EVAPORATIVE CONDENSERS

PMC-E

Easy to Install–Easy to Maintain

Available with optional
304L or 316L Stainless Steel
TITAN COIL

Capacities from 124 to 1,432 ammonia tons!

Available with optional
evapco WATER SYSTEMS

evapco for LIFE

IARW International Association of Refrigerated Warehouses

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

AHRI Air-Conditioning, Heating, and Refrigeration Institute

PMC-E Design and Construction Features

About EVAPCO

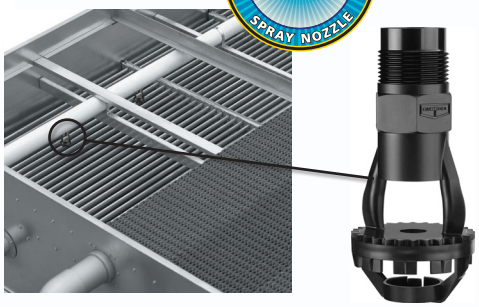
EVAPCO is the global innovator in heat transfer solutions. Our pledge is to make everyday life easier, more comfortable, more reliable, and more sustainable for people everywhere. With 26 locations spread throughout 10 countries and over 200 active patents worldwide, we are the team that engineers and contractors know they can count on for life.

Contact

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

IBC COMPLIANT DESIGNS

ZERO MAINTENANCE ZM II SPRAY NOZZLE



PVC Water Distribution with ZM®II Nozzles

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

Thermal-Pak II® Heat Transfer Technology

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

Improved Water Distribution Piping

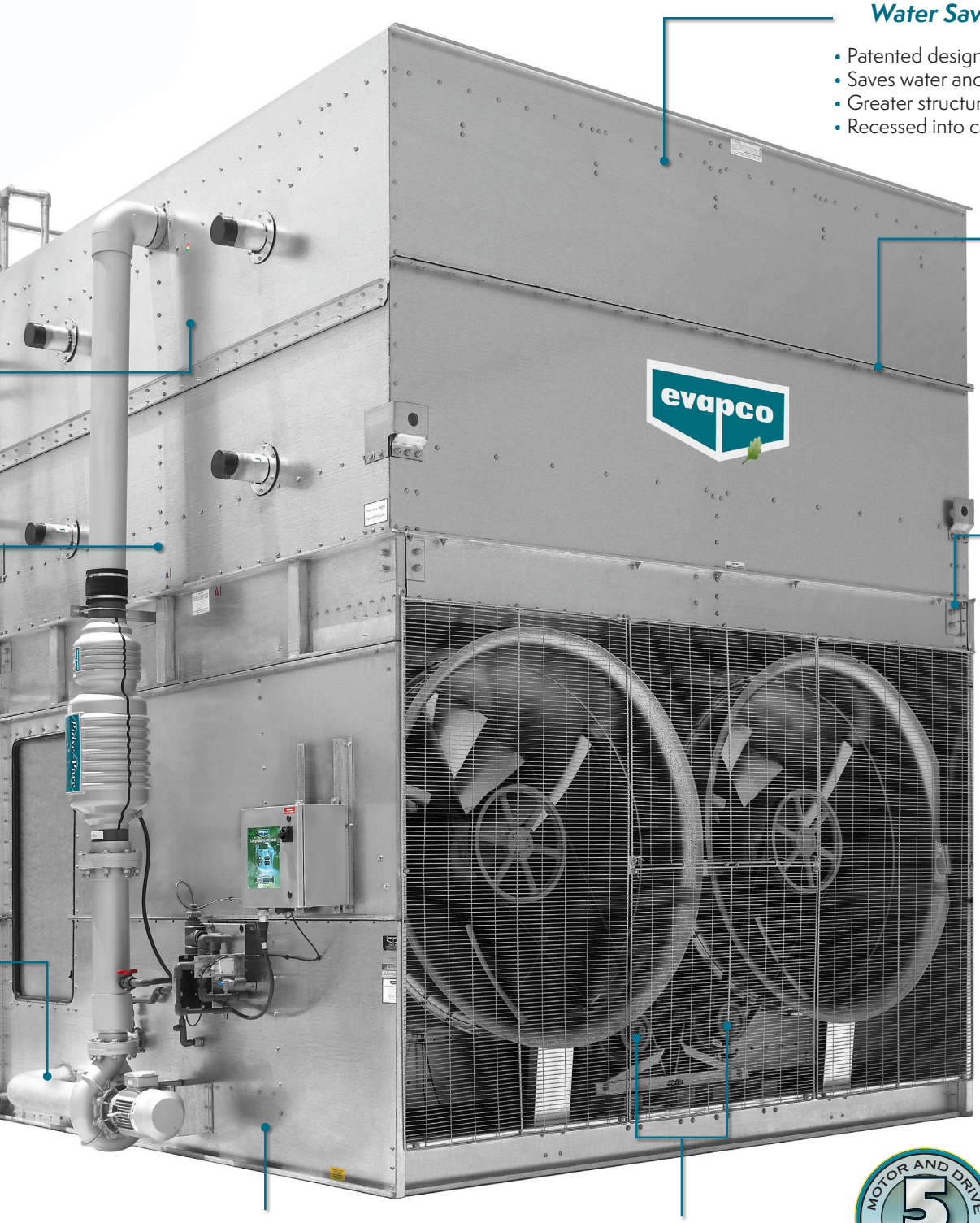
- Horizontally mounted pumps allow for reduced basin water level.*
- Simplified piping for easier basin access.
- Totally enclosed pump motors assure long, trouble-free life.

**Refer to engineering data for availability.*

Optional Super Low Sound Fan

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

The industry standard for forced draft axial fan condensers. The PMC-E is equipped with owner-oriented features and benefits that make it **easy** to install, **easy** to maintain, and **easy** on the operating budget... **It's the easy choice!**



Water Saver Drift Eliminators

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

Double-Brake Flange Joints

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

Unique Field Seam

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

Optional Design Features:

- Oversized access doors
- External service platforms
- Tandem fan drive system (standard fan only)
- Stainless steel construction

Optional Man-sized Access Door

Sloped-Pan Bottom

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

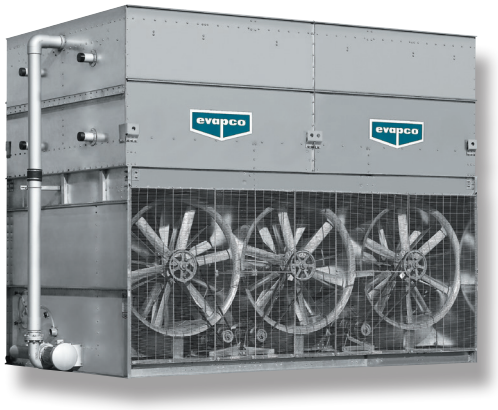
Individual Fan Drive System

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

MOTOR AND DRIVE 5 Year WARRANTY

PMC-E Design Features

Proven Performance & Design Flexibility



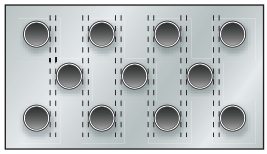
The PMC-E Evaporative Condenser offers more capacity and greater system design flexibility than ever before. EVAPCO's research and development team has invested hundreds of hours in laboratory testing to develop the next generation in forced draft condenser technology. These efforts have produced an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

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

Thermal-Pak II® Coil Design

Lower Refrigerant Charge

Thermal-Pak II® Coil by EVAPCO



Round Tube Coil by Others

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

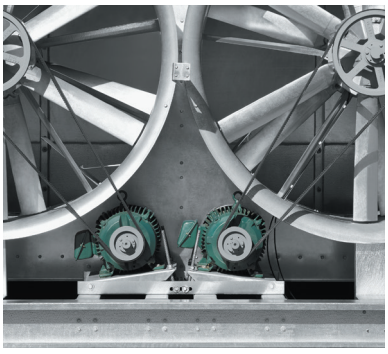
Energy Efficient for Lowest Operating Cost

Lower Horsepower Options

The fan drive system of the PMC-E 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. And, with the new PMC-E model selections **even more low horsepower options are available to obtain greater energy savings.**

Individual Fan Drive System

Capacity Control Flexibility & Operating Redundancy



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

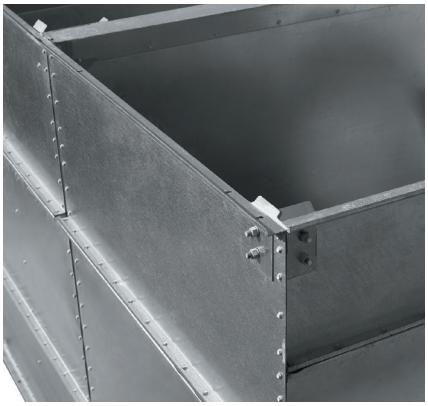
Inverter Duty Motors as STANDARD

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

NOTE: *Variable Frequency Drive (VFD) control may require other component 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.*

PMC-E Design Features

Easy Field Assembly



Fewer Fasteners
Lower Installed Cost

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

Improved Maintenance

Fan Drive Accessibility

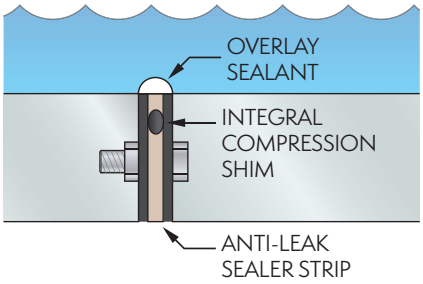
The drive components of the PMC-E are easily accessed for routine maintenance from the front of the unit. Bearing grease fittings are extended to the outside of the unit for ease of lubrication. All drive sheaves have been relocated to the front of the fan section and motors are positioned on a platform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

Easy Clean Sloped Basin

The PMC-E 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 oversized access door option to improve access to this critical area of the unit.

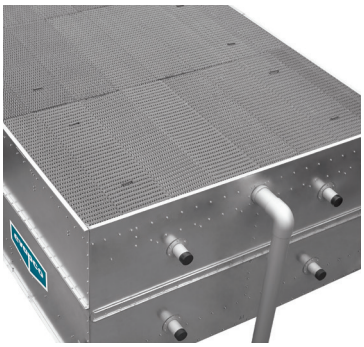
Construction Features

Unique Seam Design—Eliminate Field Leaks



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

Superior Water Saver Drift Eliminators



The PMC-E 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, PMC-E condensers save valuable water and water treatment chemicals. The eliminators feature a honeycomb design which offers greater structural integrity and are recessed in the top of the casing and UV protected for longer life. They are constructed of inert polyvinyl chloride (PVC) which eliminates corrosion in this critical area of the condenser. The eliminators are assembled in sections for easy handling and removal for coil and water distribution system inspection.

**U.S. Patent No. 6315804*

Selection Procedure

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

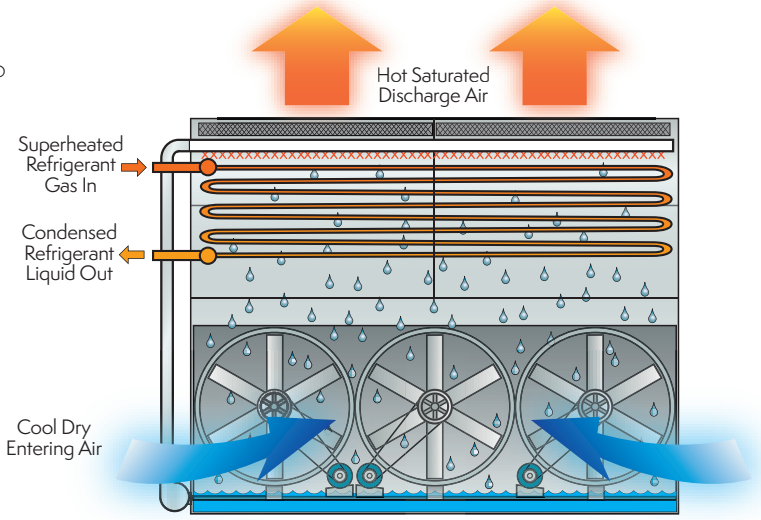
The heat of rejection method is applicable to all but centrifugal compressor applications and is normally used for selecting evaporative condensers for use with hermetic compressors and screw compressors. It can also be used for standard open type reciprocating compressors as an alternate to the evaporator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

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

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

Principle of Operation

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



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

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

Heat of Rejection Method

In the heat of rejection method, a factor for the specified operating conditions (condensing temperature and wet bulb) is obtained from **Table 1** or **2** and multiplied times the heat of rejection.

The resultant figure is used to select a unit from **Table 3** on page 10. 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: Heat of Rejection = Evaporator Load (BTU/Hr) + Compressor BHP x 2545

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

Example Selection

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

SELECTION: Heat of Rejection

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

From **Table 2** the capacity factor for 96.3° condensing and 78° wet bulb = 1.37 6,672,500 x 1.37 = 9,141,325 BTU/Hr or 9142 MBH. Therefore, select a model PMC-631E.

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

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

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

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

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

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

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

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

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

MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE	MODEL	MBH BASE
PMC-175E	2572.5	PMC-457E	6717.9	PMC-631E	9275.7	PMC-819E	12039.3	PMC-1002E	14729.4	PMC-1286E	18994.2
PMC-190E	2793.0	PMC-464E	6820.8	PMC-634E	9319.8	PMC-816E	11995.2	PMC-1004E	14758.8	PMC-1290E	18963.0
PMC-210E	3087.0	PMC-479E	7041.3	PMC-636E	9349.2	PMC-831E	12215.7	PMC-1006E	14788.2	PMC-1296E	19051.2
PMC-220E	3234.0	PMC-481E	7070.7	PMC-640E	9408.0	PMC-840E	12348.0	PMC-1013E	14891.1	PMC-1333E	19595.1
PMC-235E	3454.5	PMC-488E	7173.6	PMC-641E	9422.7	PMC-852E	12524.4	PMC-1021E	15008.7	PMC-1358E	19962.6
PMC-240E	3528.0	PMC-491E	7217.7	PMC-645E	9481.5	PMC-853E	12539.1	PMC-1024E	15052.8	PMC-1376E	20227.2
PMC-250E	3675.0	PMC-492E	7232.4	PMC-647E	9510.9	PMC-856E	12583.2	PMC-1038E	15258.6	PMC-1382E	20315.4
PMC-275E	4042.5	PMC-495E	7276.5	PMC-668E	9819.6	PMC-863E	12686.1	PMC-1056E	15523.2	PMC-1438E	21138.6
PMC-295E	4336.5	PMC-501E	7364.7	PMC-675E	9922.5	PMC-888E	13053.6	PMC-1070E	15729.0	PMC-1446E	21256.2
PMC-325E	4777.5	PMC-503E	7394.1	PMC-679E	9981.3	PMC-889E	13068.3	PMC-1071E	15743.7	PMC-1466E	21653.1
PMC-332E	4880.4	PMC-513E	7541.1	PMC-688E	10113.6	PMC-894E	13141.8	PMC-1072E	15758.4	PMC-1473E	21653.1
PMC-335E	4924.5	PMC-515E	7570.5	PMC-690E	10143.0	PMC-895E	13156.5	PMC-1073E	15773.1	PMC-1549E	22770.3
PMC-360E	5292.0	PMC-519E	7629.3	PMC-691E	10157.7	PMC-900E	13230.0	PMC-1088E	15993.6	PMC-1556E	22873.2
PMC-362E	5321.4	PMC-530E	7791.0	PMC-715E	10510.5	PMC-905E	13303.5	PMC-1116E	16405.2	PMC-1586E	23314.2
PMC-369E	5424.3	PMC-536E	7879.2	PMC-719E	10569.3	PMC-911E	13391.7	PMC-1117E	16419.9	PMC-1599E	23505.3
PMC-375E	5512.5	PMC-537E	7893.9	PMC-723E	10628.1	PMC-913E	13421.1	PMC-1125E	16537.5	PMC-1625E	23887.5
PMC-376E	5527.2	PMC-545E	8011.5	PMC-725E	10657.5	PMC-929E	13656.3	PMC-1127E	16566.9	PMC-1705E	25063.5
PMC-386E	5674.2	PMC-546E	8026.2	PMC-731E	10745.7	PMC-939E	13803.3	PMC-1137E	16713.9	PMC-1712E	25166.4
PMC-397E	5835.9	PMC-558E	8202.6	PMC-735E	10804.5	PMC-940E	13818.0	PMC-1148E	16875.6	PMC-1776E	26107.2
PMC-400E	5880.0	PMC-559E	8217.3	PMC-737E	10833.9	PMC-949E	13950.3	PMC-1180E	17346.0	PMC-1788E	26283.6
PMC-408E	5997.6	PMC-564E	8290.8	PMC-751E	11039.7	PMC-954E	14023.8	PMC-1182E	17375.4	PMC-1811E	26621.7
PMC-411E	6041.7	PMC-568E	8349.6	PMC-752E	11054.4	PMC-955E	14038.5	PMC-1189E	17478.3	PMC-1877E	27591.9
PMC-420E	6174.0	PMC-579E	8511.3	PMC-772E	11348.4	PMC-956E	14053.2	PMC-1201E	17654.7	PMC-1879E	27621.3
PMC-426E	6262.2	PMC-591E	8687.7	PMC-774E	11377.8	PMC-962E	14141.4	PMC-1203E	17684.1	PMC-1911E	28091.7
PMC-427E	6276.9	PMC-596E	8761.2	PMC-778E	11436.6	PMC-974E	14317.8	PMC-1205E	17713.5	PMC-1913E	28121.1
PMC-428E	6291.6	PMC-600E	8820.0	PMC-796E	11701.2	PMC-976E	14347.2	PMC-1211E	17801.7	PMC-1985E	29179.5
PMC-431E	6335.7	PMC-601E	8834.7	PMC-800E	11760.0	PMC-980E	14406.0	PMC-1258E	18492.6	PMC-2019E	29679.3
PMC-450E	6615.0	PMC-602E	8849.4	PMC-801E	11774.7	PMC-983E	14450.1	PMC-1261E	18536.7		
PMC-453E	6659.1	PMC-605E	8893.5	PMC-803E	11804.1	PMC-989E	14538.3	PMC-1269E	18654.3		
PMC-456E	6703.2	PMC-616E	9055.2	PMC-811E	11921.7	PMC-992E	14582.4	PMC-1275E	18742.5		

Table 3 — Unit Heat Rejection

PMC-E 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 5 or 6 and multiplied times the heat load in tons. The resultant figure is used to select a unit from Table 4. The condenser model in Table 4 is equal to the unit capacity in evaporator tons for HCFC-22 or HFC-134a conditions of 105°F condensing, 40°F suction and 78°F wet bulb.

EXAMPLE

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

SELECTION: The capacity factor from Table 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 X 1.38 X 1.03 = 426 corrected tons. Therefore, select a model PMC-428E, PMC-431E or PMC-450E depending on unit type desired, and any layout or horsepower considerations.

PMC-E MODELS

MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY	MODEL	CAPACITY
PMC-175E	175	PMC-457E	457	PMC-631E	631	PMC-819E	819	PMC-1002E	1002	PMC-1286E	1286
PMC-190E	190	PMC-464E	464	PMC-634E	634	PMC-816E	816	PMC-1004E	1004	PMC-1290E	1290
PMC-210E	210	PMC-479E	479	PMC-636E	636	PMC-831E	831	PMC-1006E	1006	PMC-1296E	1296
PMC-220E	220	PMC-481E	481	PMC-640E	640	PMC-840E	840	PMC-1013E	1013	PMC-1333E	1333
PMC-235E	235	PMC-488E	488	PMC-641E	641	PMC-852E	852	PMC-1021E	1021	PMC-1358E	1358
PMC-240E	240	PMC-491E	491	PMC-645E	645	PMC-853E	853	PMC-1024E	1024	PMC-1376E	1376
PMC-250E	250	PMC-492E	492	PMC-647E	647	PMC-856E	856	PMC-1038E	1038	PMC-1382E	1382
PMC-275E	275	PMC-495E	495	PMC-668E	668	PMC-863E	863	PMC-1056E	1056	PMC-1438E	1438
PMC-295E	295	PMC-501E	501	PMC-675E	675	PMC-888E	888	PMC-1070E	1070	PMC-1446E	1446
PMC-325E	325	PMC-503E	503	PMC-679E	679	PMC-889E	889	PMC-1071E	1071	PMC-1466E	1466
PMC-332E	332	PMC-513E	513	PMC-688E	688	PMC-894E	894	PMC-1072E	1072	PMC-1473E	1473
PMC-335E	335	PMC-515E	515	PMC-690E	690	PMC-895E	895	PMC-1073E	1073	PMC-1549E	1549
PMC-360E	360	PMC-519E	519	PMC-691E	691	PMC-900E	900	PMC-1088E	1088	PMC-1556E	1556
PMC-362E	362	PMC-530E	530	PMC-715E	715	PMC-905E	905	PMC-1116E	1116	PMC-1586E	1586
PMC-369E	369	PMC-536E	536	PMC-719E	719	PMC-911E	911	PMC-1117E	1117	PMC-1599E	1599
PMC-375E	375	PMC-537E	537	PMC-723E	723	PMC-913E	913	PMC-1125E	1125	PMC-1625E	1625
PMC-376E	376	PMC-545E	545	PMC-725E	725	PMC-929E	929	PMC-1127E	1127	PMC-1705E	1705
PMC-386E	386	PMC-546E	546	PMC-731E	731	PMC-939E	939	PMC-1137E	1137	PMC-1712E	1712
PMC-397E	397	PMC-558E	558	PMC-735E	735	PMC-940E	940	PMC-1148E	1148	PMC-1776E	1776
PMC-400E	400	PMC-559E	559	PMC-737E	737	PMC-949E	949	PMC-1180E	1180	PMC-1788E	1788
PMC-408E	408	PMC-564E	564	PMC-751E	751	PMC-954E	954	PMC-1182E	1182	PMC-1811E	1811
PMC-411E	411	PMC-568E	568	PMC-752E	752	PMC-955E	955	PMC-1189E	1189	PMC-1877E	1877
PMC-420E	420	PMC-579E	579	PMC-772E	772	PMC-956E	956	PMC-1201E	1201	PMC-1879E	1879
PMC-426E	426	PMC-591E	591	PMC-774E	774	PMC-962E	962	PMC-1203E	1203	PMC-1911E	1911
PMC-427E	427	PMC-596E	596	PMC-778E	778	PMC-974E	974	PMC-1205E	1205	PMC-1913E	1913
PMC-428E	428	PMC-600E	600	PMC-796E	796	PMC-976E	976	PMC-1211E	1211	PMC-1985E	1985
PMC-431E	431	PMC-601E	601	PMC-800E	800	PMC-980E	980	PMC-1258E	1258	PMC-2019E	2019
PMC-450E	450	PMC-602E	602	PMC-801E	801	PMC-983E	983	PMC-1261E	1261		
PMC-453E	453	PMC-605E	605	PMC-803E	803	PMC-989E	989	PMC-1269E	1269		
PMC-456E	456	PMC-616E	616	PMC-811E	811	PMC-992E	992	PMC-1275E	1275		

