



# Evaporative Condensers

*Advanced Technology for the Future, Available Today*

## ENGINEERING MANUAL





The Evaporative Condenser Engineering Manual is designed to allow quick and easy selections of EVAPCO condensers. The manual provides detailed technical information on the ATC, UBC, PMCB, LRC, and LSCB Evaporative Condensers. In addition, this bulletin includes application information on the operation of evaporative condensers, recommended steel support and mechanical specifications.

**This Engineering Manual contains only the standard catalog models. Alternate plan area horsepower and capacity selections are available in EVAPCO's Computer Selection Program.**

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### Technical Support Services

#### EVAPSPEC

EVAPSPEC is a Windows based computer selection program which allows the design engineer to choose EVAPCO models and optimize unit selections. The program allows the engineer to evaluate the equipment's thermal performance, space and energy requirements. Once the model is selected and optional equipment features are inserted, the engineer may output a complete specification **AND** a unit drawing from this program. The software is designed to provide the user with maximum flexibility in analyzing the various selection parameters while in a friendly and familiar Windows format.

The EVAPSPEC software is available to all consulting engineering offices and design-build contractors. The programs are distributed through the local EVAPCO sales representative or the EVAPCO corporate office in Taneytown, MD.

#### EVAPWEB

Call EVAPCO's "EVAPWEB" home page for product information, application assistance, literature and request for quotations @ <http://www.evapco.com>.

***With EVAPSPEC and EVAPWEB, equipment selections, written specifications, unit drawing files and EVAPCO on-line information are readily available from the comfort of your own office!***

# 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.

## Structural Steel Support

The recommended method of support for EVAPCO condensers is two 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.

## 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" Bulletin 131A.

## Indoor Installations

Centrifugal fan models can be installed indoors where it is desirable to hide the unit or where it is the only location available. Discharge ductwork is required for these installations. Normally it is best to use the room as a plenum for inlet air, but inlet ductwork can be used if required.

The design of ductwork should be symmetrical to provide even air distribution across both intake and discharge openings. The static pressure loss imposed by the ductwork must not exceed 1/2". Care must be taken to provide large access doors in the ductwork for accessibility to the unit fan section, eliminators and water distribution system for normal maintenance.

The centrifugal fan condenser can handle the external static of ductwork by using the next larger size fan motor. Units installed with

inlet ductwork should also be ordered with the solid bottom panel option. Drawings are available from the factory showing size and location of duct connections.

## 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

In some cases the make-up will be so high in mineral content that a normal bleed-off 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 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.

## Solutions for Sound Sensitive Applications

The ATC product line is now available with four (4) equipment options to reduce the overall sound generated from the side or top of the unit. Each option provides various levels of sound reduction and can be used in combination to provide the lowest sound level. Consult EVAPCO's ES II selection program for unit sound levels. If a detailed analysis or full octave band data sheet is required for your application, please consult your EVAPCO Sales Representative.

**NOTE: These low sound options may impact the overall installed dimensions and weight of the unit.**



## 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 more simple 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.

## 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 formulae:

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

$$450 \text{ tons} \times 12000 = 5,400,000 \text{ BTU/Hr}$$

$$500 \text{ BHP} \times 2545 = 1,272,500 \text{ BTU/Hr}$$

$$\text{Total } 6,672,500 \text{ BTU/Hr}$$

From Table 2 the capacity factor for 96.3° condensing and 78° W.B. = 1.37  $6,672,500 \times 1.37 = 9,141,325 \text{ BTU/Hr}$  or 9142 MBH. Therefore, select a model ATC-639B, UBC-630, PMCB-630 or LSCB-625.

**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)																		
		HCFC-22	HFC-134a	50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84
156	95	85	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	90	.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	.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	100	.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	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	.56	.59	.62	.64	.65	.67	.69	.71	.74	.77	.78	.80	.82	.84	.88	.93	.98	1.04

**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**

ATC Models				UBC Models				PMCB Models				LRC Models		LSCB Models	
Model	MBH Base	Model	MBH Base	Model	MBH Base	Model	MBH Base	Model	MBH Base	Model	MBH Base	Model	MBH Base	Model	MBH Base
50B	735	895B	13,157	180	2,646	1435	21,095	175	2,573	775	11,393	25	368	185	2,720
65B	956	907B	13,333	200	2,940	1460	21,462	190	2,793	805	11,834	27	397	200	2,940
80B	1,176	926B	13,612	210	3,087	1500	22,050	210	3,087	815	11,981	29	426	210	3,087
90B	1,323	935B	13,745	230	3,381	1530	22,491	220	3,234	850	12,495	35	515	225	3,308
105B	1,544	949B	13,950	260	3,822	1575	23,153	235	3,455	855	12,569	38	559	240	3,528
120B	1,764	967B	14,215	285	4,190	1605	23,594	240	3,528	885	13,010	42	617	250	3,675
135B	1,985	979B	14,391	320	4,704	1625	23,888	250	3,675	910	13,377	48	706	280	4,116
150B	2,205	980B	14,406	345	5,072	1655	24,329	275	4,043	935	13,745	51	750	300	4,410
165B	2,426	1006B	14,788	370	5,439	1690	24,843	290	4,263	950	13,965	58	853	315	4,631
187B	2,749	1007B	14,803	415	6,101	1720	25,284	295	4,337	960	14,112	65	956	335	4,925
199B	2,925	1046B	15,376	420	6,174	1735	25,505	325	4,778	985	14,480	72	1,058	355	5,219
221B	3,249	1047B	15,391	440	6,468	1800	26,460	330	4,851	1000	14,700	76	1,117	370	5,439
238B	3,499	1077B	15,832	460	6,762	1915	28,151	335	4,925	1015	14,921	84	1,235	385	5,660
253B	3,719	1078B	15,847	485	7,130	1980	29,106	350	5,145	1018	14,965	91	1,338	400	5,880
269B	3,954	1163B	17,096	490	7,203	2100	30,870	360	5,292	1030	15,141	101	1,485	430	6,321
280B	4,116	1164B	17,111	505	7,424	2370	34,839	375	5,513	1060	15,582	108	1,588	450	6,615
294B	4,322	1203B	17,684	520	7,644	2500	36,750	385	5,660	1075	15,803	114	1,676	480	7,056
305B	4,484	1204B	17,699	535	7,865	2615	38,441	390	5,733	1080	15,876	116	1,705	500	7,350
325B	4,778	1283B	18,860	540	7,938	2740	40,278	415	6,101	1105	16,244	128	1,882	515	7,571
358B	5,263	1284B	18,875	560	8,232	2860	42,042	425	6,248	1110	16,317	131	1,926	550	8,085
371B	5,454	1364B	20,051	580	8,526	3010	44,247	435	6,395	1120	16,464	140	2,058	590	8,673
398B	5,851	1365B	20,066	630	9,261	3225	47,408	450	6,615	1165	17,126	155	2,279	625	9,188
423B	6,218	1425B	20,948	670	9,849			455	6,689	1175	17,273	174	2,558	650	9,555
442B	6,497	1426B	20,962	700	10,290			475	6,983	1260	18,522	183	2,690	690	10,143
457B	6,718	1495B	21,977	730	10,731			480	7,056	1320	19,404	188	2,764	720	10,584
473B	6,953	1496B	21,991	765	11,246			495	7,277	1380	20,286	190	2,793	755	11,099
486B	7,144	1561B	22,947	800	11,760			510	7,497	1410	20,727	201	2,955	800	11,760
503B	7,394	1562B	22,961	830	12,201			535	7,865	1485	21,830	211	3,102	850	11,834
523B	7,688	1616B	23,755	860	12,642			540	7,938	1510	22,197	213	3,131	860	12,642
539B	7,923	1625B	23,888	890	13,083			560	8,232	1540	22,638	225	3,308	900	13,230
559B	8,217	1654B	24,314	920	13,524			580	8,526	1550	22,785	227	3,337	960	14,112
578B	8,497	1655B	24,329	1010	14,847			585	8,600	1630	23,961	233	3,425	1000	14,700
581B	8,541	1720B	25,284	1075	15,803			600	8,820	1710	25,137	240	3,528	1030	15,141
601B	8,835	1729B	25,416	1090	16,023			630	9,261	1770	26,019	246	3,616	1100	16,170
620B	9,114	1783B	26,210	1110	16,317			645	9,482			249	3,660	1180	17,346
630B	9,261	1784B	26,225	1240	18,228			660	9,702			255	3,749	1250	18,375
639B	9,393	1795B	26,387	1265	18,596			690	10,143			269	3,954	1310	19,257
642B	9,437	1805B	26,534	1310	19,257			705	10,364			287	4,219	1380	20,286
647B	9,511	1915B	28,151	1335	19,625			725	10,658			300	4,410	1440	21,168
666B	9,790	1925B	28,298	1370	20,139			755	11,099			321	4,719	1510	22,197
682B	10,025	2002B	29,429	1395	20,507			770	11,319			336	4,939	1610	23,667
687B	10,099	2082B	30,605									361	5,307		
706B	10,378	2158B	31,723									379	5,571		
713B	10,481	2256B	33,163												
725B	10,658	2324B	34,163												
746B	10,966	2404B	35,339												
747B	10,981	2490B	36,603												
755B	11,099	2647B	38,911												
778B	11,437	2765B	40,646												
781B	11,481	2900B	42,630												
805B	11,834	3029B	44,526												
827B	12,157	3210B	47,187												
830B	12,201	3336B	49,039												
854B	12,554	3459B	50,848												
865B	12,716	3482B	51,185												
869B	12,774	3591B	52,788												
892B	13,112	3714B	54,596												

**Note:** Table 3 presents only the standard model selections. Other models exist for special horsepower or layout applications. Please consult the factory or EVAPCO Representative for the special situations.



### 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° 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 ATC-442B, UBC-440, and PMCB-435 or LSCB-430 depending on unit type desired, and any layout or horsepower considerations.

**Table 4 - Unit Sizes**

ATC Models				UBC Models		PMCB Models			LRC Models		LSCB Models	
50B	539B	907B	1654B	180	1075	175	510	1000	25	174	185	650
65B	559B	926B	1655B	200	1090	190	535	1015	27	183	200	690
80B	578B	935B	1720B	210	1110	210	540	1018	29	188	210	720
90B	581B	949B	1729B	230	1240	220	560	1030	35	190	225	755
105B	601B	967B	1783B	260	1265	235	580	1060	38	201	240	755
120B	620B	979B	1784B	285	1310	240	585	1075	42	211	250	800
135B	630B	980B	1795B	320	1335	250	600	1080	48	213	280	805
150B	639B	1006B	1805B	345	1370	275	630	1105	51	225	300	860
165B	642B	1007B	1915B	370	1395	290	645	1110	58	227	315	900
187B	647B	1046B	1925B	415	1435	325	690	1165	65	233	335	960
199B	666B	1047B	2002B	420	1460	330	705	1175	72	240	355	1000
221B	682B	1077B	2082B	440	1500	335	725	1260	76	246	370	1030
238B	687B	1078B	2158B	460	1530	350	755	1320	84	249	385	1030
253B	706B	1163B	2256B	485	1575	360	770	1380	91	255	400	1100
269B	713B	1164B	2324B	490	1605	375	775	1410	101	269	430	1180
280B	725B	1203B	2404B	505	1625	385	805	1485	108	287	450	1250
294B	746B	1204B	2490B	520	1655	415	850	1540	114	300	480	1310
305B	747B	1283B	2647B	535	1690	425	855	1550	116	321	500	1380
325B	755B	1284B	2765B	540	1720	435	885	1630	128	336	515	1440
358B	778B	1364B	2900B	560	1735	450	910	1710	131	361	550	1440
371B	781B	1365B	3029B	580	1735	455	935	1770	140	379	590	1510
398B	805B	1425B	3210B	630	1800	475	950		155		625	1610
423B	827B	1426B	3336B	670	1915	480	960					
442B	830B	1495B	3459B	700	1980	495	985					
457B	854B	1496B	3482B	730	2100							
473B	865B	1561B	3591B	765	2370							
486B	869B	1562B	3714B	800	2500							
503B	892B	1616B		830	2615							
523B	895B	1625B		860	2740							
				890	2860							
				920	3010							
				1010	3225							



**Table 5 - 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 6 - Ammonia (R-717) Capacity Factors**

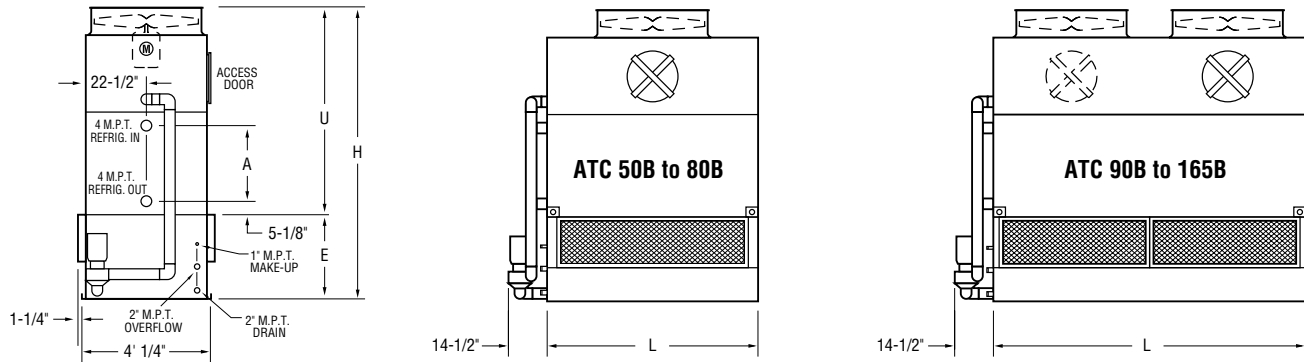
Condensing Pres. psig		Cond. Temp. °F	Wet Bulb Temperature, (°F)																
			50	55	60	62	64	66	68	70	72	74	75	76	77	78	80	82	84
152	85	.99	1.09	1.25	1.34	1.44	1.57	1.73	1.91	2.17	2.49	2.71	2.95	3.26	3.59	-	-	-	-
166	90	.84	.93	1.03	1.10	1.16	1.23	1.32	1.42	1.55	1.71	1.81	1.92	2.04	2.16	2.59	3.17	-	-
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:** Table 4 presents only the standard model selections. Other models exist for special horsepower or layout applications. Please consult the factory or EVAPCO Representative for the special situations.



# Engineering Dimensions & Data *Models ATC 50B to 165B*



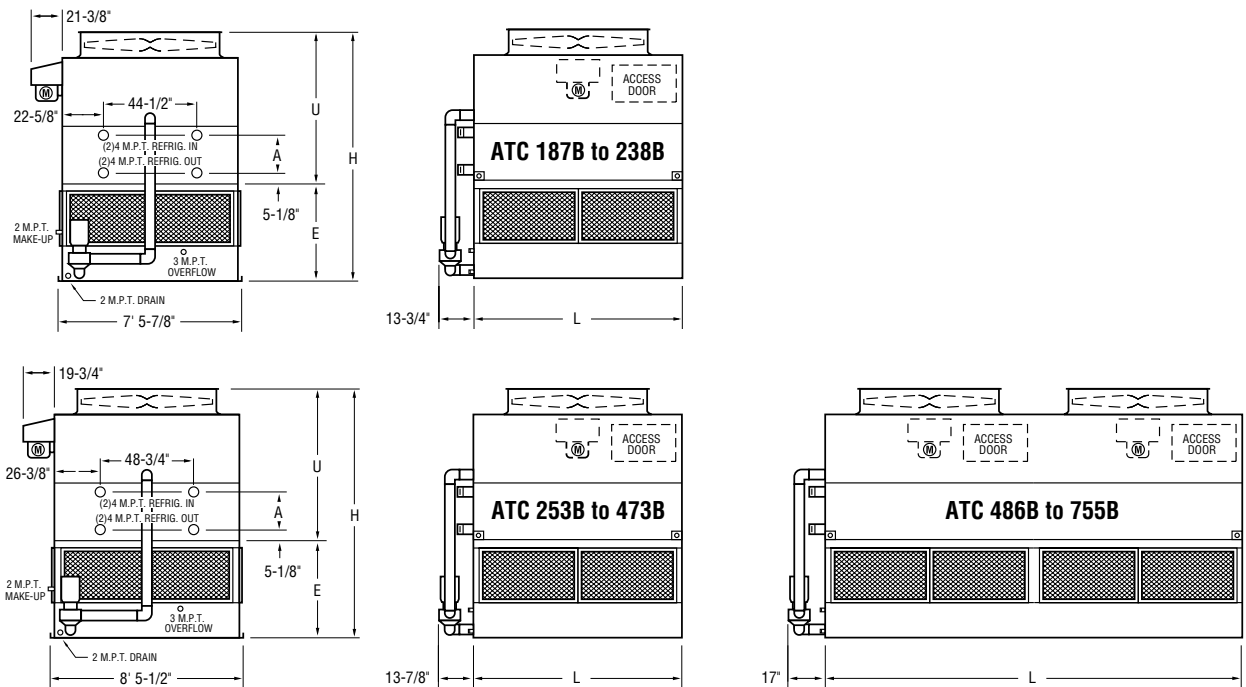
**Table 7 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
50B	35	3	11,800	2,580	3,760	2,130	50	7	3/4	135	120	6"	3,370	8' 5-1/4"	5' 9-3/4"	2' 7-1/2"	19-1/2"	5' 11-7/8"
65B	46	5	12,600	2,970	4,180	2,520	65	9	3/4	135	120	6"	3,790	9' 3/4"	6' 5-1/4"	2' 7-1/2"	27"	5' 11-7/8"
80B	57	5	12,000	3,390	4,620	2,940	80	11	3/4	135	120	6"	4,230	9' 8-1/4"	7' 3/4"	2' 7-1/2"	34-1/2"	5' 11-7/8"
90B	64	(2) 3	21,200	3,810	5,510	3,190	75	10	1	200	180	6"	4,950	8' 5-1/4"	5' 9-3/4"	2' 7-1/2"	19-1/2"	8' 11-1/2"
105B	74	(2) 3	19,800	4,350	6,100	3,730	95	13	1	200	180	6"	5,540	9' 3/4"	6' 5-1/4"	2' 7-1/2"	27"	8' 11-1/2"
120B	85	(2) 3	19,100	4,950	6,740	4,330	120	16	1	200	180	6"	6,180	9' 8-1/4"	7' 3/4"	2' 7-1/2"	34-1/2"	8' 11-1/2"
135B	96	(2) 3	25,300	5,400	7,710	4,620	130	18	1-1/2	270	230	8"	6,980	9' 3/4"	5' 9-3/4"	2' 7-1/2"	27"	11' 11-3/4"
150B	106	(2) 3	23,800	6,200	8,570	5,420	160	22	1-1/2	270	230	8"	7,840	9' 8-1/4"	7' 3/4"	2' 7-1/2"	34-1/2"	11' 11-3/4"
165B	117	(2) 5	25,900	6,240	8,610	5,460	160	22	1-1/2	270	230	8"	7,880	9' 8-1/4"	7' 3/4"	2' 7-1/2"	34-1/2"	11' 11-3/4"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. Dimensions are subject to change. Do not use for pre-fabrication.



# Models ATC 187B to 755B



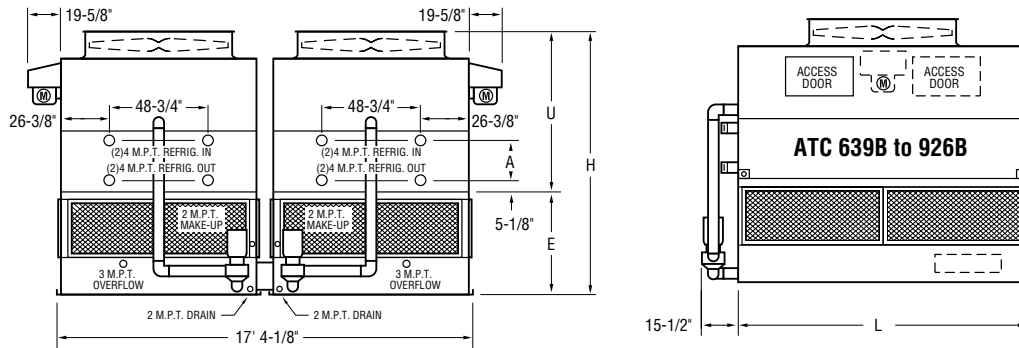
**Table 8 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP††	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
187B	133	7-1/2	34,000	7,950	10,520	6,650	185	25	2	340	220	8"	9,440	11' 2"	7' 1-7/8"	4' 1/8"	27"	8' 5-1/2"
199B	142	10	37,200	7,980	10,550	6,680	185	25	2	340	220	8"	9,470	11' 2"	7' 1-7/8"	4' 1/8"	27"	8' 5-1/2"
221B	157	10	36,100	9,070	11,720	7,770	225	31	2	340	220	8"	10,640	11' 9-1/2"	7' 9-3/8"	4' 1/8"	34-1/2"	8' 5-1/2"
238B	169	15	40,500	9,130	11,780	7,830	225	31	2	340	220	8"	10,700	11' 9-1/2"	7' 9-3/8"	4' 1/8"	34-1/2"	8' 5-1/2"
253B	180	15	47,500	9,180	12,200	7,740	210	29	2	410	250	8"	10,940	11' 10-1/8"	7' 6-3/8"	4' 3-3/4"	27"	8' 11-1/2"
280B	199	15	46,100	10,450	13,560	9,010	260	35	2	410	250	8"	12,300	12' 5-5/8"	8' 1-7/8"	4' 3-3/4"	34-1/2"	8' 11-1/2"
305B	217	20	48,400	11,730	14,940	10,290	310	42	2	410	250	8"	13,680	13' 1-1/8"	8' 9-3/8"	4' 3-3/4"	42"	8' 11-1/2"
269B	191	10	46,800	10,480	14,040	8,820	245	33	3	500	290	10"	12,530	11' 10-1/8"	7' 6-3/8"	4' 3-3/4"	27"	10' 5-1/2"
<b>294B</b>	<b>209</b>	<b>15</b>	<b>53,100</b>	<b>10,550</b>	<b>14,110</b>	<b>8,890</b>	<b>245</b>	<b>33</b>	<b>3</b>	<b>500</b>	<b>290</b>	<b>10"</b>	<b>12,600</b>	<b>11' 10-1/8"</b>	<b>7' 6-3/8"</b>	<b>4' 3-3/4"</b>	<b>27"</b>	<b>10' 5-1/2"</b>
325B	231	15	51,500	12,040	15,710	10,380	300	41	3	500	290	10"	14,200	12' 5-5/8"	8' 1-7/8"	4' 3-3/4"	34-1/2"	10' 5-1/2"
358B	255	15	56,800	13,110	17,400	11,290	345	47	3	550	330	10"	15,690	12' 10"	8' 1-7/8"	4' 8-1/8"	34-1/2"	11' 11-3/4"
371B	263	15	55,000	14,750	19,170	12,930	410	56	3	550	330	10"	17,460	13' 5-1/2"	8' 9-3/8"	4' 8-1/8"	42"	11' 11-3/4"
398B	283	15	63,000	14,910	19,900	12,880	400	55	3	600	380	10"	17,940	12' 10"	8' 1-7/8"	4' 8-1/8"	34-1/2"	13' 11-3/4"
423B	301	20	68,800	14,950	19,940	12,920	400	55	3	600	380	10"	17,980	12' 10"	8' 1-7/8"	4' 8-1/8"	34-1/2"	13' 11-3/4"
442B	313	25	73,300	14,970	19,960	12,940	400	55	3	600	380	10"	18,000	12' 10"	8' 1-7/8"	4' 8-1/8"	34-1/2"	13' 11-3/4"
457B	324	25	71,000	16,870	22,000	14,840	475	65	3	600	380	10"	20,040	13' 5-1/2"	8' 9-3/8"	4' 8-1/8"	42"	13' 11-3/4"
473B	336	30	74,700	16,890	22,020	14,860	475	65	3	600	380	10"	20,060	13' 5-1/2"	8' 9-3/8"	4' 8-1/8"	42"	13' 11-3/4"
486B	345	(2)10	84,800	17,490	23,780	14,690	410	56	5	800	510	12"	21,240	12' 6-1/2"	7' 6-3/8"	5' 1/8"	27"	18' 0"
578B	411	(2)15	92,500	19,960	26,440	17,160	510	70	5	800	510	12"	23,900	13' 2"	8' 1-7/8"	5' 1/8"	34-1/2"	18' 0"
630B	447	(2)20	97,100	22,520	29,190	19,720	610	83	5	800	510	12"	26,650	13' 9-1/2"	8' 9-3/8"	5' 1/8"	42"	18' 0"
666B	473	(2)15	98,200	22,670	30,340	19,560	595	81	7-1/2	1,050	590	12"	27,380	13' 2"	8' 1-7/8"	5' 1/8"	34-1/2"	21' 0"
687B	488	(2)15	95,100	25,530	33,420	22,420	715	97	7-1/2	1,050	590	12"	30,460	13' 9-1/2"	8' 9-3/8"	5' 1/8"	42"	21' 0"
725B	515	(2)20	100,100	25,630	33,520	22,520	715	97	7-1/2	1,050	590	12"	30,560	13' 9-1/2"	8' 9-3/8"	5' 1/8"	42"	21' 0"
755B	536	(2)25	108,600	25,690	33,580	22,580	715	97	7-1/2	1,050	590	12"	30,620	13' 9-1/2"	8' 9-3/8"	5' 1/8"	42"	21' 0"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering Dimensions & Data *Models ATC 639B to 926B*



**Table 9 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP††	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
639B	454	(2)15	115,900	23,040	31,370	9,710	555	76	(2)3	1,100	660	(2)10"	27,950	12' 6-1/2"	7' 6-3/8"	5' 1/8"	30-3/4"	11' 11-3/4"
706B	501	(2)15	112,500	26,200	34,780	11,290	690	94	(2)3	1,100	660	(2)10"	31,360	13' 2"	8' 1-7/8"	5' 1/8"	39-1/4"	11' 11-3/4"
746B	530	(2)20	121,800	26,280	34,860	11,330	690	94	(2)3	1,100	660	(2)10"	31,440	13' 2"	8' 1-7/8"	5' 1/8"	39-1/4"	11' 11-3/4"
778B	553	(2)25	129,800	26,320	34,900	11,350	690	94	(2)3	1,100	660	(2)10"	31,480	13' 2"	8' 1-7/8"	5' 1/8"	39-1/4"	11' 11-3/4"
805B	571	(2)25	125,700	29,600	38,430	12,990	820	112	(2)3	1,100	660	(2)10"	35,010	13' 9-1/2"	8' 9-3/8"	5' 1/8"	47-3/4"	11' 11-3/4"
830B	589	(2)20	136,200	28,000	37,980	11,980	800	109	(2)3	1,200	760	(2)10"	34,060	13' 8"	8' 1-7/8"	5' 6-1/8"	39-1/4"	13' 11-3/4"
865B	614	(2)25	145,000	28,040	38,020	12,000	800	109	(2)3	1,200	760	(2)10"	34,100	13' 8"	8' 1-7/8"	5' 6-1/8"	39-1/4"	13' 11-3/4"
895B	636	(2)25	140,500	33,710	43,980	14,840	955	130	(2)3	1,200	760	(2)10"	40,060	14' 3-1/2"	8' 9-3/8"	5' 6-1/8"	47-3/4"	13' 11-3/4"
926B	658	(2)30	147,900	33,750	44,020	14,860	955	130	(2)3	1,200	760	(2)10"	40,100	14' 3-1/2"	8' 9-3/8"	5' 6-1/8"	47-3/4"	13' 11-3/4"

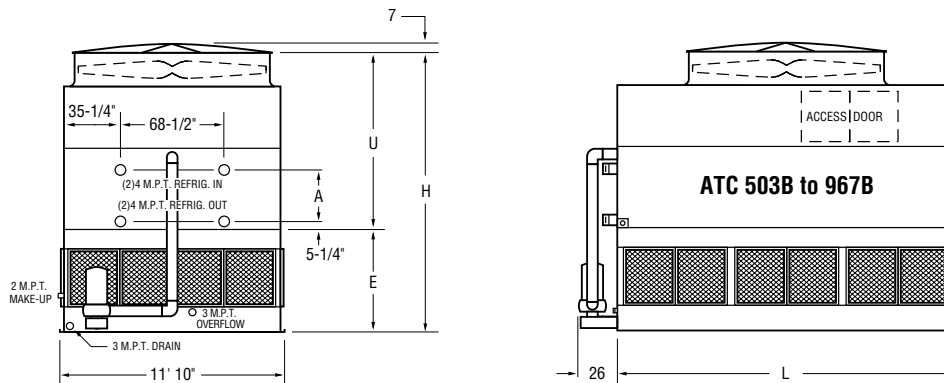
\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

\*\* 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 coil section.

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. Dimensions are subject to change. Do not use for pre-fabrication.

# Models ATC 503B to 967B



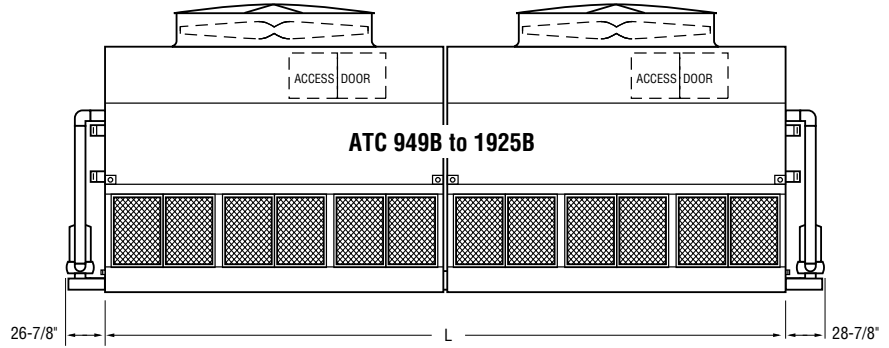
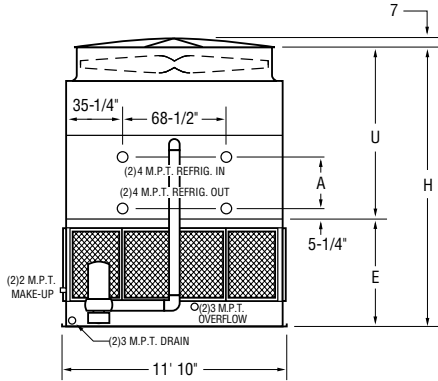
**Table 10 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
503B	357	20	78,900	18,510	25,480	15,940	500	68	5	800	490	12"	21,570	14' 9-3/4"	9' 7-5/8"	5' 2-1/8"	39-1/4"	11' 11-3/4"
523B	371	25	84,000	18,560	25,530	15,990	500	68	5	800	490	12"	21,620	14' 9-3/4"	9' 7-5/8"	5' 2-1/8"	39-1/4"	11' 11-3/4"
539B	382	30	88,500	18,660	25,630	16,090	500	68	5	800	490	12"	21,720	14' 9-3/4"	9' 7-5/8"	5' 2-1/8"	39-1/4"	11' 11-3/4"
559B	397	30	85,700	20,990	28,150	18,420	595	81	5	800	490	12"	24,240	15' 6-1/4"	10' 4-1/8"	5' 2-1/8"	47-3/4"	11' 11-3/4"
581B	413	25	94,000	21,110	29,320	18,190	580	79	5	900	570	12"	24,790	15' 3-3/4"	9' 7-5/8"	5' 8-1/8"	39-1/4"	13' 11-3/4"
601B	427	25	91,100	24,070	32,500	21,150	690	94	5	900	570	12"	27,970	16' 0"	10' 4-1/8"	5' 8-1/8"	47-3/4"	13' 11-3/4"
620B	440	30	95,800	24,140	32,570	21,220	690	94	5	900	570	12"	28,040	16' 0"	10' 4-1/8"	5' 8-1/8"	47-3/4"	13' 11-3/4"
647B	459	40	103,800	24,400	32,830	21,480	690	94	5	900	570	12"	28,300	16' 0"	10' 4-1/8"	5' 8-1/8"	47-3/4"	13' 11-3/4"
642B	456	20	110,100	23,400	33,640	19,600	595	81	7-1/2	1,200	720	12"	27,730	15' 1-1/4"	8' 11-1/8"	6' 2-1/8"	30-3/4"	18' 0"
682B	484	25	118,400	23,450	33,690	19,650	595	81	7-1/2	1,200	720	12"	27,780	15' 1-1/4"	8' 11-1/8"	6' 2-1/8"	30-3/4"	18' 0"
713B	506	30	126,000	23,560	33,800	19,760	595	81	7-1/2	1,200	720	12"	27,890	15' 1-1/4"	8' 11-1/8"	6' 2-1/8"	30-3/4"	18' 0"
747B	531	25	114,900	26,700	37,220	22,900	740	101	7-1/2	1,200	720	12"	31,310	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	18' 0"
781B	554	30	122,100	26,810	37,330	23,010	740	101	7-1/2	1,200	720	12"	31,420	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	18' 0"
827B	587	40	132,600	27,070	37,590	23,270	740	101	7-1/2	1,200	720	12"	31,680	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	18' 0"
854B	606	40	128,400	30,410	41,200	26,610	885	121	7-1/2	1,200	720	12"	35,290	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	18' 0"
892B	633	50	136,700	30,470	41,260	26,670	885	121	7-1/2	1,200	720	12"	35,350	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	18' 0"
869B	617	40	143,200	29,870	41,660	25,570	820	112	10	1,400	800	14"	34,890	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	20' 0"
907B	644	50	152,400	29,930	41,720	25,630	820	112	10	1,400	800	14"	34,950	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	20' 0"
935B	664	50	147,600	34,040	46,140	29,740	985	134	10	1,400	800	14"	39,370	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	20' 0"
967B	687	60	155,300	34,150	46,250	29,850	985	134	10	1,400	800	14"	39,480	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	20' 0"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering Dimensions & Data *Models ATC 949B to 1925B*

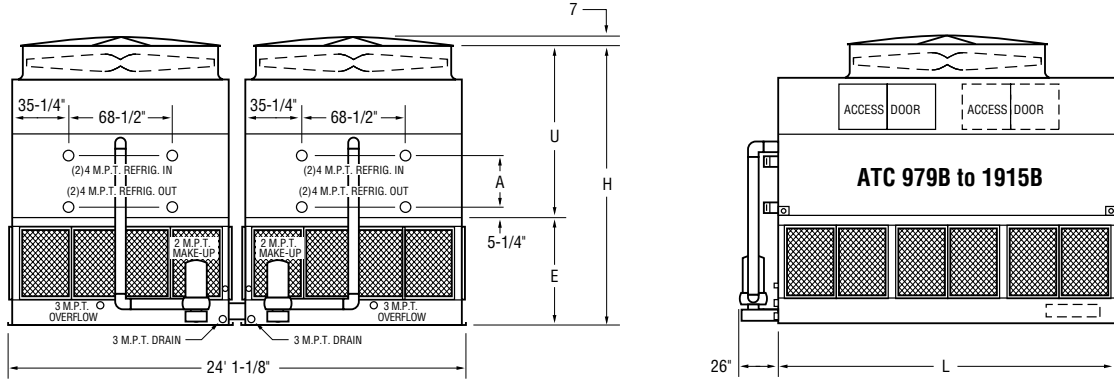


**Table 11 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump		Dimensions					
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
949B	674	(2)25	173,200	32,780	46,360	13,840	790	108	(2)5	1,600	980	(2)12"	38,540	15' 1-1/4"	8' 11-1/8"	6' 2-1/8"	30-3/4"	24' 2"
980B	695	(2)15	138,900	41,530	55,850	18,220	1,180	161	(2)5	1,600	980	(2)12"	48,030	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	24' 2"
1007B	714	(2)20	157,800	36,970	50,920	15,940	985	134	(2)5	1,600	980	(2)12"	43,100	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	24' 2"
1047B	743	(2)25	168,000	37,070	51,020	15,990	985	134	(2)5	1,600	980	(2)12"	43,200	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	24' 2"
1078B	765	(2)30	177,000	37,270	51,220	16,090	985	134	(2)5	1,600	980	(2)12"	43,400	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	24' 2"
1164B	826	(2)25	187,900	42,260	58,680	18,190	1,155	158	(2)5	1,800	1,140	(2)12"	49,620	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	28' 2"
1204B	854	(2)25	182,100	48,180	65,030	21,150	1,380	188	(2)5	1,800	1,140	(2)12"	55,970	17' 6-1/4"	10' 4-1/8"	7' 2-1/8"	47-3/4"	28' 2"
1284B	911	(2)20	220,100	47,060	67,530	19,600	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	55,710	16' 1-1/4"	8' 11-1/8"	7' 2-1/8"	30-3/4"	36' 2-1/2"
1365B	969	(2)25	236,700	47,160	67,630	19,650	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	55,810	16' 1-1/4"	8' 11-1/8"	7' 2-1/8"	30-3/4"	36' 2-1/2"
1426B	1012	(2)30	252,000	47,380	67,850	19,760	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	56,030	16' 1-1/4"	8' 11-1/8"	7' 2-1/8"	30-3/4"	36' 2-1/2"
1496B	1061	(2)25	229,800	53,660	74,690	22,900	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	62,870	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	36' 2-1/2"
1562B	1109	(2)30	244,200	53,880	74,910	23,010	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	63,090	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	36' 2-1/2"
1655B	1175	(2)40	265,100	54,400	75,430	23,270	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	63,610	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	36' 2-1/2"
1784B	1266	(2)50	273,400	61,200	82,780	26,670	1,770	241	(2)7-1/2	2,400	1,440	(2)12"	70,960	17' 6-1/4"	10' 4-1/8"	7' 2-1/8"	47-3/4"	36' 2-1/2"
1625B	1153	(2)30	262,100	59,440	83,020	25,310	1,645	224	(2)10	2,800	1,600	(2)14"	69,480	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	40' 2-1/2"
1729B	1227	(2)40	286,400	59,960	83,540	25,570	1,645	224	(2)10	2,800	1,600	(2)14"	70,000	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	40' 2-1/2"
1805B	1281	(2)50	304,800	60,080	83,660	25,630	1,645	224	(2)10	2,800	1,600	(2)14"	70,120	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	40' 2-1/2"
1925B	1367	(2)60	310,600	68,510	92,710	29,850	1,965	268	(2)10	2,800	1,600	(2)14"	79,170	17' 6-1/4"	10' 4-1/8"	7' 2-1/8"	47-3/4"	40' 2-1/2"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.

# Models ATC 979B to 1915B



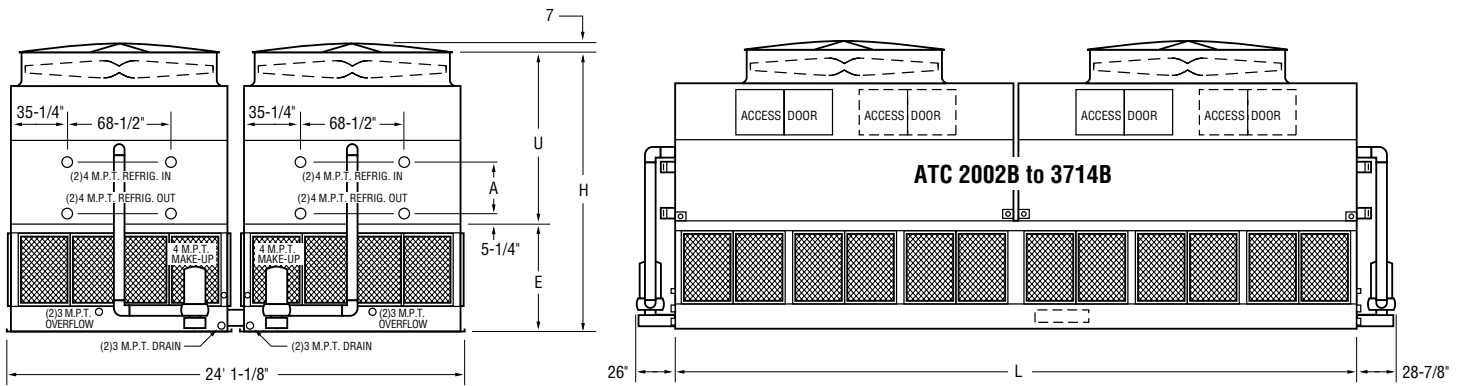
**Table 12 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
979B	695	(2)15	138,900	41,510	55,830	18,220	1,185	162	(2)5	1,600	980	(2)12"	48,010	16' 6-1/4"	10' 4-1/8"	6' 2-1/8"	47-3/4"	11' 11-3/4"
1006B	714	(2)20	157,800	36,950	50,900	15,940	995	135	(2)5	1,600	980	(2)12"	43,080	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	11' 11-3/4"
1046B	743	(2)25	168,000	37,050	51,000	15,990	995	135	(2)5	1,600	980	(2)12"	43,180	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	11' 11-3/4"
1077B	765	(2)30	177,000	37,250	51,200	16,090	995	135	(2)5	1,600	980	(2)12"	43,380	15' 9-3/4"	9' 7-5/8"	6' 2-1/8"	39-1/4"	11' 11-3/4"
1163B	826	(2)25	187,900	42,300	58,720	18,190	1,155	158	(2)5	1,800	1,140	(2)12"	49,660	16' 9-3/4"	9' 7-5/8"	7' 2-1/8"	39-1/4"	13' 11-3/4"
1203B	854	(2)25	182,100	48,220	65,070	21,150	1,380	188	(2)5	1,800	1,140	(2)12"	56,010	17' 6-1/4"	10' 4-1/8"	7' 2-1/8"	47-3/4"	13' 11-3/4"
1283B	911	(2)20	220,100	47,100	67,570	19,600	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	55,750	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	18' 0"
1364B	969	(2)25	236,700	47,200	67,670	19,650	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	55,850	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	18' 0"
1425B	1,012	(2)30	252,000	47,420	67,890	19,760	1,195	163	(2)7-1/2	2,400	1,440	(2)12"	56,070	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	18' 0"
1495B	1,061	(2)25	229,800	53,700	74,730	22,900	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	62,910	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	18' 0"
1561B	1,109	(2)30	244,200	53,920	74,950	23,010	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	63,130	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	18' 0"
1654B	1,175	(2)40	265,100	54,440	75,470	23,270	1,480	202	(2)7-1/2	2,400	1,440	(2)12"	63,650	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	18' 0"
1783B	1,266	(2)50	273,400	61,240	82,820	26,670	1,770	241	(2)7-1/2	2,400	1,440	(2)12"	71,000	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	18' 0"
1616B	1,148	(2)30	260,800	59,260	82,840	25,310	1,645	224	(2)10	2,800	1,600	(2)14"	69,300	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	20' 0"
1720B	1,221	(2)40	284,900	59,780	83,360	25,570	1,645	224	(2)10	2,800	1,600	(2)14"	69,820	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	20' 0"
1795B	1,275	(2)50	303,300	59,900	83,480	25,630	1,645	224	(2)10	2,800	1,600	(2)14"	69,940	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	20' 0"
1915B	1,360	(2)60	309,100	68,330	92,530	29,850	1,965	268	(2)10	2,800	1,600	(2)14"	78,990	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	20' 0"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering Dimensions & Data *Models ATC 2002B to 3714B*

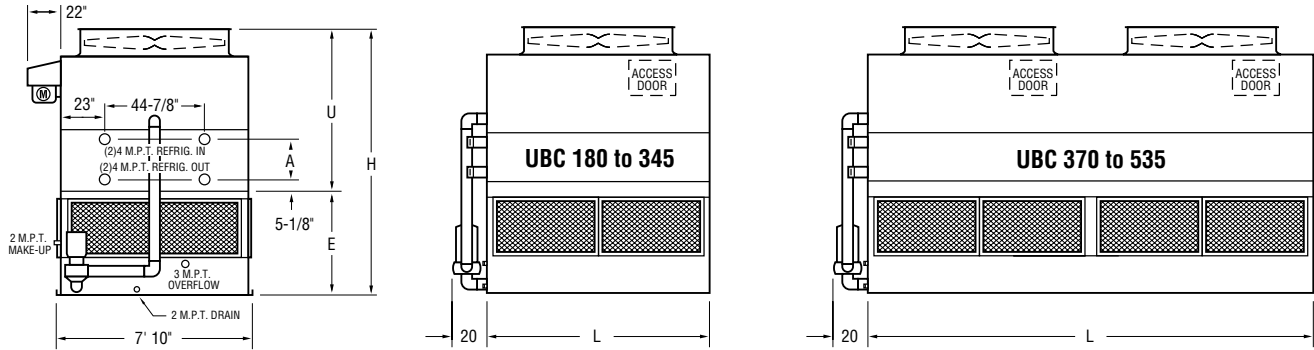


**Table 13 Engineering Data**

ATC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.**	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
2002B	1,421	(4)20	315,600	74,460	102,380	15,940	1,970	268	(4)5	3,200	1,960	(4)12"	86,480	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	24' 2"
2082B	1,478	(4)25	336,000	74,660	102,580	15,990	1,970	268	(4)5	3,200	1,960	(4)12"	86,680	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	24' 2"
2158B	1,532	(4)25	325,500	83,980	112,640	18,320	2,355	321	(4)5	3,200	1,960	(4)12"	96,740	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	24' 2"
2256B	1,602	(4)25	370,200	84,980	117,960	18,190	2,315	315	(4)5	3,600	2,280	(4)12"	99,560	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	28' 2"
2324B	1,650	(4)30	389,500	85,260	118,240	18,260	2,315	315	(4)5	3,600	2,280	(4)12"	99,840	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	28' 2"
2404B	1,707	(4)30	377,500	97,100	130,940	21,220	2,760	376	(4)5	3,600	2,280	(4)12"	112,540	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	28' 2"
2490B	1,768	(4)20	433,700	94,480	135,620	19,600	2,385	325	(4)7-1/2	4,800	2,880	(4)12"	111,680	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2647B	1,879	(4)25	466,400	94,680	135,820	19,650	2,385	325	(4)7-1/2	4,800	2,880	(4)12"	111,880	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2765B	1,963	(4)30	496,500	95,120	136,260	19,760	2,385	325	(4)7-1/2	4,800	2,880	(4)12"	112,320	17' 1-1/4"	8' 11-1/8"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2900B	2,059	(4)25	452,600	107,680	149,940	22,900	2,965	404	(4)7-1/2	4,800	2,880	(4)12"	126,000	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	36' 2-1/2"
3029B	2,151	(4)30	481,000	108,120	150,380	23,010	2,965	404	(4)7-1/2	4,800	2,880	(4)12"	126,440	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	36' 2-1/2"
3210B	2,279	(4)40	522,300	109,160	151,420	23,270	2,965	404	(4)7-1/2	4,800	2,880	(4)12"	127,480	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	36' 2-1/2"
3459B	2,456	(4)50	538,700	122,760	166,120	26,670	3,540	483	(4)7-1/2	4,800	2,880	(4)12"	142,180	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	36' 2-1/2"
3336B	2,368	(4)40	561,300	119,780	167,120	25,570	3,290	448	(4)10	5,600	3,200	(4)14"	139,740	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	40' 2-1/2"
3482B	2,472	(4)50	597,400	120,020	167,360	25,630	3,290	448	(4)10	5,600	3,200	(4)14"	139,980	17' 9-3/4"	9' 7-5/8"	8' 2-1/8"	39-1/4"	40' 2-1/2"
3591B	2,549	(4)50	578,400	136,440	185,020	29,740	3,930	536	(4)10	5,600	3,200	(4)14"	157,640	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	40' 2-1/2"
3714B	2,637	(4)60	608,900	136,880	185,460	29,850	3,930	536	(4)10	5,600	3,200	(4)14"	158,080	18' 6-1/4"	10' 4-1/8"	8' 2-1/8"	47-3/4"	40' 2-1/2"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.

## Models UBC 180 to 535



**Table 14 Engineering Data**

UBC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
180	128	10	40,500	7,380	10,300	5,760	150	20	2	405	250	8"	9,350	11' 1-3/4"	6' 10-1/16"	4' 3-11/16"	19-1/2"	8' 11-1/2"
200	142	7-1/2	36,500	8,480	11,490	6,860	195	27	2	405	250	8"	10,540	11' 9-1/4"	7' 5-9/16"	4' 3-11/16"	27"	8' 11-1/2"
210	149	10	38,500	8,510	11,520	6,890	195	27	2	405	250	8"	10,570	11' 9-1/4"	7' 5-9/16"	4' 3-11/16"	27"	8' 11-1/2"
230	163	10	37,100	9,720	12,830	8,100	240	33	2	405	250	8"	11,880	12' 4-3/4"	8' 1-1/16"	4' 3-11/16"	34-1/2"	8' 11-1/2"
260	184	10	46,500	11,300	15,380	8,840	260	35	3	545	340	10"	14,090	11' 9-1/4"	7' 5-9/16"	4' 3-11/16"	27"	11' 11-3/4"
285	202	15	52,500	11,350	15,430	8,890	260	35	3	545	340	10"	14,140	11' 9-1/4"	7' 5-9/16"	4' 3-11/16"	27"	11' 11-3/4"
320	227	15	51,000	12,850	17,060	10,390	320	43	3	545	340	10"	15,770	12' 4-3/4"	8' 1-1/16"	4' 3-11/16"	34-1/2"	11' 11-3/4"
345	245	20	52,900	14,400	18,550	11,940	380	52	3	545	340	10"	17,260	13' 1/4"	8' 8-9/16"	4' 3-11/16"	42"	11' 11-3/4"
370	262	(2)10	81,800	13,830	19,940	10,730	190	39	5	800	490	12"	18,060	11' 10-1/8"	6' 10-1/16"	5' 1/16"	19-1/2"	18' 0"
415	294	(2) 7-1/2	73,600	16,060	22,410	12,960	280	52	5	800	490	12"	20,530	12' 5-5/8"	7' 5-9/16"	5' 1/16"	27"	18' 0"
440	312	(2)10	78,000	16,120	22,470	13,020	280	52	5	800	490	12"	20,590	12' 5-5/8"	7' 5-9/16"	5' 1/16"	27"	18' 0"
485	344	(2)10	74,900	18,370	24,960	15,270	475	65	5	800	490	12"	23,080	13' 1-1/8"	8' 1-1/16"	5' 1/16"	34-1/2"	18' 0"
535	379	(2)15	80,900	20,600	27,440	17,500	565	77	5	800	490	12"	25,560	13' 8-5/8"	8' 8-9/16"	5' 1/16"	42"	18' 0"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

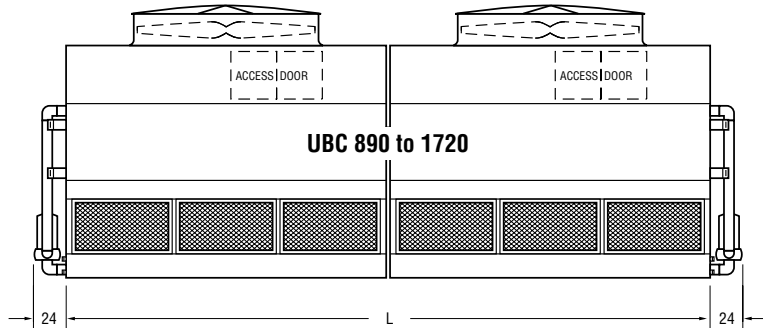
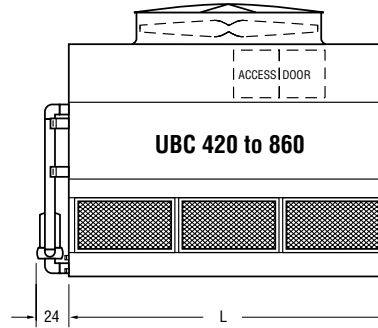
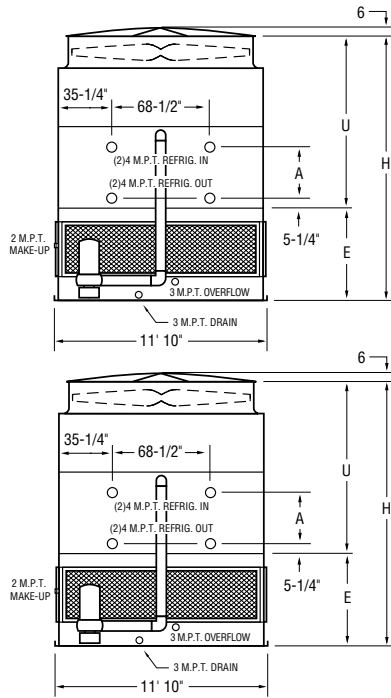
\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

† Heaviest section is the coil section.

\*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering Dimensions & Data *Models UBC 420 to 1720*



**Table 15 Engineering Data**

UBC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump		Dimensions					
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
420	298	15	75,400	16,740	22,710	13,810	400	55	5	800	500	12"	19,970	13' 11-1/8"	8' 11"	5' 1/8"	30-3/4"	11' 11-3/4"
460	326	25	84,200	16,860	22,830	13,930	400	55	5	800	500	12"	20,090	13' 11-1/8"	8' 11"	5' 1/8"	30-3/4"	11' 11-3/4"
490	348	20	79,700	18,980	25,140	16,050	495	68	5	800	500	12"	22,400	14' 7-5/8"	9' 7-1/2"	5' 1/8"	39-1/4"	11' 11-3/4"
505	358	25	82,000	19,060	25,220	16,130	495	68	5	800	500	12"	22,480	14' 7-5/8"	9' 7-1/2"	5' 1/8"	39-1/4"	11' 11-3/4"
520	369	25	80,000	21,300	27,650	18,370	590	81	5	800	500	12"	24,910	15' 4-1/8"	10' 4"	5' 1/8"	47-3/4"	11' 11-3/4"
540	383	30	82,700	21,420	27,770	18,490	590	81	5	800	500	12"	25,030	15' 4-1/8"	10' 4"	5' 1/8"	47-3/4"	11' 11-3/4"
560	397	25	122,000	21,130	29,720	16,460	450	62	7-1/2	1,200	720	12"	25,600	14' 2-5/8"	8' 2-1/2"	6' 1/8"	22-1/4"	18' 0"
580	411	30	128,900	21,250	29,840	16,580	450	62	7-1/2	1,200	720	12"	25,720	14' 2-5/8"	8' 2-1/2"	6' 1/8"	22-1/4"	18' 0"
630	447	20	115,600	24,550	33,440	19,880	595	81	7-1/2	1,200	720	12"	29,320	14' 11-1/8"	8' 11"	6' 1/8"	30-3/4"	18' 0"
670	475	25	120,900	24,630	33,520	19,960	595	81	7-1/2	1,200	720	12"	29,400	14' 11-1/8"	8' 11"	6' 1/8"	30-3/4"	18' 0"
700	496	30	124,600	24,750	33,640	20,080	595	81	7-1/2	1,200	720	12"	29,520	14' 11-1/8"	8' 11"	6' 1/8"	30-3/4"	18' 0"
730	518	25	115,000	27,960	37,220	23,350	740	101	7-1/2	1,200	720	12"	33,100	15' 7-5/8"	9' 7-1/2"	6' 1/8"	39-1/4"	18' 0"
765	543	30	120,900	28,080	37,340	23,470	740	101	7-1/2	1,200	720	12"	33,220	15' 7-5/8"	9' 7-1/2"	6' 1/8"	39-1/4"	18' 0"
800	567	40	129,000	28,360	37,620	23,750	740	101	7-1/2	1,200	720	12"	33,500	15' 7-5/8"	9' 7-1/2"	6' 1/8"	39-1/4"	18' 0"
830	589	40	125,100	31,750	41,370	27,140	885	121	7-1/2	1,200	720	12"	37,250	16' 4-1/8"	10' 4"	6' 1/8"	47-3/4"	18' 0"
860	610	50	131,400	32,050	41,670	27,440	885	121	7 1/2	1,200	720	12"	37,550	16' 4-1/8"	10' 4"	6' 1/8"	47-3/4"	18' 0"
890	631	(2)20	165,200	33,480	45,420	13,010	805	109	(2)5	1,600	1,000	(2)12"	39,940	14' 11-1/8"	8' 11"	6' 1/8"	30-3/4"	24' 2"
920	652	(2)15	146,200	37,800	50,120	14,960	990	135	(2)5	1,600	1,000	(2)12"	44,640	15' 7-5/8"	9' 7-1/2"	6' 1/8"	39-1/4"	24' 2"
1010	716	(2)25	165,000	38,040	50,360	15,080	990	135	(2)5	1,600	1,000	(2)12"	44,880	15' 7-5/8"	9' 7-1/2"	6' 1/8"	39-1/4"	24' 2"
1075	762	(2)30	165,400	42,750	55,460	17,220	1,185	161	(2)5	1,600	1,000	(2)12"	49,980	16' 4-1/8"	10' 4"	6' 1/8"	47-3/4"	24' 2"
1110	787	(2)25	244,000	42,350	59,540	15,500	905	123	(2) 7-1/2	2,400	1,440	(2)12"	51,300	15' 2-5/8"	8' 2-1/2"	7' 1/8"	22-1/4"	36' 2-1/2"
1265	897	(2)20	234,800	49,200	66,980	18,610	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	58,740	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	36' 2-1/2"
1335	947	(2)25	241,300	49,360	67,140	18,690	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	58,900	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	36' 2-1/2"
1395	989	(2)30	249,300	49,600	67,380	18,810	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	59,140	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	36' 2-1/2"
1460	1035	(2)25	230,500	56,020	74,530	21,760	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	66,290	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	36' 2-1/2"
1530	1085	(2)30	241,800	56,260	74,770	21,880	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	66,530	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	36' 2-1/2"
1605	1138	(2)40	257,000	56,820	75,330	22,160	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	67,090	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	36' 2-1/2"
1655	1174	(2)40	250,100	63,600	82,840	25,230	1,770	241	(2) 7-1/2	2,400	1,440	(2)12"	74,600	17' 4-1/8"	10' 4"	7' 1/8"	47-3/4"	36' 2-1/2"
1720	1220	(2)50	262,700	64,200	83,440	25,530	1,770	241	(2) 7-1/2	2,400	1,440	(2)12"	75,200	17' 4-1/8"	10' 4"	7' 1/8"	47-3/4"	36' 2-1/2"

\* Tons at standard conditions: HFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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.)

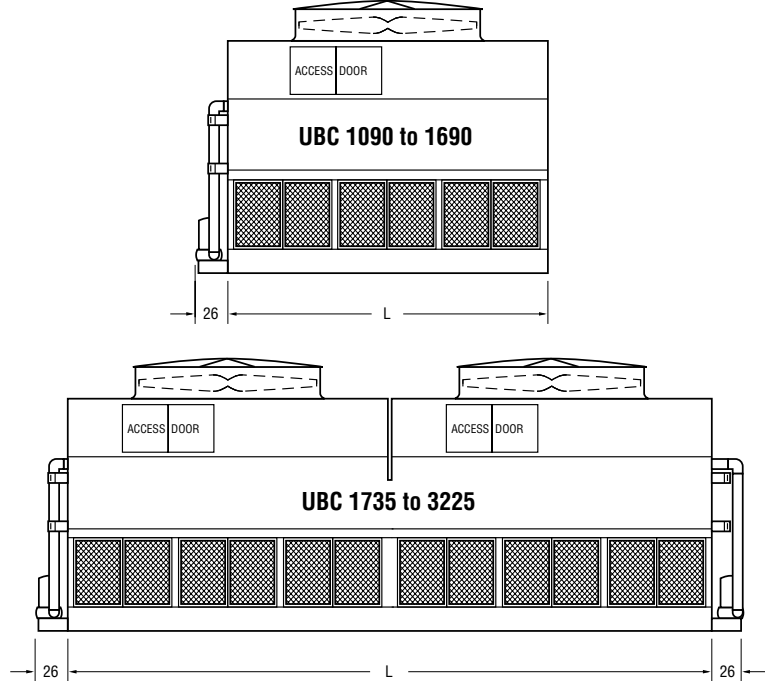
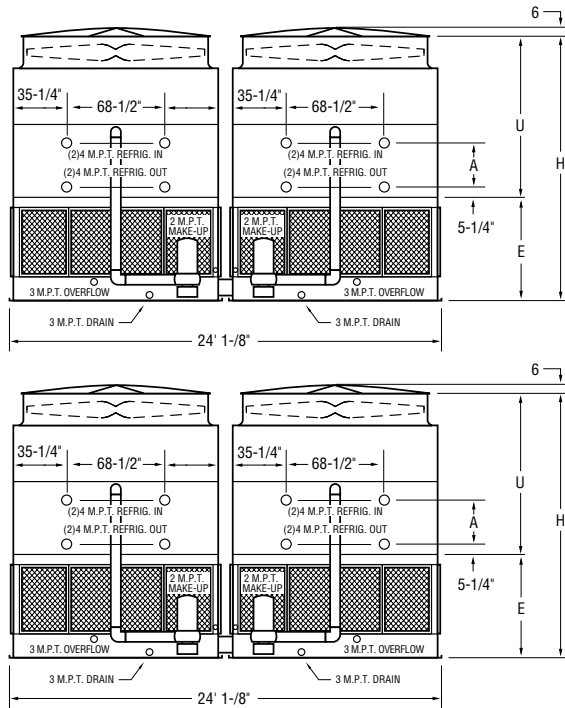
† Heaviest section is the coil section.

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

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



# Models UBC 1090 to 3225



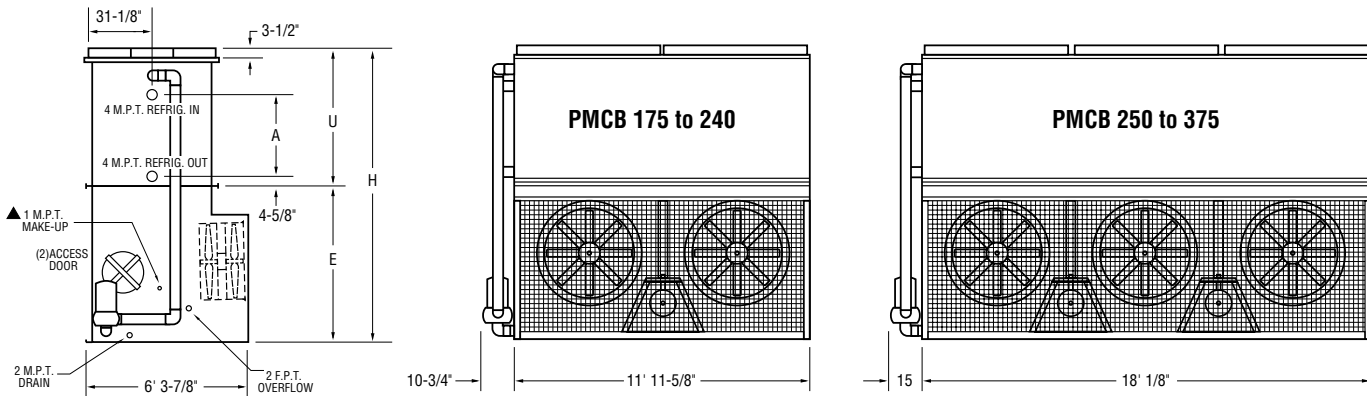
**Table 16 Engineering Data**

UBC Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
1090	773	(2)25	243,000	42,310	59,500	15,500	905	123	(2) 7-1/2	2,400	1,440	(2)12"	51,260	15' 2-5/8"	8' 2-1/2"	7' 1/8"	22-1/4"	18' 0"
1240	879	(2)20	231,900	49,160	66,940	18,610	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	58,700	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	18' 0"
1310	929	(2)25	239,000	49,320	67,100	18,690	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	58,860	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	18' 0"
1370	972	(2)30	248,300	49,560	67,340	18,810	1,190	163	(2) 7-1/2	2,400	1,440	(2)12"	59,100	15' 11-1/8"	8' 11"	7' 1/8"	30-3/4"	18' 0"
1435	1018	(2)25	230,000	55,980	74,490	21,760	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	66,250	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	18' 0"
1500	1064	(2)30	239,600	56,220	74,730	21,880	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	66,490	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	18' 0"
1575	1117	(2)40	256,700	56,780	75,290	22,160	1,485	202	(2) 7-1/2	2,400	1,440	(2)12"	67,050	16' 7-5/8"	9' 7-1/2"	7' 1/8"	39-1/4"	18' 0"
1625	1152	(2)40	249,500	63,560	82,800	25,230	1,770	241	(2) 7-1/2	2,400	1,440	(2)12"	74,560	17' 4-1/8"	10' 4"	7' 1/8"	47-3/4"	18' 0"
1690	1199	(2)50	260,000	64,160	83,400	25,530	1,770	241	(2) 7-1/2	2,400	1,440	(2)12"	75,160	17' 4-1/8"	10' 4"	7' 1/8"	47-3/4"	18' 0"
1735	1230	(4)20	322,300	67,050	90,940	11,320	1,610	219	(4)5	3,200	2,000	(4)12"	79,980	17' 1-1/8"	8' 11"	8' 2-1/8"	30-3/4"	24' 2"
1800	1277	(4)15	290,800	75,690	100,340	12,850	1,985	271	(4)5	3,200	2,000	(4)12"	89,380	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	24' 2"
1915	1358	(4)20	312,700	75,850	100,500	12,890	1,985	271	(4)5	3,200	2,000	(4)12"	89,540	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	24' 2"
1980	1404	(4)25	328,900	76,170	100,820	12,970	1,985	271	(4)5	3,200	2,000	(4)12"	89,860	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	24' 2"
2100	1489	(4)30	329,000	85,600	111,010	14,690	2,370	323	(4)5	3,200	2,000	(4)12"	100,050	18' 6-1/8"	10' 4"	8' 2-1/8"	47-3/4"	24' 2"
2370	1681	(4)20	445,600	98,230	133,790	16,060	2,385	325	(4) 7-1/2	4,800	2,880	(4)12"	117,310	17' 1-1/8"	8' 11"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2500	1773	(4)25	457,500	98,550	134,110	16,140	2,385	325	(4) 7-1/2	4,800	2,880	(4)12"	117,630	17' 1-1/8"	8' 11"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2615	1855	(4)30	473,000	99,030	134,590	16,260	2,385	325	(4) 7-1/2	4,800	2,880	(4)12"	118,110	17' 1-1/8"	8' 11"	8' 2-1/8"	30-3/4"	36' 2-1/2"
2740	1943	(4)25	435,700	111,880	148,900	18,580	2,970	404	(4) 7-1/2	4,800	2,880	(4)12"	132,420	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	36' 2-1/2"
2860	2028	(4)30	454,900	112,360	149,380	18,700	2,970	404	(4) 7-1/2	4,800	2,880	(4)12"	132,900	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	36' 2-1/2"
3010	2135	(4)40	484,600	113,480	150,500	18,980	2,970	404	(4) 7-1/2	4,800	2,880	(4)12"	134,020	17' 9-5/8"	9' 7-1/2"	8' 2-1/8"	39-1/4"	36' 2-1/2"
3225	2287	(4)50	490,600	128,250	166,720	21,720	3,545	483	(4) 7-1/2	4,800	2,880	(4)12"	150,240	18' 6-1/8"	10' 4"	8' 2-1/8"	47-3/4"	36' 2-1/2"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.



# Engineering Dimensions & Data *Axial Fan Models PMCB 175 to 375*



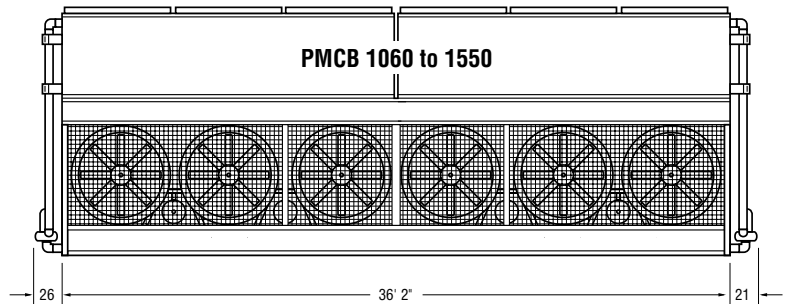
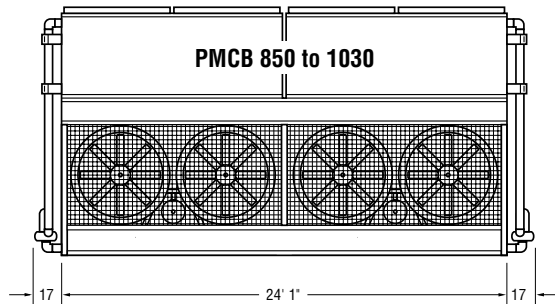
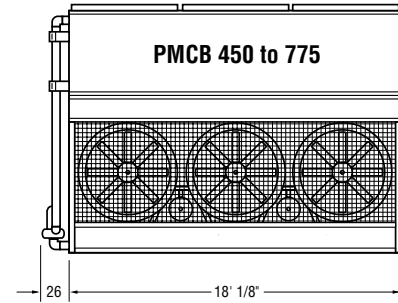
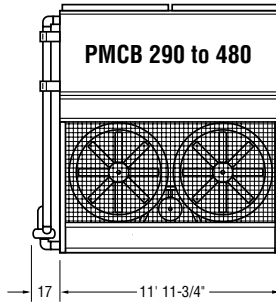
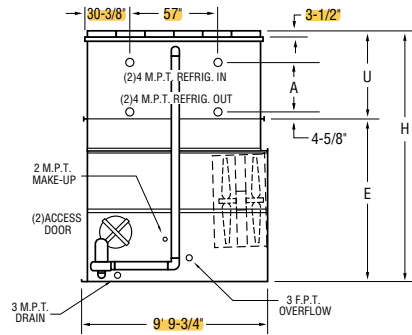
▲ NOTE:  
 Make-Up 1" M.P.T. on PMCB 175 to 240  
 Make-Up 1-1/2" M.P.T. on PMCB 250 to 375

**Table 17 Engineering Data**

PCMB Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions			
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A
175	124	7-1/2	31,300	7,490	9,640	5,110	165	22	2	345	240	8"	9,140	10' 9-1/4"	4' 8-1/8"	6' 1-1/8"	30-3/4"
190	135	10	34,000	7,620	9,770	5,110	165	22	2	345	240	8"	9,270	10' 9-1/4"	4' 8-1/8"	6' 1-1/8"	30-3/4"
210	149	10	33,500	8,640	10,820	6,130	200	28	2	345	240	8"	10,320	11' 5-3/4"	5' 4-5/8"	6' 1-1/8"	39-1/4"
220	156	10	33,000	9,570	11,760	7,160	240	33	2	345	240	8"	11,260	12' 2-1/4"	6' 1-1/8"	6' 1-1/8"	47-3/4"
235	167	15	36,600	8,770	10,950	6,130	200	28	2	345	240	8"	10,450	11' 5-3/4"	5' 4-5/8"	6' 1-1/8"	39-1/4"
240	170	15	35,500	9,700	11,890	7,160	240	33	2	345	240	8"	11,390	12' 2-1/4"	6' 1-1/8"	6' 1-1/8"	47-3/4"
250	177	10 & 5	54,000	10,070	12,780	6,280	185	25	3	515	350	10"	12,030	10' 3/4"	3' 11-5/8"	6' 1-1/8"	22-1/4"
275	195	7-1/2 & 5	48,500	11,490	14,240	7,790	240	33	3	515	350	10"	13,490	10' 9-1/4"	4' 8-1/8"	6' 1-1/8"	30-3/4"
295	209	10 & 5	51,900	11,580	14,330	7,790	240	33	3	515	350	10"	13,580	10' 9-1/4"	4' 8-1/8"	6' 1-1/8"	30-3/4"
325	230	10 & 5	50,900	13,150	15,950	9,310	300	41	3	515	350	10"	15,200	11' 5-3/4"	5' 4-5/8"	6' 1-1/8"	39-1/4"
335	238	10 & 5	50,300	14,570	17,420	10,840	360	49	3	515	350	10"	16,670	12' 2-1/4"	6' 1-1/8"	6' 1-1/8"	47-3/4"
360	255	15 & 7-1/2	57,000	13,360	16,160	9,310	300	41	3	515	350	10"	15,410	11' 5-3/4"	5' 4-5/8"	6' 1-1/8"	39-1/4"
375	266	15 & 7-1/2	56,300	14,780	17,630	10,840	360	49	3	515	350	10"	16,880	12' 2-1/4"	6' 1-1/8"	6' 1-1/8"	47-3/4"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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 coil section.  
 \*\*\* Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.  
 Dimensions are subject to change. Do not use for pre-fabrication.

## Axial Fan Models PMCB 290 to 1550



**Table 18 Engineering Data**

PMCB Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions			
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A
290	206	10	62,300	12,330	17,800	7,990	250	34	5	685	420	10"	16,500	12' 6-1/4"	3' 11-3/4"	8' 6-1/2"	22-1/4"
330	234	7-1/2	56,500	14,170	19,770	10,020	325	44	5	685	420	10"	18,470	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
350	248	10	61,600	14,260	19,860	10,020	325	44	5	685	420	10"	18,560	13' 11-1/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
385	273	10	60,400	16,190	21,960	12,040	405	55	5	685	420	10"	20,660	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
390	277	15	67,800	14,410	20,010	10,020	325	44	5	685	420	10"	18,710	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
415	294	20	74,000	14,530	20,130	10,020	325	44	5	685	420	10"	18,830	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
425	301	15	66,100	16,340	22,110	12,040	405	55	5	685	420	10"	20,810	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
455	323	20	72,500	16,460	22,230	12,040	405	55	5	685	420	10"	20,930	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
480	340	25	76,500	16,600	22,370	12,040	405	55	5	685	420	10"	21,070	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
450	319	10 & 5	96,500	18,210	26,080	11,560	370	50	7-1/2	1,030	620	12"	24,130	12' 6 1/4"	3' 11-3/4"	8' 6-1/2"	22-1/4"
585	415	10 & 5	92,500	24,210	32,590	17,320	600	82	7-1/2	1,030	620	12"	30,640	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
630	447	20 & 10	112,700	21,620	29,750	14,410	485	66	7-1/2	1,030	620	12"	27,800	13' 11-1/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
645	457	15 & 7-1/2	102,000	24,400	32,780	17,320	600	82	7-1/2	1,030	620	12"	30,830	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
690	489	20 & 10	109,300	24,550	32,930	17,320	600	82	7-1/2	1,030	620	12"	30,980	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
725	514	25 & 15	114,800	25,090	33,470	17,320	600	82	7-1/2	1,030	620	12"	31,520	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
755	535	25 & 15	114,000	27,760	36,400	20,240	720	98	7-1/2	1,030	620	12"	34,450	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
775	550	30 & 15	117,000	28,300	36,940	20,240	720	98	7-1/2	1,030	620	12"	34,990	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
850	603	(2)15	132,200	32,220	43,840	11,140	810	110	(2)5	1,370	850	12"	41,240	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
910	645	(2)20	145,000	32,460	44,080	11,140	810	110	(2)5	1,370	850	12"	41,480	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
950	674	(2)20	142,400	36,320	48,190	12,990	960	131	(2)5	1,370	850	12"	45,590	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
960	681	(2)25	153,000	32,740	44,360	11,140	810	110	(2)5	1,370	850	12"	41,760	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
1000	709	(2)25	150,000	36,600	48,470	12,990	960	131	(2)5	1,370	850	12"	45,870	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
1030	730	(2)30	154,200	36,920	48,790	12,990	960	131	(2)5	1,370	850	12"	46,190	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
1060	752	(2)10 & (2)5	185,700	42,080	58,700	13,320	970	132	(2)7-1/2	2,060	1,620	14"	54,800	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
1175	833	(2)15 & (2) 7-1/2	209,000	42,460	59,080	13,320	970	132	(2)7-1/2	2,060	1,620	14"	55,180	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
1260	894	(2)20 & (2)10	225,400	42,780	59,400	13,320	970	132	(2)7-1/2	2,060	1,620	14"	55,500	13' 2-3/4"	4' 8-1/8"	8' 6-1/2"	30-3/4"
1380	979	(2)20 & (2)10	218,600	48,640	65,830	15,960	1,205	164	(2)7-1/2	2,060	1,620	14"	61,930	13' 11-1/4"	5' 4-3/4"	8' 6-1/2"	39-1/4"
1510	1071	(2)25 & (2)15	228,000	55,050	72,800	18,600	1,435	196	(2)7-1/2	2,060	1,620	14"	68,900	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"
1550	1100	(2)30 & (2)15	234,000	56,130	73,880	18,600	1,435	196	(2)7-1/2	2,060	1,620	14"	69,980	14' 7-3/4"	6' 1-1/4"	8' 6-1/2"	47-3/4"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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.)

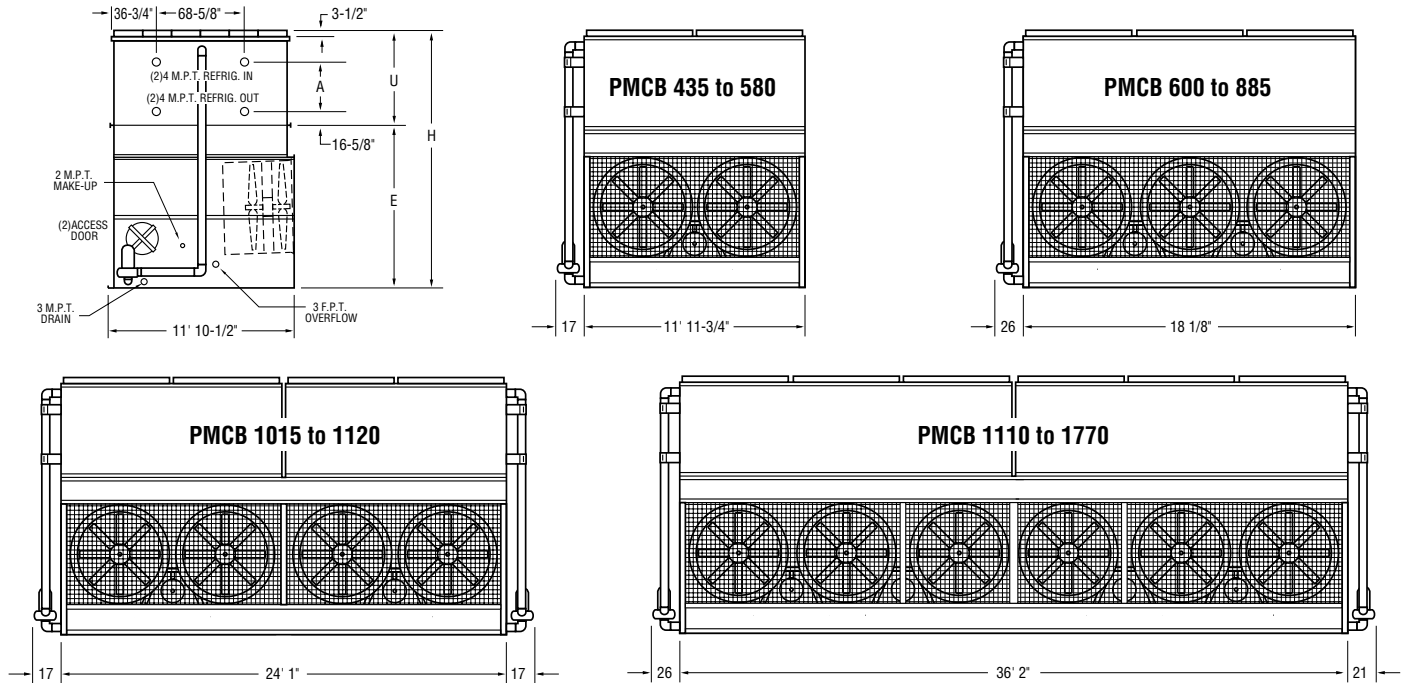
† Heaviest section is the coil section.

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

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



# Engineering Dimensions & Data *Axial Fan Models PMCB 435 to 1770*



**Table 19 Engineering Data**

PMCB Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump		Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A
435	309	15	74,100	17,160	23,270	12,310	395	54	5	800	500	10"	20,270	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
475	337	15	73,900	19,600	25,900	14,740	490	67	5	800	500	10"	22,900	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
495	351	25	87,200	17,420	23,530	12,310	395	54	5	800	500	10"	20,530	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
510	362	30	89,900	17,580	23,690	12,310	395	54	5	800	500	10"	20,690	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
535	379	25	85,000	19,860	26,160	14,740	490	67	5	800	500	10"	23,160	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
540	383	20	79,400	22,070	28,530	17,180	580	79	5	800	500	10"	25,530	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
560	397	25	84,000	22,210	28,670	17,180	580	79	5	800	500	10"	25,670	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
580	411	30	86,900	22,370	28,830	17,180	580	79	5	800	500	10"	25,830	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
600	426	20 & 10	129,000	21,750	30,230	14,230	445	61	7-1/2	1,200	730	12"	25,730	13' 6-1/4"	4' 11-3/4"	8' 6-1/2"	22-1/4"
660	468	15 & 7-1/2	118,000	25,280	34,150	17,650	580	80	7-1/2	1,200	730	12"	29,650	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
705	500	20 & 10	125,500	25,440	34,310	17,650	580	80	7-1/2	1,200	730	12"	29,810	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
770	546	20 & 10	121,900	29,120	38,360	21,150	730	99	7-1/2	1,200	730	12"	33,860	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
805	571	20 & 10	120,800	32,440	42,070	24,650	870	119	7-1/2	1,200	730	12"	37,570	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
815	578	25 & 15	128,800	29,660	38,900	21,150	730	99	7-1/2	1,200	730	12"	34,400	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
855	606	30 & 15	135,000	29,820	39,060	21,150	730	99	7-1/2	1,200	730	12"	34,560	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
885	628	30 & 15	132,800	33,520	43,150	24,650	870	119	7-1/2	1,200	730	12"	38,650	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
1015	720	(2)20	160,000	38,860	51,730	13,660	975	133	(2)5	1,600	1,000	14"	45,730	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
1080	766	(2)20	158,800	43,560	56,770	15,890	1,165	159	(2)5	1,600	1,000	14"	50,770	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
1120	794	(2)25	168,000	43,840	57,050	15,890	1,165	159	(2)5	1,600	1,000	14"	51,050	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"
1110	787	(2)15 & (2) 7-1/2	238,000	42,640	59,880	13,270	890	121	(2)7-1/2	2,400	1,460	16"	50,880	13' 6-1/4"	4' 11-3/4"	8' 6-1/2"	22-1/4"
1320	936	(2)15 & (2) 7-1/2	236,000	50,010	68,020	16,380	1,170	160	(2)7-1/2	2,400	1,460	16"	59,020	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
1410	1000	(2)20 & (2)10	251,000	50,330	68,340	16,380	1,170	160	(2)7-1/2	2,400	1,460	16"	59,340	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
1485	1053	(2)25 & (2)15	264,000	51,410	69,420	16,380	1,170	160	(2)7-1/2	2,400	1,460	16"	60,420	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
1540	1092	(2)30 & (2)15	274,000	51,730	69,740	16,380	1,170	160	(2)7-1/2	2,400	1,460	16"	60,740	14' 2-3/4"	5' 8-1/4"	8' 6-1/2"	30-3/4"
1630	1156	(2)25 & (2)15	257,600	58,770	77,520	19,560	1,455	199	(2)7-1/2	2,400	1,460	16"	68,520	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
1710	1213	(2)30 & (2)15	270,000	59,090	77,840	19,560	1,455	199	(2)7-1/2	2,400	1,460	16"	68,840	14' 11-1/4"	6' 4-3/4"	8' 6-1/2"	39-1/4"
1770	1255	(2)30 & (2)15	265,600	66,500	86,030	22,750	1,740	237	(2)7-1/2	2,400	1,460	16"	77,030	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	47-3/4"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

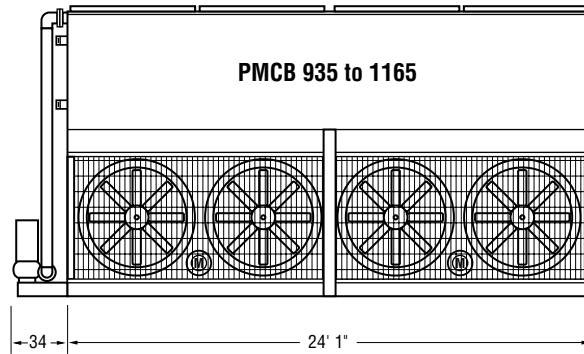
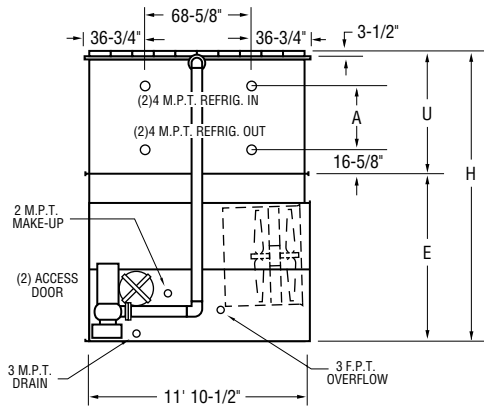
\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

† Heaviest section is the coil section.

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

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

## Axial Fan Models PMCB 935 to 1165



**Table 20 Engineering Data**

PMCB Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.***	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions			
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A
935	663	(2)20	162,800	32,960	46,670	23,550	780	106	10	1,600	1,000	14"	41,050	14' 9-3/4"	6' 3-1/4"	8' 6-1/2"	38-3/4"
985	699	(2)25	174,400	33,240	46,950	23,550	780	106	10	1,600	1,000	14"	41,330	14' 9-3/4"	6' 3-1/4"	8' 6-1/2"	38-3/4"
1018	722	(2)20	160,800	37,130	51,060	27,720	970	132	10	1,600	1,000	14"	45,520	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	48-3/4"
1075	762	(2)25	170,000	37,410	51,340	27,720	970	132	10	1,600	1,000	14"	45,800	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	48-3/4"
1105	784	(2)30	176,600	37,730	51,660	27,720	970	132	10	1,600	1,000	14"	46,120	15' 7-3/4"	7' 1-1/4"	8' 6-1/2"	48-3/4"
1165	826	(2)30	173,800	41,910	56,050	31,900	1,160	158	10	1,600	1,000	14"	50,600	16' 5-3/4"	7' 11-1/4"	8' 6-1/2"	58-3/4"

**These units are available for ammonia applications only.**

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 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.)

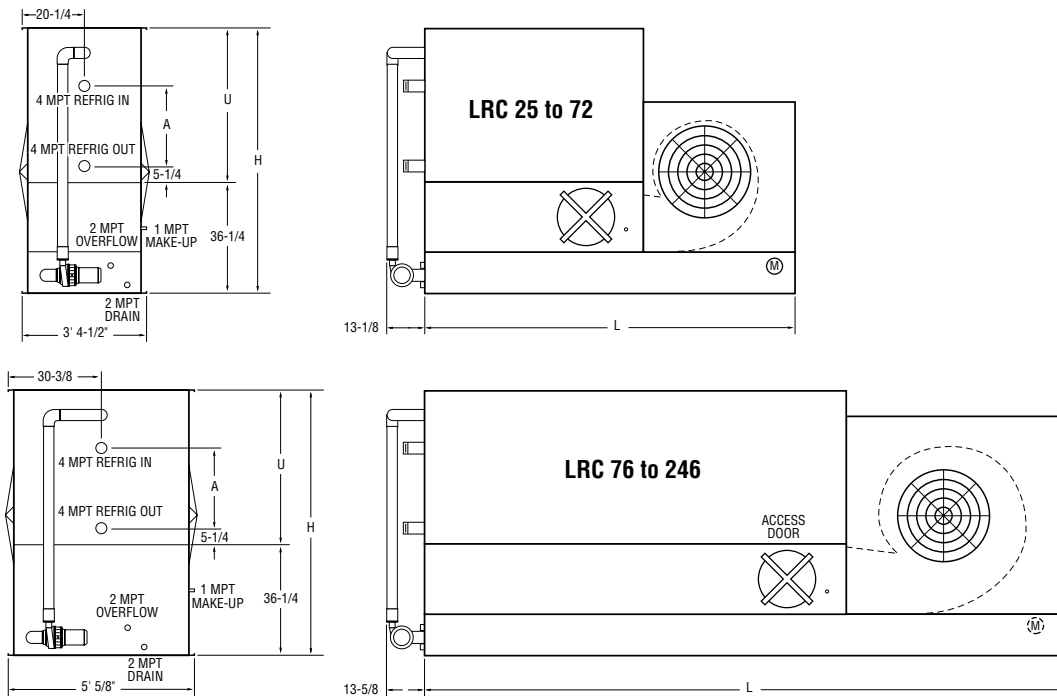
† Heaviest section is the coil section.

\*\*\* Refrigerant charge is shown for R-717.

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



# Engineering Dimensions & Data *Models LRC 25 to 246*



**Table 21 Engineering Data**

LRC Model No.*	R-717 Tons*	Fans		Weights		Refrigerant Charge lbs.†	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions			
		HP**	CFM	Shipping	Operating			HP	GPM	Gallons Req'd***	Conn. Size	Operating Weight	Height H	Upper U	Coil A	Length L
25	18	1	6,630	2,270	3,280	30	4	1/2	100	80	4"	2,430	6' 7-3/4"	43-1/2"	12"	10' 1-7/8"
27	19	1-1/2	7,580	2,270	3,290	30	4	1/2	100	80	4"	2,430	6' 7-3/4"	43-1/2"	12"	10' 1-7/8"
29	21	2	8,340	2,270	3,290	30	4	1/2	100	80	4"	2,430	6' 7-3/4"	43-1/2"	12"	10' 1-7/8"
35	25	1-1/2	7,420	2,580	3,610	40	6	1/2	100	80	4"	2,760	6' 7-3/4"	43-1/2"	19-1/2"	10' 1-7/8"
38	27	2	8,180	2,580	3,610	40	6	1/2	100	80	4"	2,760	6' 7-3/4"	43-1/2"	19-1/2"	10' 1-7/8"
42	30	3	9,370	2,590	3,630	40	6	1/2	100	80	4"	2,770	6' 7-3/4"	43-1/2"	19-1/2"	10' 1-7/8"
48	34	5	11,110	2,600	3,640	40	6	1/2	100	80	4"	2,780	6' 7-3/4"	43-1/2"	19-1/2"	10' 1-7/8"
51	36	3	9,180	2,920	3,980	55	7	1/2	100	80	4"	3,120	7' 3-1/4"	51"	27"	10' 1-7/8"
58	41	5	10,890	2,930	3,990	55	7	1/2	100	80	4"	3,130	7' 3-1/4"	51"	27"	10' 1-7/8"
65	46	5	10,680	3,290	4,360	65	9	1/2	100	80	4"	3,500	7' 10-3/4"	58-1/2"	34-1/2"	10' 1-7/8"
72	51	7-1/2	12,220	3,330	4,400	65	9	1/2	100	80	4"	3,540	7' 10-3/4"	58-1/2"	34-1/2"	10' 1-7/8"
76	54	5	16,030	3,900	5,730	65	9	1	160	120	6"	4,250	6' 7-3/4"	43-1/2"	19-1/2"	12' 2-7/8"
84	60	7-1/2	18,370	3,940	5,770	65	9	1	160	120	6"	4,290	6' 7-3/4"	43-1/2"	19-1/2"	12' 2-7/8"
91	65	5	15,730	4,390	6,250	85	11	1	160	120	6"	4,770	7' 3-1/4"	51"	27"	12' 2-7/8"
101	72	7-1/2	18,010	4,480	6,330	85	11	1	160	120	6"	4,850	7' 3-1/4"	51"	27"	12' 2-7/8"
114	81	7-1/2	17,650	4,980	6,860	105	14	1	160	120	6"	5,380	7' 10-3/4"	58-1/2"	34-1/2"	12' 2-7/8"
108	77	7-1/2	22,450	5,040	7,790	95	13	1-1/2	255	170	6"	5,630	6' 7-3/4"	43-1/2"	19-1/2"	15' 2-1/4"
116	82	10	24,690	5,080	7,820	95	13	1-1/2	255	170	6"	5,660	6' 7-3/4"	43-1/2"	19-1/2"	15' 2-1/4"
128	91	15	28,280	5,190	7,930	95	13	1-1/2	255	170	6"	5,770	6' 7-3/4"	43-1/2"	19-1/2"	15' 2-1/4"
131	93	7-1/2	22,000	5,790	8,580	125	17	1-1/2	255	170	6"	6,420	7' 3-1/4"	51"	27"	15' 2-1/4"
140	99	10	24,240	5,830	8,620	125	17	1-1/2	255	170	6"	6,460	7' 3-1/4"	51"	27"	15' 2-1/4"
155	110	15	27,740	5,940	8,730	125	17	1-1/2	255	170	6"	6,570	7' 3-1/4"	51"	27"	15' 2-1/4"
174	123	15	27,160	6,740	9,570	150	21	1-1/2	255	170	6"	7,410	7' 10-3/4"	58-1/2"	34-1/2"	15' 2-1/4"
183	130	15	26,620	7,410	10,290	180	25	1-1/2	255	170	6"	8,130	8' 6-1/4"	66"	42"	15' 2-1/4"
190	135	20	34,220	7,260	11,070	165	22	2	345	240	8"	8,210	7' 4-1/4"	52"	27"	18' 2-5/8"
201	143	25	36,860	7,270	11,080	165	22	2	345	240	8"	8,220	7' 4-1/4"	52"	27"	18' 2-5/8"
213	151	20	33,500	8,250	12,120	200	28	2	345	240	8"	9,260	7' 11-3/4"	59-1/2"	34-1/2"	18' 2-5/8"
225	160	25	36,080	8,260	12,130	200	28	2	345	240	8"	9,270	7' 11-3/4"	59-1/2"	34-1/2"	18' 2-5/8"
233	165	30	38,360	8,280	12,150	200	28	2	345	240	8"	9,290	7' 11-3/4"	59-1/2"	34-1/2"	18' 2-5/8"
246	174	30	37,580	9,210	13,120	240	33	2	345	240	8"	10,270	8' 7-1/4"	67"	42"	18' 2-5/8"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

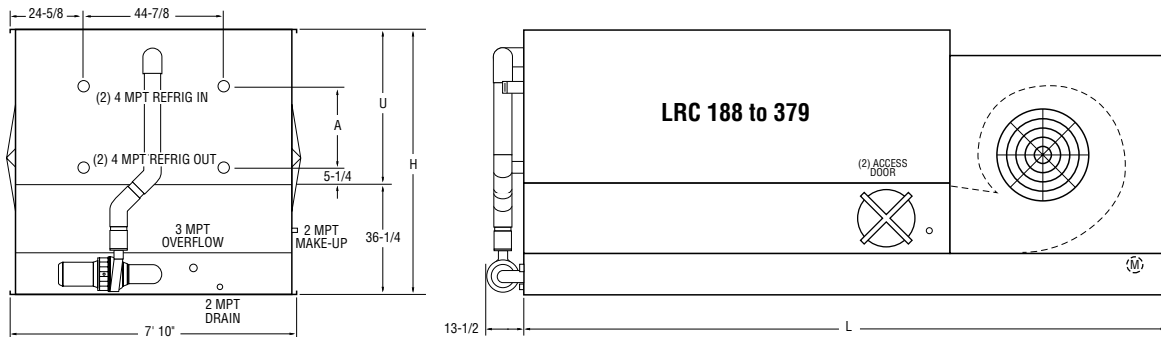
\*\* For dry operation or for external static pressure up to 1/2" use next larger size fan motor.

\*\*\* 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.)

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

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

# Models LRC 188 to 379



**Table 22 Engineering Data**

LRC Model No.*	R-717 Tons*	Fans		Weights		Refrigerant Charge lbs.†	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions			
		HP**	CFM	Shipping	Operating			HP	GPM	Gallons Req'd***	Conn. Size	Operating Weight	Height H	Upper U	Coil A	Length L
188	133	20	41,820	7,820	12,360	150	18	2	405	250	8"	8,900	6' 11-1/2"	47-1/4"	19-1/2"	15' 2-1/4"
211	150	15	37,210	8,940	13,540	195	24	2	405	250	8"	10,090	7' 7"	54-3/4"	27"	15' 2-1/4"
227	161	20	40,970	8,950	13,560	195	24	2	405	250	8"	10,110	7' 7"	54-3/4"	27"	15' 2-1/4"
240	170	25	44,160	8,970	13,570	195	24	2	405	250	8"	10,120	7' 7"	54-3/4"	27"	15' 2-1/4"
255	181	20	40,190	10,380	15,050	240	29	2	405	250	8"	11,590	8' 2-1/2"	62-1/4"	34-1/2"	15' 2-1/4"
269	191	25	43,240	10,390	15,060	240	29	2	405	250	8"	11,600	8' 2-1/2"	62-1/4"	34-1/2"	15' 2-1/4"
249	177	30	55,830	9,340	15,490	195	24	3	545	360	10"	10,930	6' 11-1/2"	47-1/4"	19-1/2"	18' 2-5/8"
287	204	25	51,560	10,770	17,020	255	31	3	545	360	10"	12,460	7' 7"	54-3/4"	27"	18' 2-5/8"
300	213	30	54,790	10,790	17,040	255	31	3	545	360	10"	12,480	7' 7"	54-3/4"	27"	18' 2-5/8"
321	228	25	50,510	12,300	18,640	320	39	3	545	360	10"	14,080	8' 2-1/2"	62-1/4"	34-1/2"	18' 2-5/8"
336	238	30	53,650	12,320	18,660	320	39	3	545	360	10"	14,100	8' 2-1/2"	62-1/4"	34-1/2"	18' 2-5/8"
361	256	40	59,060	12,620	18,950	320	39	3	545	360	10"	14,390	8' 2-1/2"	62-1/4"	34-1/2"	18' 2-5/8"
379	269	40	57,920	14,050	20,470	380	46	3	545	360	10"	15,910	8' 10"	69-3/4"	42"	18' 2-5/8"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

\*\* For dry operation or for external static pressure up to 1/2" use next larger size fan motor.

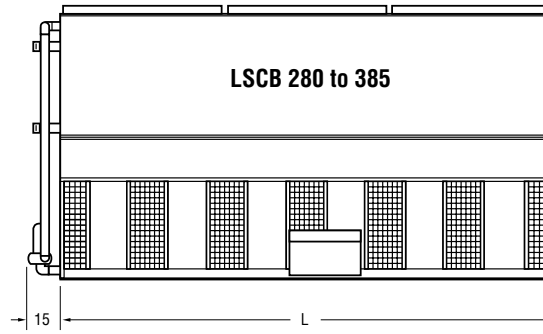
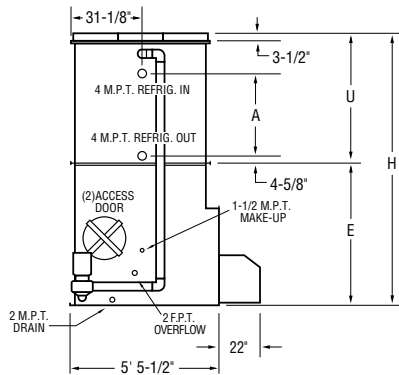
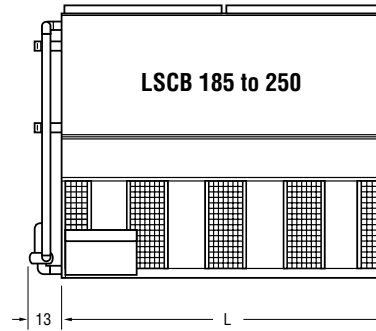
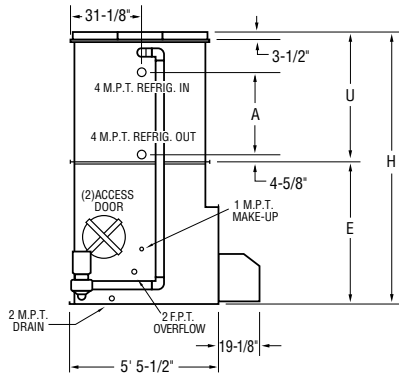
\*\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

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

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



# Engineering Dimensions & Data *Centrifugal Fan Models LSCB 185 to 385*



**Table 23 Engineering Data**

LSCB Model No.*	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs.††	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
185	131	10	32,900	7,550	9,760	5,110	165	22	2	345	230	8"	8,960	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	11' 11-1/2"
200	142	15	35,700	7,700	9,910	5,110	165	22	2	345	230	8"	9,110	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	11' 11-1/2"
210	149	20	37,600	7,830	10,040	5,110	165	22	2	345	230	8"	9,240	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	11' 11-1/2"
225	160	15	34,700	8,620	10,870	6,130	200	28	2	345	230	8"	10,070	10' 5-3/4"	64-5/8"	61-1/8"	39-1/4"	11' 11-1/2"
240	170	20	37,200	8,750	11,000	6,130	200	28	2	345	230	8"	10,200	10' 5-3/4"	64-5/8"	61-1/8"	39-1/2"	11' 11-1/2"
250	177	20	36,800	9,670	11,940	7,160	240	33	2	345	230	8"	11,140	11' 2-1/4"	73-1/8"	61-1/8"	47-3/4"	11' 11-1/2"
280	199	15	47,300	11,530	14,400	7,790	240	33	3	515	340	8"	13,200	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	18' 1/8"
300	213	20	52,000	11,660	14,530	7,790	240	33	3	515	340	8"	13,330	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	18' 1/8"
315	223	25	55,500	11,860	14,730	7,790	240	33	3	515	340	8"	13,530	9' 9-1/4"	56-1/8"	61-1/8"	30-3/4"	18' 1/8"
335	238	20	50,400	13,090	15,990	9,310	300	41	3	515	340	8"	14,790	10' 5-3/4"	64-5/8"	61-1/8"	39-1/4"	18' 1/8"
355	252	25	54,300	13,290	16,190	9,310	300	41	3	515	340	8"	14,990	10' 5-3/4"	64-5/8"	61-1/8"	39-1/4"	18' 1/8"
370	262	30	57,700	13,440	16,340	9,310	300	41	3	515	340	8"	15,140	10' 5-3/4"	64-5/8"	61-1/8"	39-1/4"	18' 1/8"
385	273	30	56,500	14,770	17,710	10,840	360	49	3	515	340	8"	16,510	11' 2-1/4"	73-1/8"	61-1/8"	47-3/4"	18' 1/8"

\* Tons at standard conditions: HCFC-22 and HFC-134a. 105°F condensing, 40°F suction and 78°F W.B.; ammonia 96.3°F condensing, 20°F suction and 78°F W.B.

\*\* For dry operation or for external static pressure up to 1/2" use next larger size fan motor.

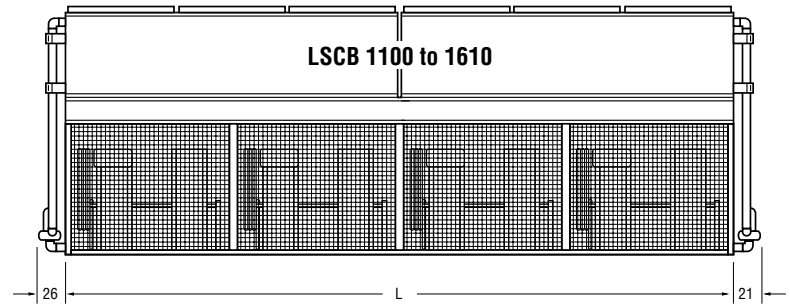
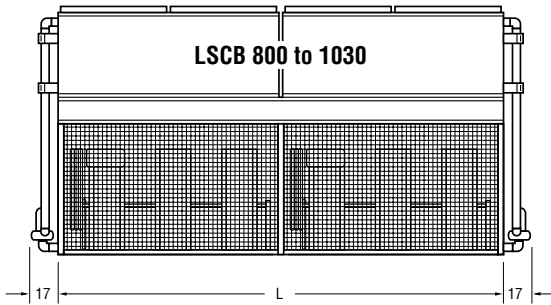
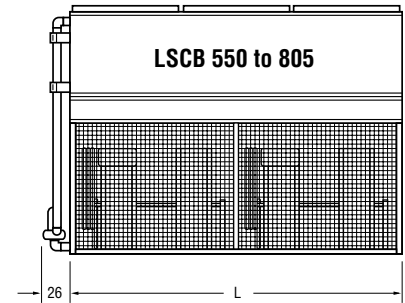
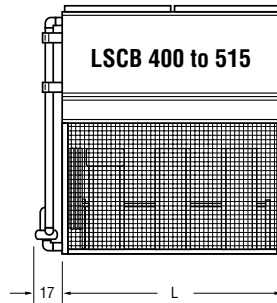
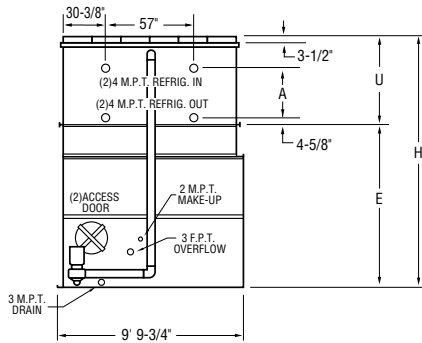
\*\*\* Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)

† Heaviest section is the coil section.

†† Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. Dimensions are subject to change. Do not use for pre-fabrication.



# Centrifugal Fan Models LSCB 400 to 1610



**Table 24 Engineering Data**

LSCB Model No. *	R-717 Tons*	Fans		Weights			Refrigerant Operating Charge lbs. ††	Coil Volume ft <sup>3</sup>	Spray Pump		Remote Pump			Dimensions				
		HP	CFM	Shipping	Operating	Heaviest Section†			HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
400	284	30	70,900	15,150	21,000	10,020	325	44	5	685	410	10"	18,700	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	11' 11-5/8"
430	305	25	66,600	17,120	23,150	12,040	405	55	5	685	410	10"	20,850	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	11' 11-5/8"
450	319	30	69,500	17,270	23,300	12,040	405	55	5	685	410	10"	21,000	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	11' 11-5/8"
480	340	40	75,600	17,510	23,540	12,040	405	55	5	685	410	10"	21,240	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	11' 11-5/8"
500	355	40	74,200	19,340	25,540	14,070	480	66	5	685	410	10"	23,240	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	11' 11-5/8"
515	365	50	77,200	19,400	25,600	14,070	480	66	5	685	410	10"	23,300	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	11' 11-5/8"
550	390	(2)15	97,400	21,900	30,400	14,410	485	66	7-1/2	1,030	600	12"	26,950	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	18' 1/4"
590	418	(2)20	105,000	22,280	30,780	14,410	485	66	7-1/2	1,030	600	12"	27,330	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	18' 1/4"
625	443	(2)25	111,200	22,520	31,020	14,410	485	66	7-1/2	1,030	600	12"	27,570	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	18' 1/4"
650	461	(2)20	102,900	25,310	34,070	17,320	600	82	7-1/2	1,030	600	12"	30,620	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	18' 1/4"
690	489	(2)25	109,000	25,550	34,310	17,320	600	82	7-1/2	1,030	600	12"	30,860	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	18' 1/4"
720	511	(2)30	114,000	25,780	34,540	17,320	600	82	7-1/2	1,030	600	12"	31,090	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	18' 1/4"
755	535	(2)30	113,000	28,720	37,740	20,240	720	98	7-1/2	1,030	600	12"	34,290	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	18' 1/4"
805	571	(2)40	121,500	29,550	38,570	20,860	720	98	7-1/2	1,030	600	12"	35,120	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	18' 1/4"
800	567	(2)30	141,800	29,960	41,660	9,300	650	89	(2)5	1,370	820	12"	37,060	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	24' 3/4"
860	610	(2)25	133,200	33,910	45,940	11,140	810	110	(2)5	1,370	820	12"	41,340	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	24' 3/4"
900	638	(2)30	139,000	34,110	46,140	11,140	810	110	(2)5	1,370	820	12"	41,540	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	24' 3/4"
960	681	(2)40	151,200	34,590	46,640	11,140	810	110	(2)5	1,370	820	12"	42,040	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	24' 3/4"
1000	709	(2)40	148,400	37,610	49,760	12,990	960	131	(2)5	1,370	820	12"	45,160	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	24' 3/4"
1030	730	(2)50	154,400	37,820	49,980	12,990	960	131	(2)5	1,370	820	12"	45,380	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	24' 3/4"
1100	780	(4)15	194,800	43,440	60,970	13,320	970	132	(2) 7-1/2	2,060	1,500	14"	54,070	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	36' 2"
1180	837	(4)20	210,000	43,960	61,490	13,320	970	132	(2) 7-1/2	2,060	1,500	14"	54,590	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	36' 2"
1250	887	(4)25	222,400	44,440	61,970	13,320	970	132	(2) 7-1/2	2,060	1,500	14"	55,070	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	36' 2"
1310	929	(4)30	230,400	45,080	62,610	13,320	970	132	(2) 7-1/2	2,060	1,500	14"	55,710	13' 2-3/4"	56-1/4"	102-1/2"	30-3/4"	36' 2"
1380	979	(4)25	218,000	50,510	68,610	15,960	1,205	164	(2) 7-1/2	2,060	1,500	14"	61,710	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	36' 2"
1440	1021	(4)30	228,000	50,770	68,880	15,960	1,205	164	(2) 7-1/2	2,060	1,500	14"	61,980	13' 11-1/4"	64-3/4"	102-1/2"	39-1/4"	36' 2"
1510	1071	(4)30	226,000	56,830	75,360	18,600	1,435	196	(2) 7-1/2	2,060	1,500	14"	68,460	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	36' 2"
1610	1142	(4)40	243,000	58,480	77,010	19,220	1,435	196	(2) 7-1/2	2,060	1,500	14"	70,110	14' 7-3/4"	73-1/4"	102-1/2"	47-3/4"	36' 2"

\* Tons at standard conditions: ammonia 96.3° condensing, 20° suction and 78° W.B.

\*\* For dry operation or for external static pressure up to 1/2" use next larger size fan motor.

\*\*\* 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 coil section.

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

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

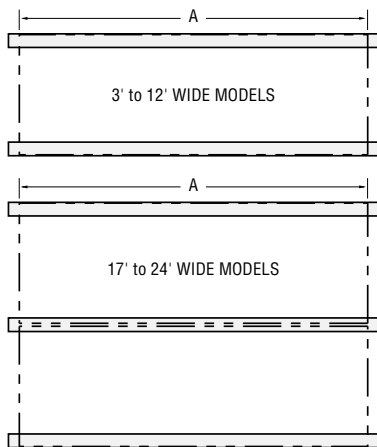


# Steel Support

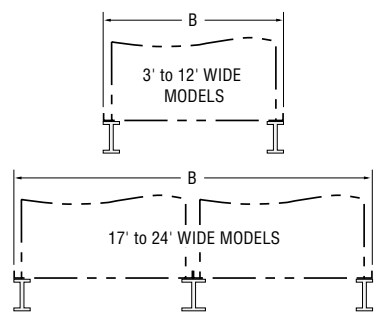
The recommended support for EVAPCO condensers is structural "I" beams located under the outer flanges and running the entire length of the unit. Mounting holes, 3/4" in diameter are located in the bottom channels of the pan section to provide for bolting to the structural steel. (Refer to certified drawings 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.

### Plan Views



### End Elevations



### LRC DIMENSIONS

3' Wide Models	A	B
LRC-25 to 72	10' 1-7/8"	3' 4-1/2"
5' Wide Models	A	B
LRC-76 to 114	12' 2-7/8"	5' 5/8"
108 to 183	15' 2-1/4"	5' 5/8"
190 to 246	18' 2-5/8"	5' 5/8"
8' Wide Models	A	B
LRC-188 to 269	15' 2-1/4"	7' 10"
249 to 379	18' 2-5/8"	7' 10"

### LSCB DIMENSIONS

5' Wide Models	A	B
LSCB-185 to 250	11' 11-3/4"	5' 5-3/8"
280 to 385	18' 1/8"	5' 5-3/8"
10' Wide Models	A	B
LSCB-400 to 515	11' 11-3/4"	9' 9-3/4"
550 to 805	18' 1/8"	9' 9-3/4"
800 to 1030	24' 1"	9' 9-3/4"
1100 to 1610	36' 2"	9' 9-3/4"

### ATC DIMENSIONS

4' Wide Models	A	B
ATC-50B to 165B	5' 11-7/8"	4' 1/4"
90B to 120B	8' 11-1/2"	4' 1/4"
135B to 165B	11' 11-3/4"	4' 1/4"
8-1/2' Wide Models	A	B
ATC-187B to 238B	8' 5-1/2"	7' 5-7/8"
253B to 305B	8' 11-1/2"	8' 5-1/2"
269B to 325B	10' 5-1/2"	8' 5-1/2"
358B to 371B	11' 11-3/4"	8' 5-1/2"
398B to 473B	13' 11-3/4"	8' 5-1/2"
486B to 630B	18' 0"	8' 5-1/2"
666B to 755B	21' 0"	8' 5-1/2"
17' Wide Models	A	B
ATC-639B to 805B	11' 11-3/4"	17' 4-1/8"
830B to 926B	13' 11-3/4"	17' 4-1/8"
12' Wide Models	A	B
ATC-503B to 559B	11' 11-3/4"	11' 10"
581B to 647B	13' 11-3/4"	11' 10"
642B to 892B	18' 0"	11' 10"
869B to 967B	20' 0"	11' 10"
949B to 1078B	24' 2"	11' 10"
1164B to 1204B	28' 2"	11' 10"
1284B to 1784B	36' 2-1/2"	11' 10"
1625B to 1925B	40' 2-1/2"	11' 10"
24' Wide Models	A	B
ATC-979B to 1077B	11' 11-3/4"	24' 1-1/8"
1163B to 1203B	13' 11-3/4"	24' 1-1/8"
1283B to 1783B	18' 0"	24' 1-1/8"
1616B to 1915B	20' 0"	24' 1-1/8"
2002B to 2158B	24' 2"	24' 1-1/8"
2256B to 2404B	28' 2"	24' 1-1/8"
2490B to 3210B	36' 2-1/2"	24' 1-1/8"
3336B to 3714B	40' 2-1/2"	24' 1-1/8"

### UBC DIMENSIONS

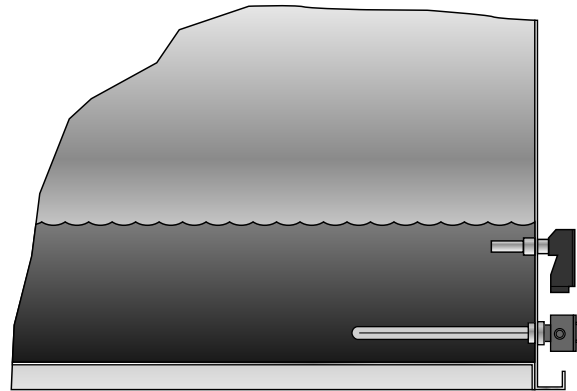
8' Wide Models	A	B
UBC-180 to 230	8' 11-1/2"	7' 10"
260 to 345	11' 11-3/4"	7' 10"
370 to 535	18' 0"	7' 10"
12' Wide Models	A	B
UBC-420 to 540	11' 11-3/4"	11' 10"
560 to 860	18' 0"	11' 10"
890 to 1075	24' 2"	11' 10"
1110 to 1720	36' 2-1/2"	11' 10"
24' Wide Models	A	B
UBC-1090 to 1690	18' 0"	24' 1-1/8"
1735 to 2100	24' 2"	24' 1-1/8"
2370 to 3225	36' 2-1/2"	24' 1-1/8"

### PMCB DIMENSIONS

5' Wide Models	A	B
PMCB-175 to 240	8' 11-1/2"	6' 4"
250 to 375	18' 0"	6' 4"
10' Wide Models	A	B
PMCB-290 to 480	11' 11-3/4"	9' 9-3/4"
450 to 775	18' 1/8"	9' 9-3/4"
850 to 1030	24' 1"	9' 9-3/4"
1060 to 1550	36' 2"	9' 9-3/4"
12' Wide Models	A	B
PMCB-435 to 580	11' 11-3/4"	11' 10-1/2"
600 to 885	18' 1/8"	11' 10-1/2"
1015 to 1120	24' 1"	11' 10-1/2"
935 to 1165	24' 1"	11' 10-1/2"
1110 to 1770	36' 2"	11' 10-1/2"

# 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. 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.



ATC Heater Sizes	
Models	kW
ATC-50B to 165B	3
90B to 120B	4
135B to 165B	5
187B to 238B	6
253B to 305B	7
269B to 325B	8
358B to 371B	(2) 4
398B to 473B	(2) 5
486B to 630B	(2) 6
666B to 755B	(2) 7
639B to 805B	(4) 4
830B to 926B	(4) 5
503B to 559B	(2) 6
581B to 647B	(2) 7
642B to 892B	(2) 9
869B to 967B	(2) 10
949B to 1078B	(4) 6
1164B to 1204B	(4) 7
1284B to 1784B	(4) 9
1625B to 1925B	(4) 10
979B to 1077B	(4) 6
1163B to 1203B	(4) 7
1283B to 1783B	(4) 9
1616B to 1915B	(4) 10
2002B to 2158B	(4) 12
2256B to 2404B	(4) 15
2490B to 3210B	(4) 18
3336B to 3714B	(4) 20

UBC Heater Sizes	
Models	kW
UBC-180 to 230	6
260 to 345	(2) 4
370 to 535	(2) 6
420 to 540	(2) 6
560 to 860	(2) 8
890 to 1075	(4) 6
1110 to 1720	(4) 8
1090 to 1690	(4) 8
1735 to 2100	(4) 12
2370 to 3225	(4) 16

PMCB Heater Sizes	
Models	kW
PMCB-175 to 240	5
250 to 375	(2) 4
290 to 480	8
450 to 775	(2) 6
850 to 1030	(2) 8
1060 to 1550	(2) 12
435 to 580	10
600 to 885	(2) 7
1015 to 1120	(2) 9
935 to 1165	(2) 9
1110 to 1770	(2) 15

LRC Heater Sizes	
Models	kW
LRC-25 to 72	2
76 to 114	3
108 to 183	4
190 to 246	6
188 to 269	7
249 to 379	9

LSCB Heater Sizes	
Models	kW
LSCB-185 to 250	4
280 to 385	(2) 3
400 to 515	7
550 to 805	(2) 5
800 to 1030	(2) 7
1100 to 1610	(2) 10



# ATC & UBC Evaporative Condenser Specifications

Furnish and install, as shown on the plans, an EVAPCO model \_\_\_\_\_ induced draft, counterflow evaporative condenser with a condensing capacity of \_\_\_\_\_ MBH total heat of rejection when operating with \_\_\_\_\_ refrigerant at \_\_\_\_\_ °F condensing temperature with a \_\_\_\_\_ °F design wet bulb temperature.

## Basin and Casing

The basin and casing shall be constructed of G-235 hot-dip galvanized steel for long life and durability.

Standard basin accessories shall include overflow, drain, type 304 stainless steel strainers, and brass make-up valve with plastic float.

## Direct Drive Models ATC 50B to 165B

### Fan Motor

\_\_\_\_\_ horsepower totally enclosed fan cooled fan motor(s), with 1.25 service factor shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase.

### Drive

The fan shall be mounted on the motor in a direct drive configuration.

## Belt Drive Models ATC 187B to 926B and UBC 180 to 535

### Fan Motor

\_\_\_\_\_ horsepower totally enclosed fan cooled motors 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 which is accessible from the outside of the unit for service. A swing away protective cover shall shield the motor and sheave from the weather.

### Drive

The fan drive shall be multigroove, solid back V-belt type with taper lock bushings designed for 150% of the motor nameplate horsepower. The belt material shall be neoprene reinforced with polyester cord and specifically designed for evaporative condenser service. Fan sheave shall be aluminum alloy construction. The fans and the fan sheaves shall be mounted on the shaft with a specially coated bushing to provide maximum corrosion protection. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance.

## Belt Drive Models ATC 503B to 3714B and UBC 420 to 3225

### Fan Motor

\_\_\_\_\_ horsepower totally enclosed air over ball bearing fan motor(s), with 1.15 service factor shall be furnished suitable for service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase. Motor(s) shall be mounted on an adjustable base which allows the motor to swing to the outside of the unit for servicing.

### Drive

The fan drive shall be a multigroove, solid back V-belt type with taper lock bushings designed for 150% of the motor nameplate horsepower. The belt material shall be neoprene reinforced with polyester cord and specifically designed for evaporative condenser service. Fan and motor sheaves shall be aluminum alloy construction. The fans and fan sheaves shall be mounted on the shaft with a specially coated bushing to provide maximum corrosion protection. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance.

### Axial Propeller Fans

Fans shall be heavy duty axial propeller type statically balanced. The fans shall be constructed of aluminum alloy blades, installed in a closely fitted cowl with venturi air inlet. Fan screens shall be galvanized steel mesh and frame, bolted to the fan cowl.

### Fan Shaft Bearings

Fan shaft bearings shall be heavy duty self-aligning ball type with grease fittings extended to the outside of the unit. Bearings shall be designed for a minimum L-10 life of 75,000 hours.

### Water Recirculation Pump

The pump(s) shall be a close-coupled, centrifugal type with mechanical seal, installed vertically at the factory to allow free drainage on shut down.

\_\_\_\_\_ horsepower totally enclosed motor(s) shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase.

### Heat Transfer Coil

Condensing coil(s) shall be all prime surface steel, encased in a steel framework and hot-dip galvanized after fabrication as a complete assembly. The coil(s) shall be designed with sloping tubes for free drainage of liquid refrigerant and shall be pneumatically tested at 400 psig, under water.

### Water Distribution System

The system shall provide a water flow rate of 6 GPM over each square foot of unit face area to ensure proper flooding of the coil. The spray header shall be constructed of schedule 40 polyvinyl chloride pipe for corrosion resistance. All spray branches shall be removable for cleaning. Heavy-duty molded nylon ZM spray nozzles with large 1-5/16" diameter opening and internal sludge ring to eliminate clogging. Nozzles shall be threaded into spray header to provide easy removal for maintenance.

### 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.

### Louvers

The louvers shall be constructed from polyvinyl chloride (PVC). The louvers shall be mounted in easily removable sections for access to the pan for maintenance. The louvers shall have a minimum of two changes in air direction to prevent splashout and block direct sunlight.

### Finish

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

### UBC Seismic/Windload Specification

The equipment shall be designed and manufactured to withstand 1.0g horizontal acceleration concurrent with 0.3g horizontal orthogonal and 0.5g vertical acting through the center of gravity (wind pressure of 125 pounds per square foot applied at the center of pressure). This design shall have been analyzed and certified by a licensed structural engineer, independent of the manufacturer. The analysis shall include the principal members and joints of the unit as well as the mounting configuration and hardware. The use of external reinforced anchorage, supports and bracing to meet the design acceleration levels (wind pressure) shall not be accepted. The unit will not be expected to maintain operation during the seismic (high windload) event.

# PMCB Evaporative Condenser 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.

## 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. 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.

## 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 molded nylon ZM spray nozzles with large 1-5/16" diameter opening and internal sludge ring to eliminate clogging. ZM nozzles are threaded into Schedule-40 Polyvinyl Chloride headers equipped with removable end plugs for ease of cleaning. 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 vertically at the factory to allow free drainage on shut down. \_\_\_\_\_ horsepower totally enclosed, motor shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase.

## Eliminators

The eliminators shall be constructed entirely of PVC that has been specially treated to resist ultra-violet light. Assembled in easily handled sections, the eliminator blades shall be spaced on 1-inch centers and shall incorporate three changes in air direction to assure removal of entrained moisture from the discharge air stream. They shall have a hooked leaving edge to direct the discharge air away from the fans to minimize recirculation.

## 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.



## ***LRC Evaporative Condenser 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.

### **Cold Water Basin**

The complete cold water basin shall be constructed of Type 304 stainless steel for long life and durability.

Standard cold water basin accessories shall include Type 304 stainless steel overflow, drain, anti-vortexing hood, strainers, brass make-up valve with unsinkable, foam filled plastic float and wastewater bleed line with adjustable valve.

### **Casing and Fan Section**

The casing and fan section shall be constructed of G-235 galvanized steel for long life and durability. Fan section shall include fans, motors and drives. The entire drive system (including fans, motors, sheaves and belts) shall be located in the dry entering airstream.

### **Centrifugal Fans and Drives**

Fans shall be forwardly curved centrifugal type of hot-dip galvanized steel construction. The fans shall be factory installed, statically and dynamically balanced for vibration free operation. The fans shall be mounted on either a solid steel shaft or a hollow steel foam filled shaft with forged bearing journals. The fan shaft shall be supported by heavy-duty self-aligning bearings with cast iron housings and lubrication fittings extended to the outside of the unit for ease of maintenance. The fan drive shall be a V-Belt type with taper lock bushings designed for 150% of the motor nameplate horsepower. Drives are mounted and aligned at the factory.

### **Fan Motor**

Fan motor(s) shall be \_\_\_\_\_ Horsepower T.E.F.C. design with 1.15 service factor and suitable for outdoor installation on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase electrical service. Motor(s) shall be mounted on an adjustable base.

### **Water Recirculation Pump**

The pump shall be a close-coupled, centrifugal type with a mechanical seal. Pump motor shall be \_\_\_\_\_ Horsepower T.E.F.C. design suitable for outdoor installation on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase electrical service.

### **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 and tested to 400 psig air pressure under water.

### **Water Distribution System**

The system shall provide a water flow rate of not less than 6 GPM over each square foot of unit face area to ensure proper flooding of the coil. The spray header shall be constructed of schedule 40 polyvinyl chloride 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 molded nylon ZM spray nozzles with large 1-5/16" diameter opening and internal sludge ring to eliminate clogging. ZM nozzles are threaded into Schedule-40 Polyvinyl Chloride headers equipped with removable end plugs for ease of cleaning. Nozzles shall be threaded into the spray header to provide easy removal for maintenance.

### **Eliminators**

The eliminators shall be constructed of inert polyvinyl chloride that has been specially treated to resist UV degradation. Assembled in easily handled sections, the eliminators shall incorporate three changes in air direction to assure removal of entrained moisture from the discharge airstream. The maximum drift rate shall not exceed 0.001% of the recirculated water rate.

### **Finish**

The complete cold water basin shall be constructed of Type 304 stainless steel for maximum corrosion protection. The casing and fan section shall be constructed of G-235 heavy gauge mill hot-dip galvanized steel. During fabrication, all panel edges shall be coated with a 95% pure zinc compound.

### **Mechanical Equipment Warranty**

The fan motor and drive system shall carry a 5 year warranty from the date of shipment, against defects in materials and workmanship including the fan(s), bearings, sheaves, shafts, fan motors(s) and mechanical equipment supports.

# LSCB Evaporative Condenser 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.

## 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. 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.

## Centrifugal Fan Drives

Fans shall be forwardly curved centrifugal type of hot-dip galvanized construction. The fans shall be factory installed into the pan-fan section, and statically and dynamically balanced for vibration free operation. Fans shall be mounted on either a solid steel shaft or a hollow steel shaft with forged bearing journals. The fan shaft shall be supported by heavy-duty, self aligning bearings with cast-iron housings and lubrication fittings for maintenance.

The fan drive shall be V-belt type with taper lock bushings designed for 150% of motor nameplate horsepower. Drives are to be mounted and aligned at the factory.

## 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 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 molded nylon ZM spray nozzles with large 1-5/16" diameter opening and internal sludge ring to eliminate clogging. ZM nozzles are threaded into Schedule-40 Polyvinyl Chloride headers equipped with removable end plugs for ease of cleaning. 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 vertically at the factory to allow free drainage on shut down. \_\_\_\_\_ horsepower totally enclosed, motor shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase.

## Eliminators

The eliminators shall be constructed entirely of PVC that has been specially treated to resist ultra-violet light. Assembled in easily handled sections, the eliminator blades shall be spaced on 1-inch centers and shall incorporate three changes in air direction to assure removal of entrained moisture from the discharge air stream. They shall have a hooked leaving edge to direct the discharge air away from the fans to minimize recirculation.

## 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.



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**EVAPCO, Inc.**  
P.O. Box 1300  
Westminster, MD 21158 USA  
Phone: (410) 756-2600  
Fax: (410) 756-6450  
E-mail: marketing@evapco.com

### Asia/Pacific Regional Office

**EVAPCO China**  
Suite D, 23rd Floor  
Majesty Building  
138 Pudong Avenue  
Shanghai, China 200120  
Phone: (86) 21-5877-3980  
Fax: (86) 21-5877-2928  
E-mail: evapcochina@evapcochina.com

### European Regional Office

**EVAPCO Europe, N.V.**  
Heersterveldweg 19  
Industriezone, Tongeren-Oost  
3700 Tongeren, Belgium  
Phone: (32) 12-395029  
Fax: (32) 12-238527  
E-mail: evapco.europe@evapco.be

### Sales Office – Germany

**EVAPCO Europe GmbH**  
Bovert 22  
D-40670 Meerbusch, