	188-7/8	86-1/2	47-3/4
eco-PMC-1067-1g	757	(3) 20	158,900	41,180	49,850	31,900	820	112	10	1,400	810	14	46,860	180-3/8	78	39-1/4
eco-PMC-1095-1g	777	(3) 20	156,600	46,810	55,640	37,530	985	134	10	1,400	810	14	52,650	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.

\*\* 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.)

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

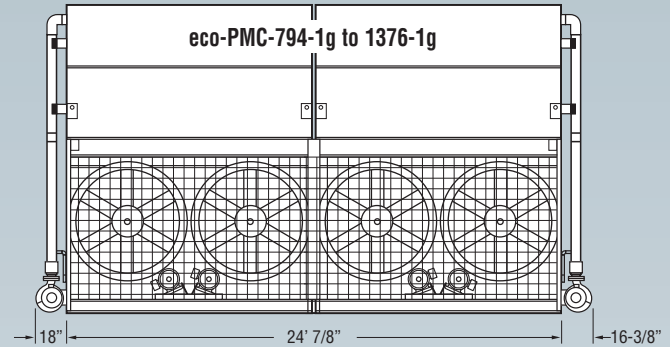
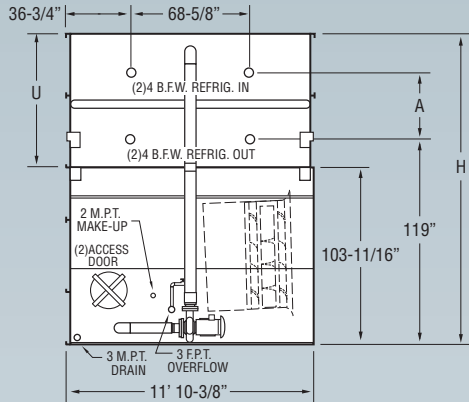
\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.

†† **These units are available for Ammonia applications only.**



# Engineering & Dimensions Data

## eco-PMC-794-1g to 1376-1g



**Table 14 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-794-1g	563	(4) 7.5	160,800	28,210	38,390	L 10,130	420	57	(2) 5	1,600	1,080	14	35,590	154-7/8	52-1/2	13-3/4
eco-PMC-821-1g	582	(4) 3	125,400	48,240	59,000	U 19,180	995	135	(2) 5	1,600	1,080	14	56,200	180-3/8	78	39-1/4
eco-PMC-838-1g	594	(4) 5	144,600	34,860	45,230	U 12,470	610	83	(2) 5	1,600	1,080	14	42,430	163-3/8	61	22-1/4
eco-PMC-846-1g	600	(4) 3	123,300	54,700	65,650	U 22,410	1,185	161	(2) 5	1,600	1,080	14	62,850	188-7/8	86-1/2	47-3/4
eco-PMC-855-1g	606	(4) 10	171,500	28,280	38,460	L 10,200	420	57	(2) 5	1,600	1,080	14	35,660	154-7/8	52-1/2	13-3/4
eco-PMC-901-1g	639	(4) 5	142,500	41,720	52,290	U 15,900	805	109	(2) 5	1,600	1,080	14	49,490	171-7/8	69-1/2	30-3/4
eco-PMC-930-1g	660	(4) 7.5	158,400	35,070	45,440	U 12,470	610	83	(2) 5	1,600	1,080	14	42,640	163-3/8	61	22-1/4
eco-PMC-935-1g	663	(4) 5	140,600	48,280	59,040	U 19,180	995	135	(2) 5	1,600	1,080	14	56,240	180-3/8	78	39-1/4
eco-PMC-949-1g	673	(4) 15	197,100	28,800	38,980	L 10,720	420	57	(2) 5	1,600	1,080	14	36,180	154-7/8	52-1/2	13-3/4
eco-PMC-964-1g	684	(4) 5	138,300	54,740	65,690	U 22,410	1,185	161	(2) 5	1,600	1,080	14	62,890	188-7/8	86-1/2	47-3/4
eco-PMC-1000-1g	709	(4) 7.5	156,100	41,930	52,500	U 15,900	805	109	(2) 5	1,600	1,080	14	49,700	171-7/8	69-1/2	30-3/4
eco-PMC-1001-1g	710	(4) 10	169,000	35,140	45,510	U 12,470	610	83	(2) 5	1,600	1,080	14	42,710	163-3/8	61	22-1/4
eco-PMC-1022-1g	725	(4) 20	209,700	29,050	39,230	L 10,970	420	57	(2) 5	1,600	1,080	14	36,430	154-7/8	52-1/2	13-3/4
eco-PMC-1038-1g	736	(4) 7.5	154,000	48,490	59,250	U 19,180	995	135	(2) 5	1,600	1,080	14	56,450	180-3/8	78	39-1/4
eco-PMC-1069-1g	758	(4) 7.5	151,500	54,950	65,900	U 22,410	1,185	161	(2) 5	1,600	1,080	14	63,100	188-7/8	86-1/2	47-3/4
eco-PMC-1076-1g	763	(4) 10	166,500	42,000	52,570	U 15,900	805	109	(2) 5	1,600	1,080	14	49,770	171-7/8	69-1/2	30-3/4
eco-PMC-1111-1g	788	(4) 15	194,200	35,660	46,030	U 12,470	610	83	(2) 5	1,600	1,080	14	43,230	163-3/8	61	22-1/4
eco-PMC-1117-1g	792	(4) 10	164,000	48,560	59,320	U 19,180	995	135	(2) 5	1,600	1,080	14	56,520	180-3/8	78	39-1/4
eco-PMC-1151-1g	816	(4) 10	161,600	55,020	65,970	U 22,410	1,185	161	(2) 5	1,600	1,080	14	63,170	188-7/8	86-1/2	47-3/4
eco-PMC-1195-1g	848	(4) 15	191,300	42,520	53,090	U 15,900	805	109	(2) 5	1,600	1,080	14	50,290	171-7/8	69-1/2	30-3/4
eco-PMC-1197-1g	849	(4) 20	206,600	35,910	46,280	U 12,470	610	83	(2) 5	1,600	1,080	14	43,480	163-3/8	61	22-1/4
eco-PMC-1239-1g	879	(4) 15	188,800	49,080	59,840	U 19,180	995	135	(2) 5	1,600	1,080	14	57,040	180-3/8	78	39-1/4
eco-PMC-1277-1g	906	(4) 15	185,700	55,540	66,490	U 22,410	1,185	161	(2) 5	1,600	1,080	14	63,690	188-7/8	86-1/2	47-3/4
eco-PMC-1287-1g	913	(4) 20	197,400	42,770	53,340	U 15,900	805	109	(2) 5	1,600	1,080	14	50,540	171-7/8	69-1/2	30-3/4
eco-PMC-1336-1g	948	(4) 20	200,500	49,330	60,090	U 19,180	995	135	(2) 5	1,600	1,080	14	57,290	180-3/8	78	39-1/4
eco-PMC-1376-1g	976	(4) 20	197,600	55,790	66,740	U 22,410	1,185	161	(2) 5	1,600	1,080	14	63,940	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.

\*\* 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.)

† L = Lower Section, U = Upper Section. **When 5-12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A.

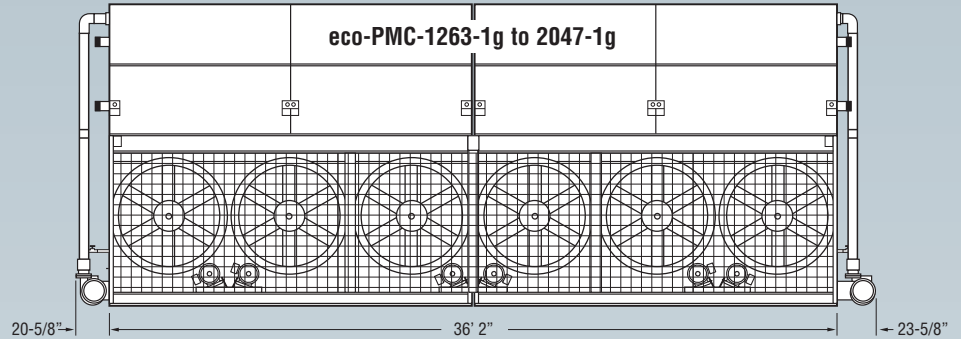
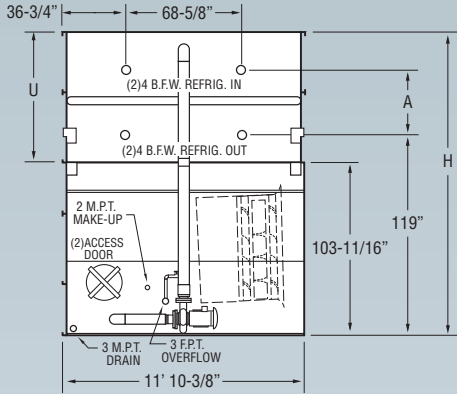
Dimensions are subject to change. Do not use for pre-fabrication.

†† **These units are available for Ammonia applications only.**



# Engineering & Dimensions Data

## eco-PMC-1263-1g to 2047-1g



**Table 15 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-1263-1g	896	(6) 3	187,500	71,950	87,940	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	82,280	180-3/8	78	39-1/4
eco-PMC-1290-1g	915	(6) 5	216,300	51,950	67,360	U 18,760	905	123	(2) 7.5	2,400	1,460	16	61,710	163-3/8	61	22-1/4
eco-PMC-1292-1g	916	(6) 10	256,400	42,180	57,300	L 14,840	615	84	(2) 7.5	2,400	1,460	16	51,650	154-7/8	52-1/2	13-3/4
eco-PMC-1301-1g	923	(6) 3	184,400	81,310	97,590	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	91,930	188-7/8	86-1/2	47-3/4
eco-PMC-1386-1g	983	(6) 5	213,100	62,130	77,830	U 23,850	1,195	163	(2) 7.5	2,400	1,460	16	72,180	171-7/8	69-1/2	30-3/4
eco-PMC-1406-1g	997	(6) 7.5	236,800	52,270	67,680	U 18,760	905	123	(2) 7.5	2,400	1,460	16	62,030	163-3/8	61	22-1/4
eco-PMC-1415-1g	1,004	(6) 15	294,700	42,970	58,090	L 15,630	615	84	(2) 7.5	2,400	1,460	16	52,440	154-7/8	52-1/2	13-3/4
eco-PMC-1439-1g	1,021	(6) 5	210,300	72,010	88,000	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	82,340	180-3/8	78	39-1/4
eco-PMC-1482-1g	1,051	(6) 5	206,800	81,370	97,650	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	91,990	188-7/8	86-1/2	47-3/4
eco-PMC-1511-1g	1,072	(6) 7.5	233,000	62,450	78,150	U 23,850	1,195	163	(2) 7.5	2,400	1,460	16	72,500	171-7/8	69-1/2	30-3/4
eco-PMC-1513-1g	1,073	(6) 10	252,600	52,360	67,770	U 18,760	905	123	(2) 7.5	2,400	1,460	16	62,120	163-3/8	61	22-1/4
eco-PMC-1521-1g	1,079	(6) 20	313,500	43,350	58,470	L 16,010	615	84	(2) 7.5	2,400	1,460	16	52,820	154-7/8	52-1/2	13-3/4
eco-PMC-1568-1g	1,112	(6) 7.5	230,300	72,330	88,320	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	82,660	180-3/8	78	39-1/4
eco-PMC-1615-1g	1,145	(6) 7.5	226,500	81,690	97,970	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	92,310	188-7/8	86-1/2	47-3/4
eco-PMC-1626-1g	1,153	(6) 10	248,900	62,540	78,240	U 23,850	1,195	163	(2) 7.5	2,400	1,460	16	72,590	171-7/8	69-1/2	30-3/4
eco-PMC-1657-1g	1,175	(6) 15	290,300	53,150	68,560	U 18,760	905	123	(2) 7.5	2,400	1,460	16	62,910	163-3/8	61	22-1/4
eco-PMC-1687-1g	1,196	(6) 10	245,200	72,420	88,410	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	82,750	180-3/8	78	39-1/4
eco-PMC-1738-1g	1,233	(6) 10	241,600	81,780	98,060	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	92,400	188-7/8	86-1/2	47-3/4
eco-PMC-1781-1g	1,263	(6) 20	308,900	53,530	68,940	U 18,760	905	123	(2) 7.5	2,400	1,460	16	63,290	163-3/8	61	22-1/4
eco-PMC-1782-1g	1,264	(6) 15	286,000	63,330	79,030	U 23,850	1,195	163	(2) 7.5	2,400	1,460	16	73,380	171-7/8	69-1/2	30-3/4
eco-PMC-1849-1g	1,311	(6) 15	282,300	73,210	89,200	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	83,540	180-3/8	78	39-1/4
eco-PMC-1904-1g	1,350	(6) 15	277,600	82,570	98,850	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	93,190	188-7/8	86-1/2	47-3/4
eco-PMC-1914-1g	1,357	(6) 20	304,300	63,710	79,410	U 23,850	1,195	163	(2) 7.5	2,400	1,460	16	73,760	171-7/8	69-1/2	30-3/4
eco-PMC-1986-1g	1,409	(6) 20	299,800	73,590	89,580	U 28,790	1,480	202	(2) 7.5	2,400	1,460	16	83,920	180-3/8	78	39-1/4
eco-PMC-2047-1g	1,452	(6) 20	295,400	82,950	99,230	U 33,470	1,770	241	(2) 7.5	2,400	1,460	16	93,570	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.

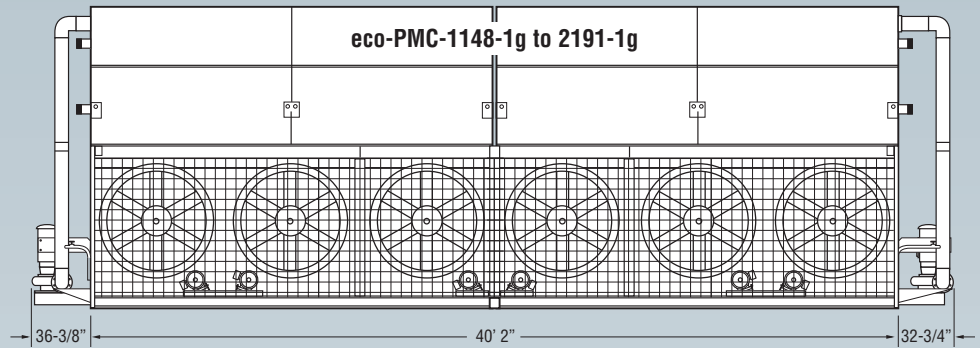
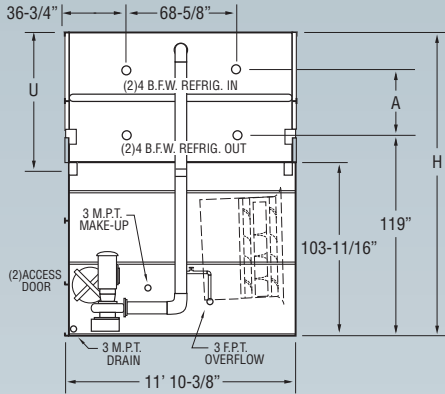
\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

† L = Lower Section, U = Upper Section. **When 5.12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.

# Engineering & Dimensions Data

## eco-PMC-1148-1g to 2191-1g



**Table 16 Engineering Data**

Model No.	R-717 Capacity Tons*	Fans		Weights (lbs)†			NH <sub>3</sub> Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Sump			Dimensions (in.)		
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Coil A
eco-PMC-1148-1g	814	(6) 5	263,900	46,150	62,790	15,730	680	93	(2) 10	2,800	1,630	16	56,560	154-7/8	52-1/2	13-3/4
eco-PMC-1283-1g	910	(6) 7.5	289,000	46,470	63,110	16,050	680	93	(2) 10	2,800	1,630	16	56,880	154-7/8	52-1/2	13-3/4
eco-PMC-1365-1g	968	(6) 10	308,200	46,560	63,200	16,140	680	93	(2) 10	2,800	1,630	16	56,970	154-7/8	52-1/2	13-3/4
eco-PMC-1445-1g	1,025	(6) 5	225,800	68,650	85,940	26,460	1,325	180	(2) 10	2,800	1,630	16	79,710	171-7/8	69-1/2	30-3/4
eco-PMC-1494-1g	1,060	(6) 5	198,800	79,650	97,260	31,960	1,645	224	(2) 10	2,800	1,630	16	91,030	180-3/8	78	39-1/4
eco-PMC-1502-1g	1,065	(6) 7.5	250,700	57,770	74,730	20,860	1,000	137	(2) 10	2,800	1,630	16	68,500	163-3/8	61	22-1/4
eco-PMC-1520-1g	1,078	(6) 15	354,200	47,350	63,990	16,930	680	93	(2) 10	2,800	1,630	16	57,760	154-7/8	52-1/2	13-3/4
eco-PMC-1550-1g	1,099	(6) 5	195,400	91,210	109,140	37,740	1,965	268	(2) 10	2,800	1,630	16	102,910	188-7/8	86-1/2	47-3/4
eco-PMC-1598-1g	1,133	(6) 10	267,400	57,860	74,820	20,860	1,000	137	(2) 10	2,800	1,630	16	68,590	163-3/8	61	22-1/4
eco-PMC-1617-1g	1,147	(6) 7.5	247,400	68,970	86,260	26,460	1,325	180	(2) 10	2,800	1,630	16	80,030	171-7/8	69-1/2	30-3/4
eco-PMC-1631-1g	1,157	(6) 20	376,800	47,730	64,370	17,310	680	93	(2) 10	2,800	1,630	16	58,140	154-7/8	52-1/2	13-3/4
eco-PMC-1677-1g	1,189	(6) 7.5	223,000	79,970	97,580	31,960	1,645	224	(2) 10	2,800	1,630	16	91,350	180-3/8	78	39-1/4
eco-PMC-1718-1g	1,218	(6) 10	263,700	69,060	86,350	26,460	1,325	180	(2) 10	2,800	1,630	16	80,120	171-7/8	69-1/2	30-3/4
eco-PMC-1739-1g	1,233	(6) 7.5	219,200	91,530	109,460	37,740	1,965	268	(2) 10	2,800	1,630	16	103,230	188-7/8	86-1/2	47-3/4
eco-PMC-1780-1g	1,262	(6) 15	307,400	58,650	75,610	20,860	1,000	137	(2) 10	2,800	1,630	16	69,380	163-3/8	61	22-1/4
eco-PMC-1783-1g	1,265	(6) 10	259,600	80,060	97,670	31,960	1,645	224	(2) 10	2,800	1,630	16	91,440	180-3/8	78	39-1/4
eco-PMC-1837-1g	1,303	(6) 10	256,100	91,620	109,550	37,740	1,965	268	(2) 10	2,800	1,630	16	103,320	188-7/8	86-1/2	47-3/4
eco-PMC-1910-1g	1,355	(6) 20	327,200	59,030	75,990	20,860	1,000	137	(2) 10	2,800	1,630	16	69,760	163-3/8	61	22-1/4
eco-PMC-1916-1g	1,359	(6) 15	302,700	69,850	87,140	26,460	1,325	180	(2) 10	2,800	1,630	16	80,910	171-7/8	69-1/2	30-3/4
eco-PMC-1989-1g	1,411	(6) 15	299,100	80,850	98,460	31,960	1,645	224	(2) 10	2,800	1,630	16	92,230	180-3/8	78	39-1/4
eco-PMC-2049-1g	1,453	(6) 15	294,300	92,410	110,340	37,740	1,965	268	(2) 10	2,800	1,630	16	104,110	188-7/8	86-1/2	47-3/4
eco-PMC-2134-1g	1,513	(6) 20	317,800	81,230	98,840	31,960	1,645	224	(2) 10	2,800	1,630	16	92,610	180-3/8	78	39-1/4
eco-PMC-2191-1g	1,554	(6) 20	313,100	92,790	110,720	37,740	1,965	268	(2) 10	2,800	1,630	16	104,490	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.

\*\* 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.)

† L = Lower Section, U = Upper Section. **When 5.12 seismic design is required consult the factory for specific weights.**

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22, 1.98 for R-134a, 1.64 for R-507A/R-404A, 1.66 for R-410A. Dimensions are subject to change. Do not use for pre-fabrication.



## Optional Equipment

### Oversized Access Door

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



### 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.

### Two Speed Motors

Two speed fan motors can provide an excellent means of capacity control. In periods of lightened loads or reduced wet bulb temperatures, the fans can operate at low speed, which will provide about 60% of full speed capacity, yet consume only about 15% of the power compared with high speed. In addition to the energy savings, the sound levels of the units will be greatly reduced at low speed.

### 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 make-up 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.

### 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.

### 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.

### Basin Heater Package

If a remote sump configuration is not practical, electric basin heater packages are available to help prevent freeze-up of the basin water. The packages include electric heater elements, and a combination thermostat/low water cutoff. **Note: External pumps should be heat traced and insulated in the field to prevent freezing.**

### Pulse~Pure® Water Treatment System

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. Utilizing pulse-power technology Pulse~Pure provides chemical-free treatment that is environmentally safe.



U.S. Patent No. 7,704,364

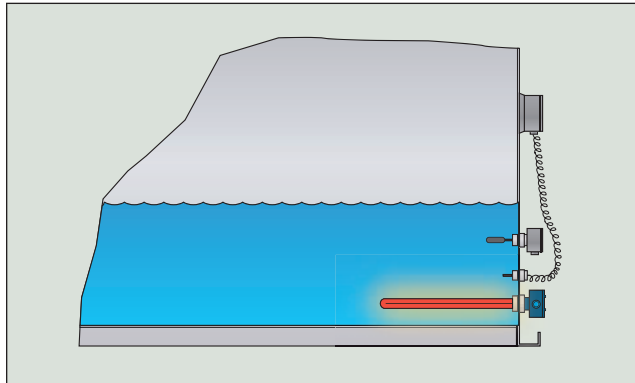
### Smart Shield® Solid Chemistry Water Treatment System **NEW**

EVAPCO's SmartShield® solid chemistry water treatment system is an innovative solution to conventional liquid chemical programs. SmartShield® 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.



## 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 weather proof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.



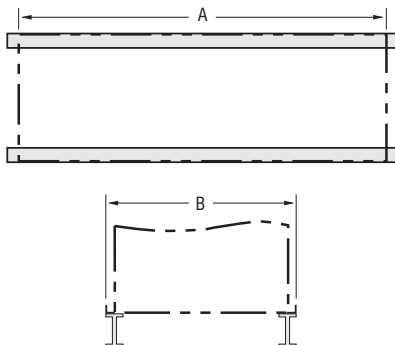
**eco-PMC Heater Sizes**

Models	0°F	-20°F	-40°F
eco-PMC-183-1g to eco-PMC-252-1g	5	7	9
eco-PMC-279-1g to eco-PMC-387-1g	(2) 4	(2) 5	(2) 7
eco-PMC-275-1g to eco-PMC-559-1g	8	12	16
eco-PMC-479-1g to eco-PMC-831-1g	(2) 6	(2) 9	(2) 12
eco-PMC-549-1g to eco-PMC-1118-1g	(2) 8	(2) 12	(2) 15
eco-PMC-959-1g to eco-PMC-1662-1g	(2) 12	(4) 9	(4) 12
eco-PMC-314-1g to eco-PMC-688-1g	10	15	20
eco-PMC-632-1g to eco-PMC-1024-1g	(2) 7	(2) 12	(2) 15
eco-PMC-573-1g to eco-PMC-1095-1g	(2) 8	(2) 12	(2) 15
eco-PMC-794-1g to eco-PMC-1376-1g	(2) 9	(2) 15	(2) 18
eco-PMC-1263-1g to eco-PMC-2047-1g	(2) 15	(4) 10	(4) 15
eco-PMC-1148-1g to eco-PMC-2191-1g	(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.



**eco-PMC Dimensions**

5' Wide Models	A	B
eco-PMC-183-1g to eco-PMC-252-1g	11' 11-5/8"	6' 4"
eco-PMC-279-1g to eco-PMC-387-1g	18' 1/8"	6' 4"
10' Wide Models	A	B
eco-PMC-275-1g to eco-PMC-559-1g	11' 11-3/4"	9' 9-3/4"
eco-PMC-479-1g to eco-PMC-831-1g	18' 1/8"	9' 9-3/4"
eco-PMC-549-1g to eco-PMC-1118-1g	24' 7/8"	9' 9-3/4"
eco-PMC-959-1g to eco-PMC-1662-1g	36' 2"	9' 9-3/4"
12' Wide Models	A	B
eco-PMC-314-1g to eco-PMC-688-1g	11' 11-3/4"	11' 10-3/8"
eco-PMC-632-1g to eco-PMC-1024-1g	18' 1/8"	11' 10-3/8"
eco-PMC-573-1g to eco-PMC-1095-1g	20' 1/4"	11' 10-3/8"
eco-PMC-794-1g to eco-PMC-1376-1g	24' 7/8"	11' 10-3/8"
eco-PMC-1263-1g to eco-PMC-2047-1g	36' 2"	11' 10-3/8"
eco-PMC-1148-1g to eco-PMC-2191-1g	40' 2"	11' 10-3/8"



## Application

### 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 EVAPCO Bulletin entitled *"Equipment Layout"*.

### 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 EVAPCO Bulletin entitled *"Piping Evaporative Condensers"*.

### 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. Therefore, it is important to bleed-off an amount of water equal to that which is evaporated to prevent the build-up of these impurities. If this is not done, the mineral or the acidic nature of the water will continue to increase. This will ultimately result in heavy scaling or a corrosive condition.

### Bleed-off

Each unit supplied with a pump mounted on the side is furnished with a clear bleed line for visual inspection and a valve which, when fully open, will bleed-off the proper amount of water. If the make-up 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. Make-up water pressure should be maintained between 20 and 50 psig.

### Water Treatment

A proper water treatment program is an essential part of routine maintenance in order to help assure proper operation and longevity of the unit. To help prevent the formation of "white rust", the interior of the unit should be passivated during start-up and monitored periodically as part of the water treatment program. For more information about white rust, please request a copy of EVAPCO Engineering Bulletin 36. A qualified water treatment company should be contacted to design a water treatment protocol specifically based on applicable location, water quality and unit materials of construction.

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.

**NOTE: Operating the condenser below 6.0 pH for any period of time may cause the removal of the protective zinc coating on the galvanized steel components.**

For more information see 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 Current Compliance

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

### 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.

### Power-Mizer Fan Drives

Fans shall be vane-axial type constructed of cast aluminum alloy blades. They shall be arranged in a two-stage system installed in a closely fitted cowl with venturi air inlet and air stabilizing vanes. 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), inverter ready 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

Each row of the heat transfer coil shall be provided with elliptical spiral fins to increase the evaporative and dry thermal performance of the unit. 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 with large 1-1/4" 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. \_\_\_\_\_ 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.





EVAPCO PRODUCTS ARE MANUFACTURED WORLDWIDE.



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