Table 4 — Unit Sizes

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

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

Table 5 — HCFC-22 and HFC-134a Capacity Factors

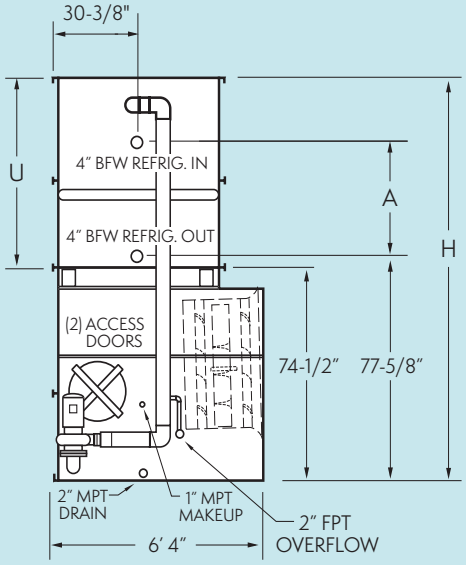
COND. PRESSURE (psig)	COND. TEMP. (°F)	WET BULB TEMPERATURE (°F)																	
		50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84	86
152	85	0.99	1.09	1.25	1.34	1.44	1.57	1.73	1.91	2.17	2.49	2.71	2.95	3.26	3.59	-	-	-	-
166	90	0.84	0.93	1.03	1.10	1.16	1.23	1.32	1.42	1.55	1.71	1.81	1.92	2.04	2.16	2.59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

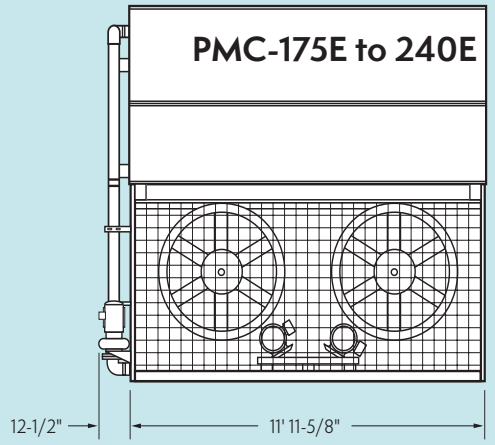
SUCTION TEMP. °F	-30°	-20°	-10°	0°	+10°	+20°	+30°	+40°
SUCTION PRESS. (psig)	-1.6	3.6	9.0	15.7	23.8	33.5	45.0	58.6
CAPACITY FACTOR	1.18	1.14	1.10	1.07	1.03	1.00	0.97	0.95

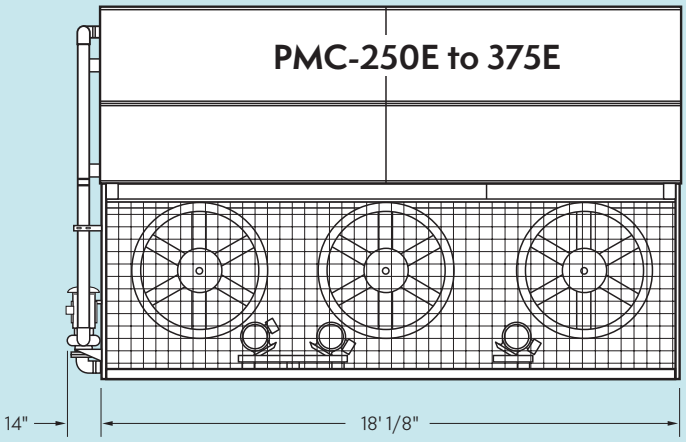
Table 6 — Ammonia (R-717) Capacity Factors

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

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





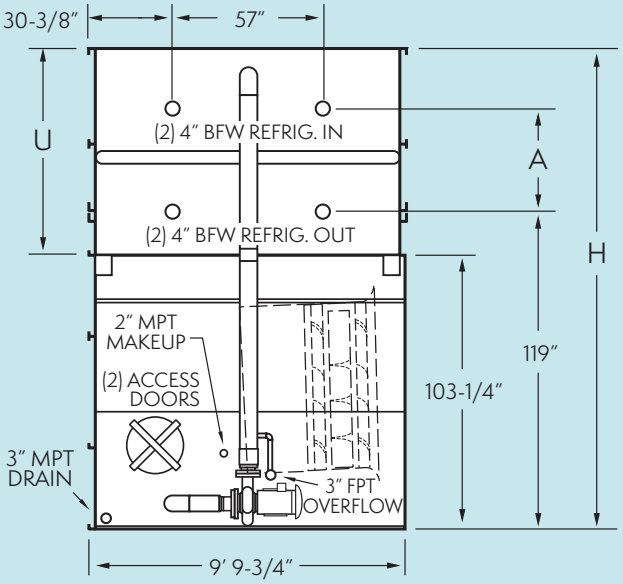


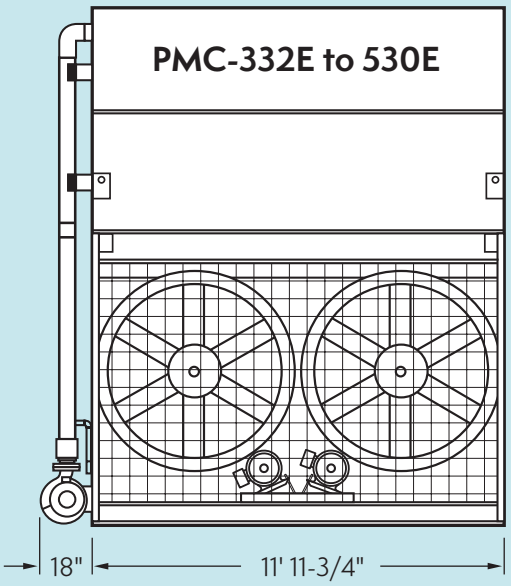
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-175E	124	(2) 5	31,300	8,090	5,220	10,410	165	22	2	345	200	8	9,360	130-3/8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

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

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

Engineering Dimensions & Data
Models PMC-332E to 530E



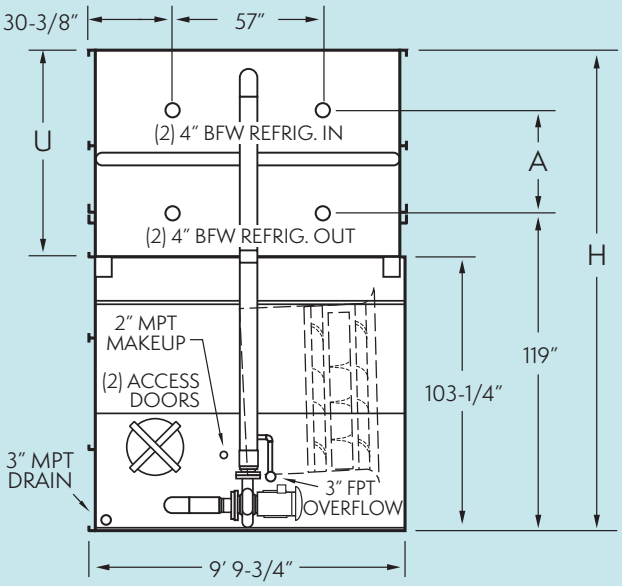


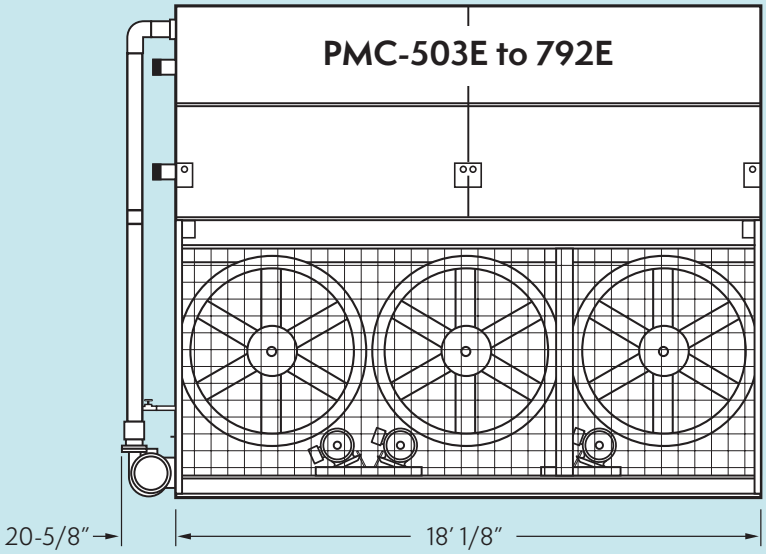
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-332E	235	(2) 5	61,000	12,870	8,590	16,950	250	34	5	685	500	10	16,270	163-3/8	61	22-1/4
PMC-362E	257	(2) 5	60,100	14,840	10,560	19,000	325	44	5	685	500	10	18,320	171-7/8	69-1/2	30-3/4
PMC-369E	262	(2) 7.5	70,000	12,970	8,590	17,050	250	34	5	685	500	10	16,370	163-3/8	61	22-1/4
PMC-386E	274	(2) 5	59,200	16,700	12,420	20,940	405	55	5	685	500	10	20,260	180-3/8	78	39-1/4
PMC-397E	282	(2) 10	77,200	13,000	8,590	17,080	250	34	5	685	500	10	16,400	163-3/8	61	22-1/4
PMC-400E	284	(2) 7.5	69,000	14,940	10,560	19,100	325	44	5	685	500	10	18,420	171-7/8	69-1/2	30-3/4
PMC-411E	291	(2) 5	58,400	18,650	14,370	22,960	480	66	5	685	500	10	22,280	188-7/8	86-1/2	47-3/4
PMC-426E	302	(2) 7.5	67,900	16,800	12,420	21,040	405	55	5	685	500	10	20,360	180-3/8	78	39-1/4
PMC-428E	304	(2) 15	88,700	13,260	8,590	17,340	250	34	5	685	500	10	16,660	163-3/8	61	22-1/4
PMC-431E	306	(2) 10	76,000	14,970	10,560	19,130	325	44	5	685	500	10	18,450	171-7/8	69-1/2	30-3/4
PMC-453E	321	(2) 7.5	66,900	18,750	14,370	23,060	480	66	5	685	500	10	22,380	188-7/8	86-1/2	47-3/4
PMC-457E	324	(2) 10	74,900	16,830	12,420	21,070	405	55	5	685	500	10	20,390	180-3/8	78	39-3/4
PMC-464E	329	(2) 15	87,400	15,230	10,560	19,390	325	44	5	685	500	10	18,710	171-7/8	69-1/2	30-3/4
PMC-481E	341	(2) 10	73,800	18,780	14,370	23,090	480	66	5	685	500	10	22,410	188-7/8	86-1/2	47-3/4
PMC-491E	348	(2) 10	72,700	21,130	16,720	25,520	560	76	5	685	500	10	24,840	188-7/8	86-1/2	47-3/4
PMC-492E	349	(2) 15	86,100	17,090	12,420	21,330	405	55	5	685	500	10	20,650	180-3/8	78	39-1/4
PMC-519E	368	(2) 15	84,800	19,040	14,370	23,350	480	66	5	685	500	10	22,670	188-7/8	86-1/2	47-3/4
PMC-530E	376	(2) 15	83,500	21,390	16,720	25,780	560	76	5	685	500	10	25,100	188-7/8	86-1/2	47-3/4

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

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

Engineering Dimensions & Data
Models PMC-503E to 792E



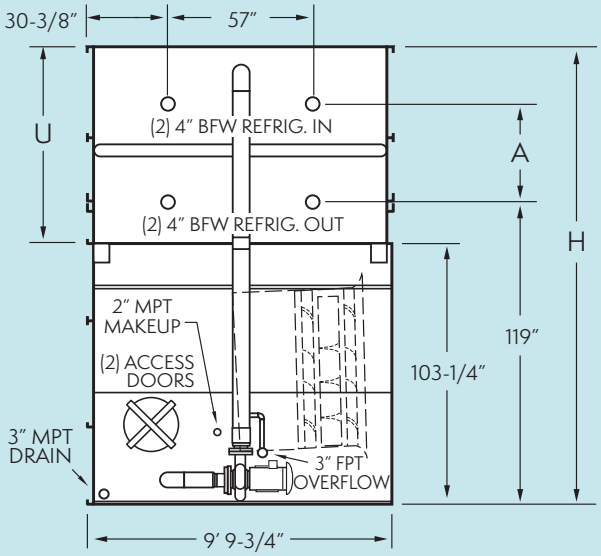


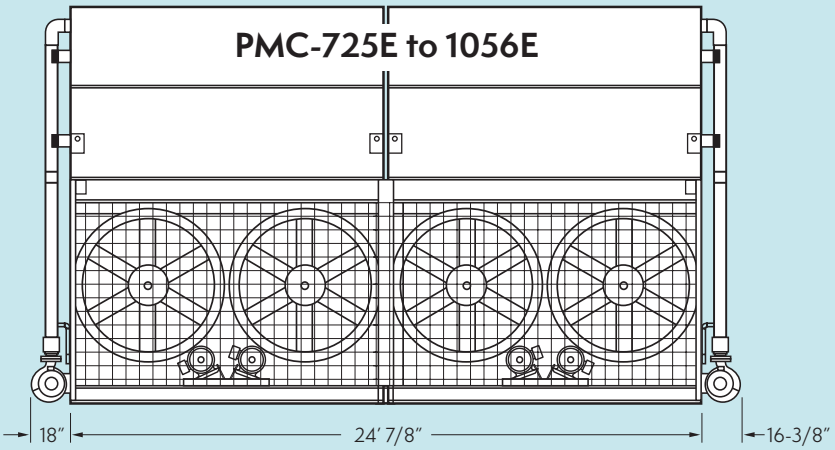
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-503E	357	(3) 5	91,800	19,590	12,580	25,910	365	50	7.5	1,030	620	12	23,710	163-3/8	61	22-1/4
PMC-546E	387	(3) 5	90,500	22,520	15,510	28,960	485	66	7.5	1,030	620	12	26,760	171-7/8	69-1/2	30-3/4
PMC-558E	396	(3) 7.5	105,300	19,750	12,580	26,070	365	50	7.5	1,030	620	12	23,870	163-3/8	61	22-1/4
PMC-579E	411	(3) 5	89,100	25,340	18,330	31,890	600	82	7.5	1,030	620	12	29,690	180-3/8	78	39-1/4
PMC-596E	423	(3) 10	116,100	19,800	12,580	26,120	365	50	7.5	1,030	620	12	23,920	163-3/8	61	22-1/4
PMC-602E	427	(3) 5	87,800	28,270	21,260	34,940	720	98	7.5	1,030	620	12	32,740	188-7/8	86-1/2	47-3/4
PMC-605E	429	(3) 7.5	103,800	22,680	15,510	29,120	485	66	7.5	1,030	620	12	26,920	171-7/8	69-1/2	30-3/4
PMC-636E	451	(3) 15	133,500	20,190	12,580	26,510	365	50	7.5	1,030	620	12	24,310	163-3/8	61	22-1/4
PMC-641E	455	(3) 7.5	102,200	25,500	18,330	32,050	600	82	7.5	1,030	620	12	29,850	180-3/8	78	39-1/4
PMC-645E	457	(3) 10	114,400	22,730	15,510	29,170	485	66	7.5	1,030	620	12	26,970	171-7/8	69-1/2	30-3/4
PMC-668E	474	(3) 7.5	100,700	28,430	21,260	35,100	720	98	7.5	1,030	620	12	32,900	188-7/8	86-1/2	47-3/4
PMC-690E	489	(3) 15	131,500	23,120	15,510	29,560	485	66	7.5	1,030	620	12	27,360	171-7/8	69-1/2	30-3/4
PMC-691E	490	(3) 10	112,700	25,550	18,330	32,100	600	82	7.5	1,030	620	12	29,900	180-3/8	78	39-1/4
PMC-719E	510	(3) 10	111,100	28,480	21,260	35,150	720	98	7.5	1,030	620	12	32,950	188-7/8	86-1/2	47-3/4
PMC-731E	518	(3) 15	129,600	25,940	18,330	32,490	600	82	7.5	1,030	620	12	30,290	180-3/8	78	39-1/4
PMC-732E	519	(3) 10	109,400	32,010	24,790	38,800	835	114	7.5	1,030	620	12	36,600	188-7/8	86-1/2	47-3/4
PMC-778E	552	(3) 15	127,600	28,870	21,260	35,540	720	98	7.5	1,030	620	12	33,340	188-7/8	86-1/2	47-3/4
PMC-792E	562	(3) 15	125,700	32,400	24,790	39,190	835	114	7.5	1,030	620	12	36,990	188-7/8	86-1/2	47-3/4

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

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

Engineering Dimensions & Data
Models PMC-725E to 1056E



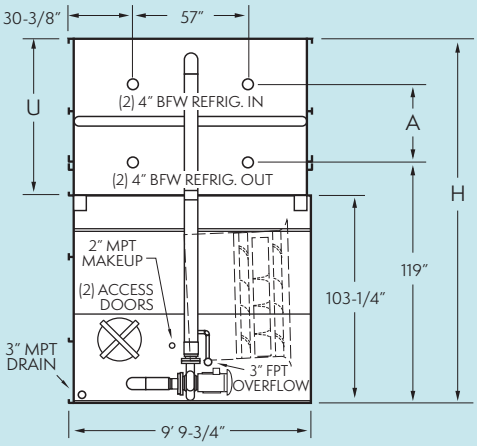


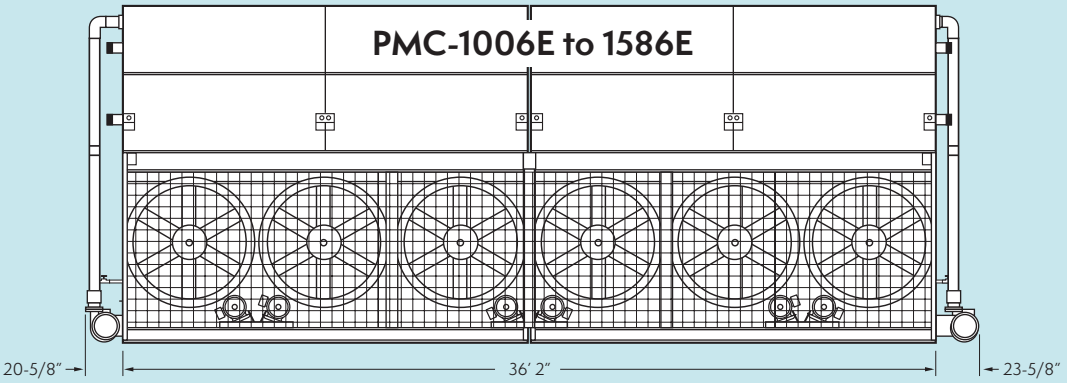
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-725E	514	(4) 5	120,200	29,930	10,360	38,610	650	89	(2) 5	1,370	930	12	36,470	171-7/8	69-1/2	30-3/4
PMC-735E	521	(4) 7.5	140,000	26,000	9,420	34,530	495	68	(2) 5	1,370	930	12	32,390	163-3/8	61	22-1/4
PMC-772E	548	(4) 5	118,500	33,850	12,320	42,690	805	110	(2) 5	1,370	930	12	40,550	180-3/8	78	39-1/4
PMC-801E	568	(4) 7.5	137,900	30,140	10,360	38,820	650	89	(2) 5	1,370	930	12	36,680	171-7/8	69-1/2	30-3/4
PMC-853E	605	(4) 7.5	135,900	34,060	12,320	42,900	805	110	(2) 5	1,370	930	12	40,760	180-3/8	78	39-1/4
PMC-863E	612	(4) 10	152,100	30,210	10,360	38,890	650	89	(2) 5	1,370	930	12	36,750	171-7/8	69-1/2	30-3/4
PMC-888E	630	(4) 7.5	133,900	38,160	14,370	47,150	960	131	(2) 5	1,370	930	12	45,010	188-7/8	86-1/2	47-3/4
PMC-929E	659	(4) 15	174,800	30,730	10,360	39,410	650	89	(2) 5	1,370	930	12	37,270	171-7/8	69-1/2	30-3/4
PMC-962E	682	(4) 10	147,600	38,230	14,370	47,220	960	131	(2) 5	1,370	930	12	45,080	188-7/8	86-1/2	47-3/4
PMC-980E	695	(4) 10	145,400	42,930	16,720	52,080	1,115	152	(2) 5	1,370	930	12	49,940	188-7/8	86-1/2	47-3/4
PMC-983E	697	(4) 15	172,200	34,650	12,320	43,490	805	110	(2) 5	1,370	930	12	41,350	180-3/8	78	39-1/4
PMC-1038E	736	(4) 15	169,600	38,750	14,370	47,740	960	131	(2) 5	1,370	930	12	45,600	188-7/8	86-1/2	47-3/4
PMC-1056E	749	(4) 15	167,100	43,450	16,720	52,600	1,115	152	(2) 5	1,370	930	12	50,460	188-7/8	86-1/2	47-3/4

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

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

Engineering Dimensions & Data
Models PMC-1006E to 1586E



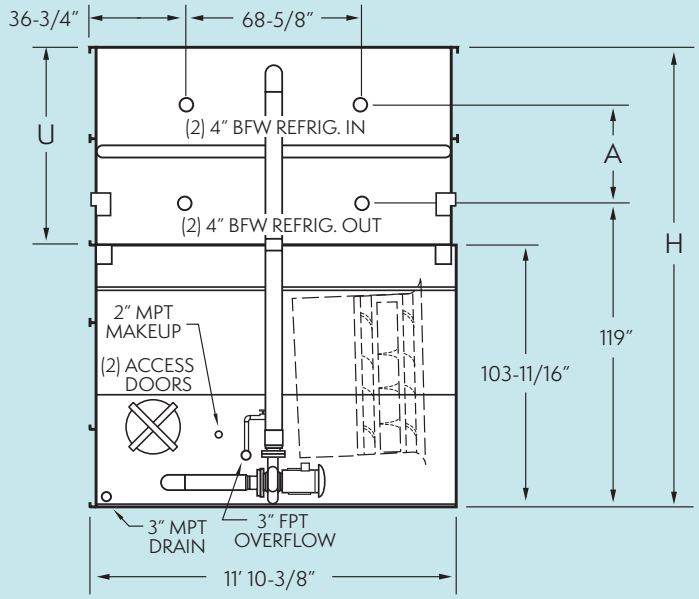


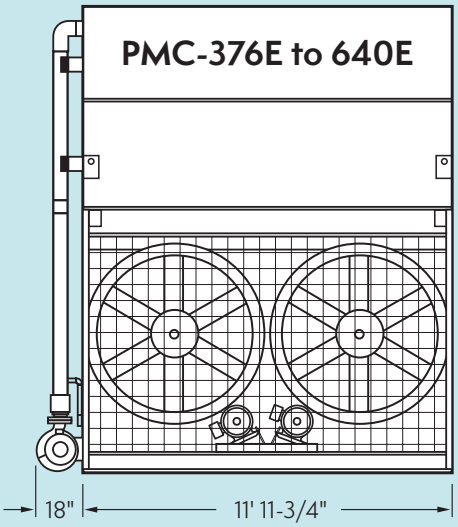
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-1006E	713	(6) 5	183,700	37,680	13,280	50,650	735	100	(2) 7.5	2,060	1,400	14	47,370	163-3/8	61	22-1/4
PMC-1088E	772	(6) 5	181,000	43,800	15,260	57,000	970	132	(2) 7.5	2,060	1,400	14	53,730	171-7/8	69-1/2	30-3/4
PMC-1116E	791	(6) 7.5	210,600	37,990	13,590	50,960	735	100	(2) 7.5	2,060	1,400	14	47,680	163-3/8	61	22-1/4
PMC-1148E	814	(6) 5	178,300	49,700	18,210	63,140	1,205	164	(2) 7.5	2,060	1,400	14	59,860	180-3/8	78	39-1/4
PMC-1189E	843	(6) 10	232,300	38,090	13,690	51,060	735	100	(2) 7.5	2,060	1,400	14	47,780	163-3/8	61	22-1/4
PMC-1211E	859	(6) 7.5	207,500	44,110	15,260	57,310	970	132	(2) 7.5	2,060	1,400	14	54,040	171-7/8	69-1/2	30-3/4
PMC-1275E	904	(6) 7.5	204,500	50,010	18,210	63,450	1,205	164	(2) 7.5	2,060	1,400	14	60,170	180-3/8	78	39-1/4
PMC-1290E	915	(6) 10	228,900	44,210	15,260	57,410	970	132	(2) 7.5	2,060	1,400	14	54,140	171-7/8	69-1/2	30-3/4
PMC-1333E	945	(6) 7.5	201,400	56,110	21,260	69,780	1,435	196	(2) 7.5	2,060	1,400	14	66,500	188-7/8	86-1/2	47-3/4
PMC-1382E	980	(6) 10	225,500	50,110	18,210	63,550	1,205	164	(2) 7.5	2,060	1,400	14	60,270	180-3/8	78	39-1/4
PMC-1438E	1,020	(6) 10	222,100	56,210	21,260	69,880	1,435	196	(2) 7.5	2,060	1,400	14	66,600	188-7/8	86-1/2	47-3/4
PMC-1466E	1,040	(6) 10	218,800	63,270	24,790	77,170	1,670	228	(2) 7.5	2,060	1,400	14	73,900	188-7/8	86-1/2	47-3/4
PMC-1556E	1,104	(6) 15	255,300	56,990	21,260	70,660	1,435	196	(2) 7.5	2,060	1,400	14	67,380	188-7/8	86-1/2	47-3/4
PMC-1586E	1,125	(6) 15	251,500	64,050	24,790	77,950	1,670	228	(2) 7.5	2,060	1,400	14	74,680	188-7/8	86-1/2	47-3/4

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

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

Engineering Dimensions & Data
Models PMC-376E to 640E



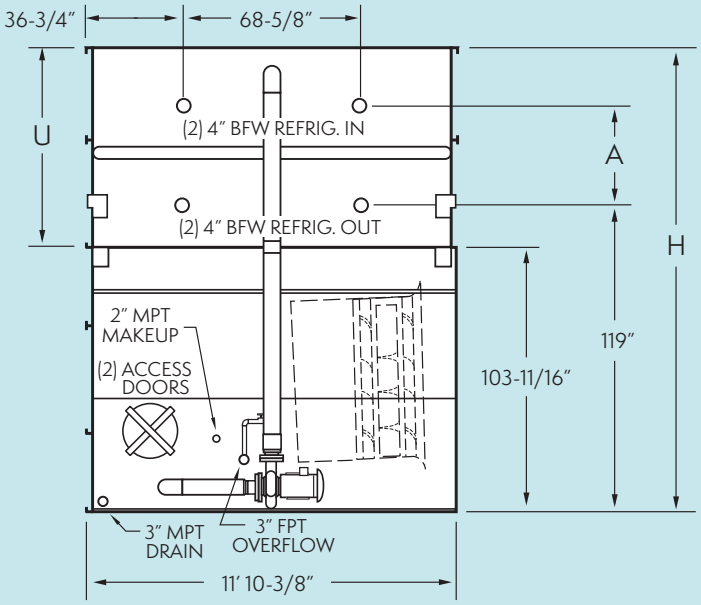


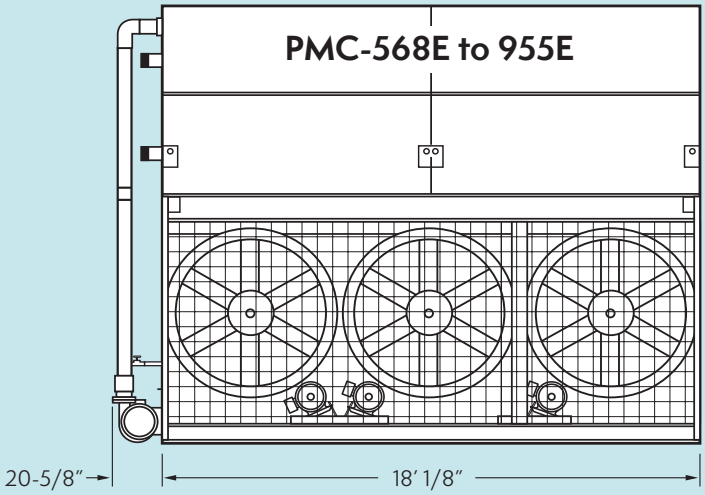
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-376E	267	(2) 5	73,523	14,950	9,970	19,990	305	42	5	800	570	10	18,960	163-3/8	61	22-1/4
PMC-408E	289	(2) 5	72,409	17,340	12,360	22,480	400	55	5	800	570	10	21,450	171-7/8	69-1/2	30-3/4
PMC-420E	298	(2) 7.5	79,200	15,050	9,970	20,090	305	42	5	800	570	10	19,060	163-3/8	61	22-1/4
PMC-427E	303	(2) 5	71,480	19,610	14,630	24,840	495	68	5	800	570	10	23,810	180-3/8	78	39-1/4
PMC-450E	319	(2) 10	84,500	15,090	9,970	20,130	305	42	5	800	570	10	19,100	163-3/8	61	22-1/4
PMC-456E	323	(2) 7.5	78,000	17,440	12,360	22,580	400	55	5	800	570	10	21,550	171-7/8	69-1/2	30-3/4
PMC-479E	340	(2) 7.5	77,000	19,710	14,630	24,940	495	68	5	800	570	10	23,910	180-3/8	78	39-1/4
PMC-488E	346	(2) 10	83,200	17,480	12,360	22,620	400	55	5	800	570	10	21,590	171-7/8	69-1/2	30-3/4
PMC-495E	351	(2) 15	97,100	15,350	9,970	20,390	305	42	5	800	570	10	19,360	163-3/8	61	22-1/4
PMC-501E	355	(2) 7.5	75,700	21,940	16,860	27,270	595	81	5	800	570	10	26,240	188-7/8	86-1/2	47-3/4
PMC-513E	364	(2) 10	82,00	19,750	14,630	24,980	495	68	5	800	570	10	23,950	180-3/8	78	39-1/4
PMC-515E	365	(2) 20	100,300	15,470	9,970	20,510	305	42	5	800	570	10	19,480	163-3/8	61	22-1/4
PMC-536E	380	(2) 15	95,600	17,740	12,360	22,880	400	55	5	800	570	10	21,850	171-7/8	69-1/2	30-3/4
PMC-537E	381	(2) 10	80,800	21,980	16,860	27,310	595	81	5	800	570	10	26,280	188-7/8	86-1/2	47-3/4
PMC-545E	387	(2) 10	79,600	24,740	19,620	30,170	690	94	5	800	570	10	29,140	188-7/8	86-1/2	47-3/4
PMC-559E	396	(2) 20	98,700	28,270	21,260	34,940	720	55	5	800	620	10	32,740	171-7/8	69-1/2	30-3/4
PMC-564E	400	(2) 15	94,400	20,010	14,630	25,240	495	68	5	800	570	10	24,210	180-3/8	78	39-1/4
PMC-591E	419	(2) 15	92,800	22,240	16,860	27,570	595	81	5	800	570	10	26,540	188-7/8	86-1/2	47-3/4
PMC-600E	426	(2) 15	91,400	25,000	19,620	30,430	690	94	5	800	570	10	29,400	188-7/8	86-1/2	47-3/4
PMC-601E	426	(2) 20	100,300	20,130	14,630	25,360	495	68	5	800	570	10	24,330	180-3/8	78	39-1/4
PMC-631E	448	(2) 20	98,800	22,360	16,860	27,690	595	81	5	800	570	10	26,660	188-7/8	86-1/2	47-3/4
PMC-640E	454	(2) 20	97,300	25,120	19,620	30,550	690	94	5	800	570	10	29,520	188-7/8	86-1/2	47-3/4

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

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

Engineering Dimensions & Data
Models PMC-568E to 955E



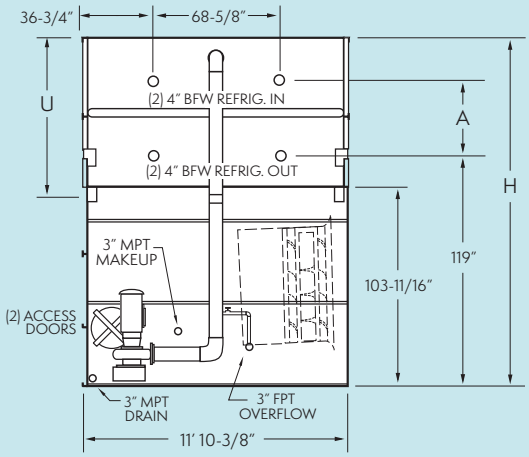


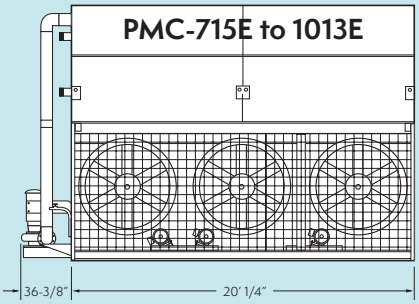
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-568E	403	(3) 5	109,913	22,760	14,920	30,090	450	62	7.5	1,200	740	12	27,430	163-3/8	61	22-1/4
PMC-616E	437	(3) 5	108,335	26,330	18,490	33,810	595	81	7.5	1,200	740	12	31,150	171-7/8	69-1/2	30-3/4
PMC-634E	450	(3) 7.5	118,400	22,920	14,920	30,250	450	62	7.5	1,200	740	12	27,590	163-3/8	61	22-1/4
PMC-647E	459	(3) 5	106,942	29,770	21,930	37,390	740	101	7.5	1,,200	740	12	34,730	180-3/8	78	39-1/4
PMC-675E	479	(3) 5	105,178	29,930	10,360	38,610	650	121	7.5	1,200	930	12	36,470	188-7/8	86-1/2	47-3/4
PMC-679E	482	(3) 10	126,300	22,970	14,920	30,300	450	62	7.5	1,200	740	12	27,640	163-3/8	61	22-1/4
PMC-688E	488	(3) 7.5	116,700	26,490	18,490	33,970	595	81	7.5	1,200	740	12	31,310	171-7/8	69-1/2	30-3/4
PMC-723E	513	(3) 7.5	115,200	29,930	21,930	37,550	740	101	7.5	1,200	740	12	34,890	180-3/8	78	39-1/4
PMC-737E	523	(3) 10	124,500	26,540	18,490	34,020	595	81	7.5	1,200	740	12	31,360	171-7/8	69-1/2	30-3/4
PMC-751E	533	(3) 7.5	113,300	33,140	25,140	40,910	885	121	7.5	1,200	740	12	38,250	188-7/8	86-1/2	47-3/4
PMC-774E	549	(3) 10	122,600	29,980	21,930	37,600	740	101	7.5	1,200	740	12	34,940	180-3/8	78	39-1/4
PMC-800E	567	(3) 15	143,000	26,930	18,490	34,410	595	81	7.5	1,200	740	12	31,750	171-7/8	69-1/2	30-3/4
PMC-803E	570	(3) 10	120,800	33,190	25,140	40,960	885	121	7.5	1,200	740	12	38,300	188-7/8	86-1/2	47-3/4
PMC-819E	581	(3) 10	119,000	37,310	29,260	45,220	1,030	140	7.5	1,200	740	12	42,560	188-7/8	86-1/2	47-3/4
PMC-831E	589	(3) 20	147,600	27,120	18,490	34,600	595	81	7.5	1,200	740	12	31,940	171-7/8	69-1/2	30-3/4
PMC-856E	607	(3) 15	141,200	30,370	21,260	37,990	740	101	7.5	1,200	740	12	35,330	180-3/8	78	39-1/4
PMC-889E	630	(3) 15	138,800	33,580	25,140	41,350	885	121	7.5	1,200	740	12	38,690	188-7/8	86-1/2	47-3/4
PMC-894E	634	(3) 20	149,900	30,560	21,930	38,180	740	101	7.5	1,200	740	12	35,520	180-3/8	78	39-1/4
PMC-905E	642	(3) 15	136,700	37,700	29,260	45,610	1,030	140	7.5	1,200	740	12	42,950	188-7/8	86-1/2	47-3/4
PMC-939E	666	(3) 20	147,700	33,770	25,140	41,540	885	121	7.5	1,200	740	12	38,880	188-7/8	86-1/2	47-3/4
PMC-955E	677	(3) 20	145,500	37,890	29,260	45,800	1,030	140	7.5	1,200	740	12	43,140	188-7/8	86-1/2	47-3/4

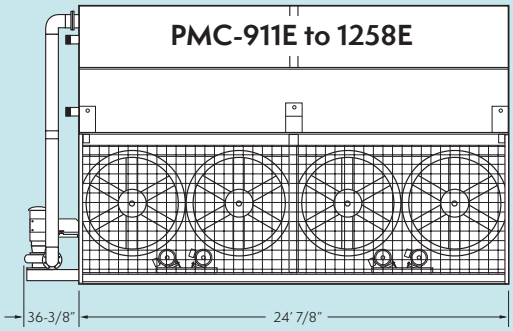
* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
† *Heaviest section is the upper coil section. When 5.12 seismic design is required consult the factory for specific weights.*
***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

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

Engineering Dimensions & Data
Models PMC-715E to 1258E





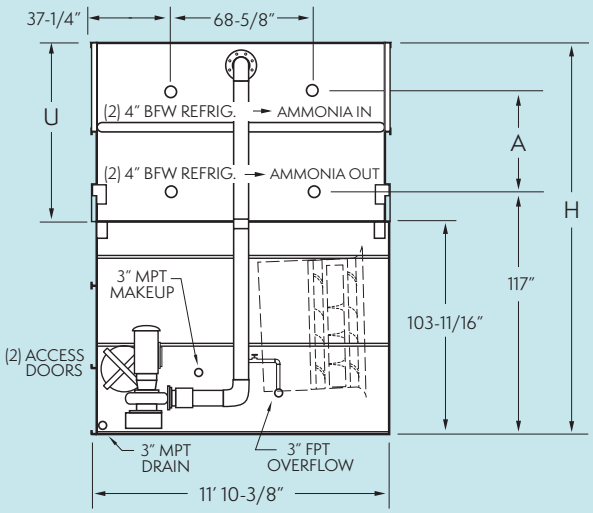


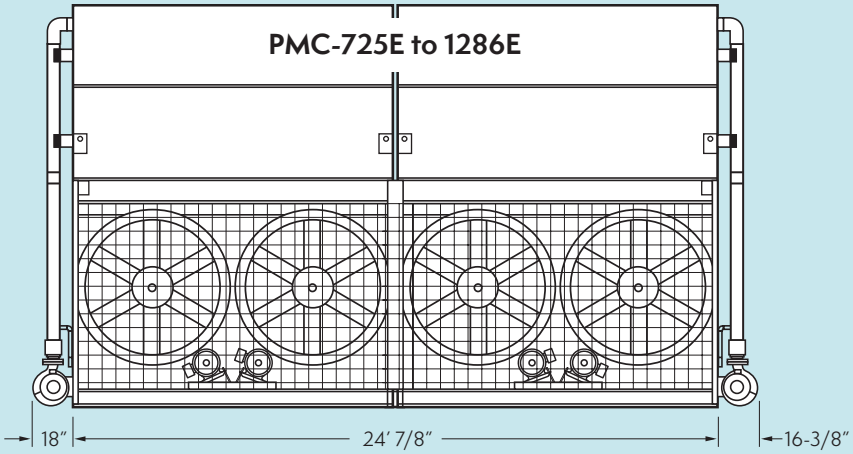
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC†	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-715E	507	(3) 5	111,398	36,680	28,190	45,510	985	134	10	1,400	810	14	42,520	188-7/8	86-1/2	47-3/4
PMC-796E	565	(3) 7.5	120,000	36,840	28,190	45,670	985	134	10	1,400	810	14	42,680	188-7/8	86-1/2	47-3/4
PMC-811E	575	(3) 10	130,000	32,820	24,120	41,490	820	112	10	1,400	810	14	38,500	180-3/8	78	39-1/4
PMC-852E	604	(3) 10	128,000	36,890	28,190	45,720	985	134	10	1,400	810	14	42,730	188-7/8	86-1/2	47-3/4
PMC-895E	635	(3) 15	149,600	33,210	24,120	41,880	820	112	10	1,400	810	14	38,890	180-3/8	78	39-1/4
PMC-940E	667	(3) 15	147,100	37,280	28,190	46,110	985	134	10	1,400	810	14	43,120	188-7/8	86-1/2	47-3/4
PMC-949E	673	(3) 20	158,900	33,400	24,120	42,070	820	112	10	1,400	810	14	39,080	180-3/8	78	39-1/4
PMC-959E	680	(3) 15	144,900	41,930	32,840	50,920	1,145	156	10	1,400	810	14	47,930	188-7/8	86-1/2	47-3/4
PMC-992E	704	(3) 20	156,600	37,470	28,190	46,300	985	134	10	1,400	810	14	43,310	188-7/8	86-1/2	47-3/4
PMC-1013E	718	(3) 20	154,300	42,120	32,840	51,110	885	121	7.5	1,200	740	12	38,250	188-7/8	86-1/2	47-3/4
PMC-911E‡	646	(4) 7.5	166,800	33,910	23,710	45,070	790	108	10	1,600	1,080	14	42,270	178-7/8	76-1/2	38-3/4
PMC-954E‡	677	(4) 7.5	164,300	38,500	28,300	49,850	985	134	10	1,600	1,080	14	47,050	188-7/8	86-1/2	48-3/4
PMC-974E‡	691	(4) 10	166,800	33,970	23,710	45,130	790	108	10	1,600	1,080	14	42,330	178-7/8	76-1/2	38-3/4
PMC-1002E‡	711	(4) 7.5	161,900	43,360	33,160	54,910	1,180	161	10	1,600	1,080	14	52,110	198-7/8	96-1/2	58-3/4
PMC-1021E‡	724	(4) 10	164,300	38,560	28,300	49,910	985	134	10	1,600	1,080	14	47,110	188-7/8	86-1/2	48-3/4
PMC-1070E‡	759	(4) 10	161,900	43,420	33,160	54,970	1,180	161	10	1,600	1,080	14	52,170	198-7/8	96-1/2	58-3/4
PMC-1071E‡	760	(4) 15	191,600	34,500	23,710	45,660	790	108	10	1,600	1,080	14	42,860	178-7/8	76-1/2	38-3/4
PMC-1125E‡	798	(4) 15	189,100	39,090	28,300	50,440	985	134	10	1,600	1,080	14	47,640	188-7/8	86-1/2	48-3/4
PMC-1180E‡	837	(4) 15	186,000	43,950	33,160	55,500	1,180	161	10	1,600	1,080	14	52,700	198-7/8	96-1/2	58-3/4
PMC-1201E‡	852	(4) 20	200,900	39,340	28,300	50,690	985	134	10	1,600	1,080	14	47,890	188-7/8	86-1/2	48-3/4
PMC-1258E‡	892	(4) 20	197,900	44,200	33,160	55,750	1,180	161	10	1,600	1,080	14	52,950	198-7/8	96-1/2	58 -3/4

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

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

Engineering Dimensions & Data
Models PMC-725E to 1286E



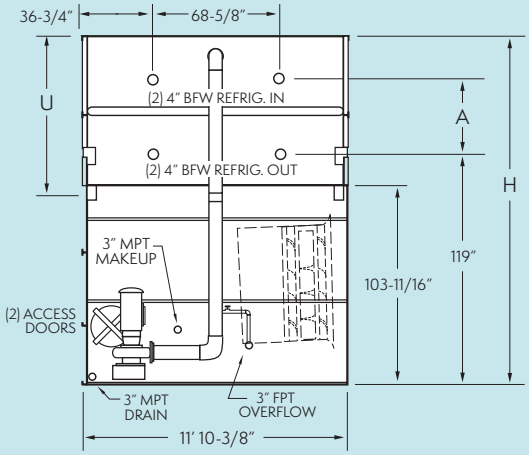


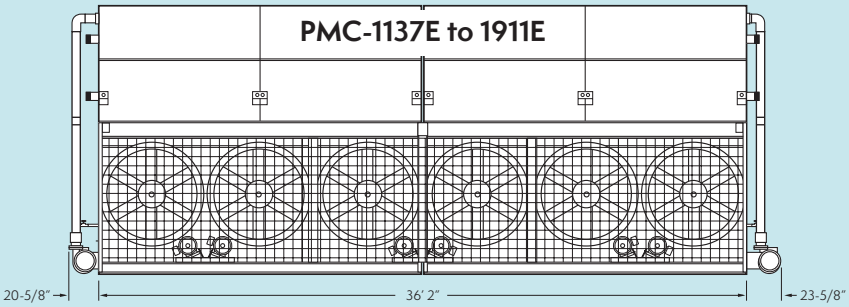
MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT³)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-725E	533	(4) 5	147,046	29,200	9,920	39,570	610	83	(2) 5	1,600	1,080	14	36,770	163-3/8	61	22-1/4
PMC-816E	579	(4) 5	144,910	34,220	12,150	44,790	805	109	(2) 5	1,600	1,080	14	41,990	171-7/8	69-1/2	30-3/4
PMC-840E	596	(4) 7.5	158,400	29,410	10,130	39,780	610	83	(2) 5	1,600	1,080	14	36,980	163-3/8	61	22-1/4
PMC-900E	638	(4) 10	169,000	29,480	10,200	39,850	610	83	(2) 5	1,600	1,080	14	37,050	163-3/8	61	22-1/4
PMC-913E	648	(4) 7.5	156,100	34,430	12,150	45,000	805	109	(2) 5	1,600	1,080	14	42,200	171-7/8	69-1/2	30-3/4
PMC-956E	678	(4) 7.5	154,000	39,190	14,530	49,950	995	135	(2) 5	1,600	1,080	14	47,150	180-3/8	78	39-1/4
PMC-976E	692	(4) 10	166,500	34,500	12,150	45,070	805	109	(2) 5	1,600	1,080	14	42,270	171-7/8	69-1/2	30-3/4
PMC-989E	701	(4) 15	194,200	30,000	10,720	40,370	610	83	(2) 5	1,600	1,080	14	37,570	163-3/8	61	22-1/4
PMC-1004E	712	(4) 7.5	151,500	43,850	16,860	54,800	1,185	161	(2) 5	1,600	1,080	14	52,000	188-7/8	86-1/2	47-3/4
PMC-1024E	726	(4) 10	164,000	39,260	14,530	50,020	995	135	(2) 5	1,600	1,080	14	47,220	180-3/8	78	39-1/4
PMC-1072E	760	(4) 10	161,600	43,920	16,860	54,870	1,185	161	(2) 5	1,600	1,080	14	52,070	188-7/8	86-1/2	47-3/4
PMC-1073E	761	(4) 15	191,300	35,020	12,150	45,590	805	109	(2) 5	1,600	1,080	14	42,790	171-7/8	69-1/2	30-3/4
PMC-1117E	792	(4) 20	197,400	35,270	12,150	45,840	805	109	(2) 5	1,600	1,080	14	43,040	171-7/8	69-1/2	30-3/4
PMC-1127E	799	(4) 15	188,800	39,780	14,530	50,540	995	135	(2) 5	1,600	1,080	14	47,740	180-3/8	78	39-1/4
PMC-1182E	838	(4) 15	185,700	44,440	16,860	55,390	1,185	161	(2) 5	1,600	1,080	14	52,590	188-7/8	86-1/2	47-3/4
PMC-1203E	853	(4) 20	200,500	40,030	14,530	50,790	995	135	(2) 5	1,600	1,080	14	47,990	180-3/8	78	39-1/4
PMC-1205E	855	(4) 15	182,900	49,960	19,620	61,100	1,375	188	(2) 5	1,600	1,080	14	58,300	188-7/8	86-1/2	47-3/4
PMC-1261E	894	(4) 20	197,600	44,690	16,860	55,640	1,185	161	(2) 5	1,600	1,080	14	52,840	188-7/8	86-1/2	47-3/4
PMC-1286E	912	(4) 20	194,600	50,210	19,620	61,350	1,375	188	(2) 5	1,600	1,080	14	58,550	188-7/8	86-1/2	47-3/4

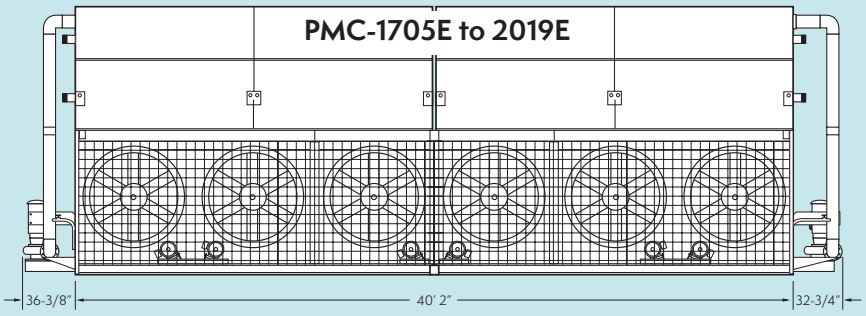
* *Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.*
** *Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.*
† *Heaviest section is the upper coil section. When 5.12 seismic design is required consult the factory for specific weights.*
***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

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

Engineering Dimensions & Data
Models PMC-1137E to 2019E







MODEL NO.	R-717 CAP TONS*	FANS		WEIGHT (LBS)†			REF. OPR CHG (LBS)**	COIL VOL. (FT^3)	SPRAY PUMP		REMOTE SUMP			DIMENSIONS (IN)		
		HP	CFM	SHIP	HEAVIEST SEC †	OPR			HP	GPM	GAL RQD***	CONN SIZE	OPR WGT	HGT (H)	UPPER (U)	COIL (A)
PMC-1137E	806	(6) 5	219,826	43,450	14,510	58,860	905	123	(2) 7.5	2,400	1,460	16	53,210	163-3/8	61	22-1/4
PMC-1269E	900	(6) 7.5	236,800	43,770	14,750	59,180	905	123	(2) 7.5	2,400	1,460	16	53,530	163-3/8	61	22-1/4
PMC-1296E	919	(6) 5	213,792	58,010	21,790	74,000	1,480	202	(2) 7.5	2,400	1,460	16	68,340	180-3/8	78	39-1/4
PMC-1358E	963	(6) 10	252,600	43,860	14,840	59,270	905	123	(2) 7.5	2,400	1,460	16	53,620	163-3/8	61	22-1/4
PMC-1376E	976	(6) 7.5	233,300	51,170	18,210	66,870	1,195	163	(2) 7.5	2,400	1,460	16	61,220	171-7/8	69-1/2	30-3/4
PMC-1446E	1,026	(6) 7.5	230,300	58,330	21,790	74,320	1,480	202	(2) 7.5	2,400	1,460	16	68,660	180-3/8	78	39-1/4
PMC-1473E	1,045	(6) 10	248,900	51,260	18,210	66,960	1,195	163	(2) 7.5	2,400	1,460	16	61,310	171-7/8	69-1/2	30-3/4
PMC-1549E	1,099	(6) 10	245,200	58,420	21,790	74,410	1,480	202	(2) 7.5	2,400	1,460	16	68,750	180-3/8	78	39-1/4
PMC-1599E	1,134	(6) 15	286,000	52,050	18,210	67,750	1,195	163	(2) 7.5	2,400	1,460	16	62,100	171-7/8	69-1/2	30-3/4
PMC-1625E	1,152	(6) 10	241,600	65,120	25,140	81,400	1,770	241	(2) 7.5	2,400	1,460	16	75,740	188-7/8	86-1/2	47-3/4
PMC-1712E	1,214	(6) 15	282,300	59,210	21,790	75,200	1,480	202	(2) 7.5	2,400	1,460	16	69,540	180-3/8	78	39-1/4
PMC-1776E	1,260	(6) 15	277,600	65,910	25,140	82,190	1,770	241	(2) 7.5	2,400	1,460	16	76,530	188-7/8	86-1/2	47-3/4
PMC-1788E	1,268	(6) 20	299,800	59,590	21,790	75,580	1,480	202	(2) 7.5	2,400	1,460	16	69,920	180-3/8	78	39-1/4
PMC-1811E	1,284	(6) 15	273,400	74,150	29,260	90,720	2,060	281	(2) 7.5	2,400	1,460	16	85,060	188-7/8	86-1/2	47-3/4
PMC-1877E	1,331	(6) 20	295,400	66,290	25,140	82,570	1,770	241	(2) 7.5	2,400	1,460	16	76,910	188-7/8	86-1/2	47-3/4
PMC-1911E	1,355	(6) 20	291,000	74,530	29,260	91,100	2,060	281	(2) 7.5	2,400	1,460	16	85,440	188-7/8	86-1/2	47-3/4
PMC-1705E	1,209	(6) 10	256,100	72,920	28,390	90,850	1,965	268	(2) 10	2,800	1,630	16	84,620	188-7/8	86-1/2	47-3/4
PMC-1879E	1,333	(6) 15	294,300	73,710	28,390	91,640	1,965	268	(2) 10	2,800	1,630	16	85,410	188-7/8	86-1/2	47-3/4
PMC-1913E	1,357	(6) 15	289,900	83,010	33,040	101,260	2,290	312	(2) 10	2,800	1,630	16	95,030	188-7/8	86-1/2	47-3/4
PMC-1985E	1,408	(6) 20	313,100	74,090	28,390	92,020	1,965	268	(2) 10	2,800	1,630	16	85,790	188-7/8	86-1/2	47-3/4
PMC-2019E	1,432	(6) 20	308,400	83,390	33,040	101,640	2,290	312	(2) 10	2,800	1,630	16	95,410	188-7/8	86-1/2	47-3/4

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

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

Optional Equipment

Pulse~Pure®

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

Smart Shield® Solid Chemistry Water Treatment System

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

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 makeup assembly. This package provides accurate control of water levels and does not require field adjustment.

Water Level Indicator

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

Super Low Sound Fan

Super Low Sound Fan

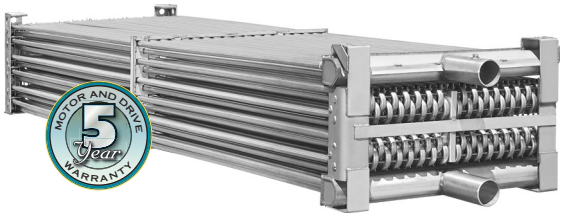
EVAPCO's Super Low Sound Fan utilizes an extremely wide chord blade design and is ideal for low energy, sound-sensitive installations without sacrificing thermal performance. This revolutionary technology is one-piece molded, heavy-duty fiberglass reinforced polyester hub and blade construction utilizing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

ASME Coils

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

TITAN Coils — Stainless Steel Construction

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

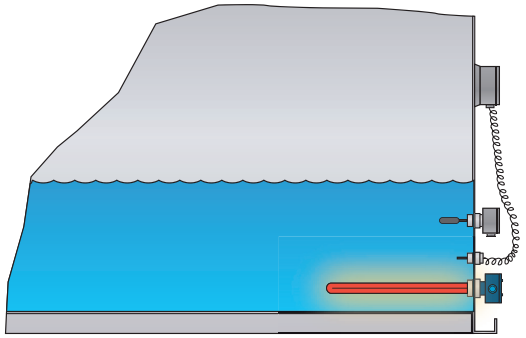


Multiple Circuit Coils

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

Electric Heaters

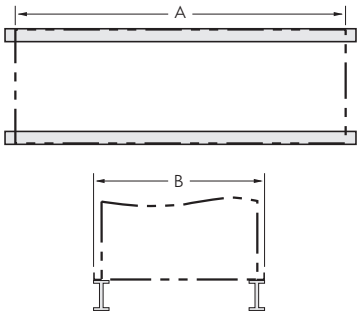
Electric immersion heaters are available factory installed in the basin of the condenser. They are sized to maintain a +40° F pan water temperature with the fans off and an ambient air temperature of 0°F, -20°F, or -40°F. They are furnished with a combination thermostat/low water protection device to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



PMC-E HEATER SIZES			
MODELS	**0°F**	**-20°F**	**-40°F**
PMC-175E to PMC-240E	5	7	9
PMC-250E to PMC-375E	(2) 4	(2) 5	(2) 7
PMC-332E to PMC-530E	8	12	16
PMC-503E to PMC-792E	(2) 6	(2) 9	(2) 12
PMC-725E to PMC-1056E	(2) 8	(2) 12	(2) 15
PMC-1006E to PMC-1586E	(2) 12	(4) 9	(4) 12
PMC-376E to PMC-640E	10	15	20
PMC-568E to PMC-955E	(2) 7	(2) 12	(2) 15
PMC-715E to PMC-1013E	(2) 8	(2) 12	(2) 15
PMC-911E to PMC-1258E	(2) 9	(2) 15	(2) 18
PMC-752E to PMC-1286E	(2) 9	(2) 15	(2) 18
PMC-1137E to PMC-1911E	(2) 15	(4) 10	(4) 15
PMC-1705E to PMC-2019E	(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.



PMC-E DIMENSIONS		
5' WIDE MODELS	**A**	**B**
PMC-175E to 240E	11' 11-5/8"	6' 4"
PMC-250E to 375E	18' 1/8"	6' 4"
10' WIDE MODELS	**A**	**B**
PMC-332E to 530E	11' 11-3/4"	9' 9-3/4"
PMC-503E to 792E	18' 1/8"	9' 9-3/4"
PMC-725E to 1056E	24' 7/8"	9' 9-3/4"
PMC-1006E to 1586E	36' 2"	9' 9-3/4"
12' WIDE MODELS	**A**	**B**
PMC-376E to 640E	11' 11-3/4"	11' 10-3/8"
PMC-568E to 955E	18' 1/8"	11' 10-3/8"
PMC-715E to 1013E	20' 1/4"	11' 10-3/8"
PMC-911E to 1258E	24' 7/8"	11' 10-3/8"
PMC-752E to 1286E	24' 7/8"	11' 10-3/8"
PMC-1137E to 1911E	36' 2"	11' 10-3/8"
PMC-1705E to 2019E	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 the EVAPCO bulletin entitled ***Equipment Layout Manual.***

Piping

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

Super Low Sound Fan

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

Maintaining the Recirculated Water System

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

Bleed or Blowdown

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

Water Treatment

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

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

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

Control of Biological Contamination

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

Mechanical Specifications

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

IBC Compliance

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

Pan and Casing

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

The pan/fan section shall include fans, motors, and drives mounted and aligned at the factory. These items shall be located in the dry entering air stream to provide maximum service life and easy maintenaince. 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) with 1.15 service factor shall be furnished suitable for outdoor service on _____ volts, _____ hertz, and _____ phase. Motor(s) shall be mounted on an adjustable base.

Heat Transfer Coil

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

Water Distribution System

The system shall provide a water flow rate of 6 GPM over each square foot of the unit face area to ensure proper flooding of the coil. The spray header shall be constructed of schedule 40, PVC pipe for corrosion resistance. All spray branches shall be removable and include a threaded end plug for cleaning. The water shall be distributed over the entire coil surface by heavy-duty ABS spray nozzles 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.

Notes

Notes

Notes

WORLDWIDE MANUFACTURING FACILITIES

EVAPCO, Inc. — World Headquarters & Research / Development Center

P.O. Box 1300 • Westminster, MD 21158 USA
410.756.2600 • marketing@evapco.com • **evapco.com**

North America

EVAPCO, Inc.
World Headquarters
Westminster, MD USA
410.756.2600
marketing@evapco.com

EVAPCO East
Taneytown, MD USA
410.756.2600
marketing@evapco.com

EVAPCO East
Key Building
Taneytown, MD USA
410.756.2600
marketing@evapco.com

EVAPCO Midwest
Greenup, IL USA
217.923.3431
evapcomw@evapcomw.com

EVAPCO West
Madera, CA USA
559.673.2207
contact@evapcowest.com

EVAPCO Iowa
Lake View, IA USA
712.657.3223

EVAPCO Iowa
Sales & Engineering
Medford, MN USA
507.446.8005
evapcomn@evapcomn.com

EVAPCO Newton
Newton, IL USA
618.783.3433
evapcomw@evapcomw.com

Evapcold Manufacturing
Greenup, IL USA
217.923.3431
evapcomw@evapcomw.com

EVAPCO Dry Cooling, Inc.
Littleton, CO USA
908.895.3236
info@evapcodc.com
Spare Parts: 908.895.3236
Spare Parts: spares@evapcodc.com

EVAPCO Dry Cooling, Inc.
Bridgewater, NJ USA
908.379.2665
info@evapcodc.com

EVAPCO Power México S. de R.L. de C.V.
Mexico City, Mexico
(52) 55.8421.9260
info@evapcodc.com

Refrigeration Vessels & Systems Corporation
A wholly owned subsidiary of EVAPCO, Inc.
Bryan, TX USA
979.778.0095
rvs@rvscorp.com

EvapTech, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
Edwardsville, KS USA
913.322.5165
marketing@evaptech.com

Tower Components, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
Ramseur, NC USA
336.824.2102
mail@towercomponentsinc.com

EVAPCO Alcoil, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
York, PA USA
717.347.7500
info@evapco-alcoil.com

Europe

EVAPCO Europe
EMENA Headquarters
Tongeren, Belgium
(32) 12.39.50.29
evapco.europe@evapco.be

EVAPCO Europe BVBA
Tongeren, Belgium
(32) 12.39.50.29
evapco.europe@evapco.be

EVAPCO Europe, S.r.l.
Milan, Italy
(39) 02.939.9041
evapcoeurope@evapco.it

EVAPCO Europe, S.r.l.
Sondrio, Italy

EVAPCO Europe GmbH
Meerbusch, Germany
(49) 2159.69560
info@evapco.de

EVAPCO Europe A/S
Aabybro, Denmark
(45) 9824.4999
info@evapco.dk

Evap Egypt Engineering Industries Co.
A licensed manufacturer of EVAPCO, Inc.
Nasr City, Cairo, Egypt
(202) 24044997 / (202) 24044998
mmanz@tiba-group.com /
hany@tiba-group.com

EVAPCO Middle East DMCC
Dubai, United Arab Emirates
(971) 4.448.7242
info@evapco.ae

EVAPCO S.A. (Pty.) Ltd.
A licensed manufacturer of EVAPCO, Inc.
Isando, South Africa
(27) 11.392.6630
evapco@evapco.co.za

Asia Pacific

EVAPCO Asia Pacific Headquarters
Baoshan Industrial Zone
Shanghai, P.R. China
(86) 21.6687.7786
marketing@evapcochina.com

EVAPCO (Shanghai) Refrigeration Equipment Co., Ltd.
Baoshan Industrial Zone, Shanghai, P.R. China
(86) 21.6687.7786
marketing@evapcochina.com

EVAPCO (Beijing) Refrigeration Equipment Co., Ltd.
Huairou District, Beijing, P.R. China
(86) 10.6166.7238
marketing@evapcochina.com

EVAPCO Air Cooling Systems (Jiaxing) Company, Ltd.
Jiaxing, Zhejiang,P.R. China
(86) 573.8311.9379
info@evapcochina.com

EVAPCO Australia (Pty.) Ltd.
Riverstone, NSW, Australia
(61) 02.9627.3322
sales@evapco.com.au

EvapTech Asia Pacific Sdn. Bhd
A wholly owned subsidiary of EvapTech, Inc.
Puchong, Selangor, Malaysia
(60) 3.8070.7255
marketing-ap@evaptech.com

South America

EVAPCO Brasil
Equipamentos Industriais Ltda.
Indaiatuba, São Paulo, Brazil
(55) 11.5681.2000
vendas@evapco.com.br

FanTR Technology Resources
Indaiatuba, São Paulo, Brazil
(55) 11.4025.1670
fantr@fantr.com

Bulletin CT21MRKT
3M/1-20/YGS

Committed to making life easier, more reliable and more sustainable for people everywhere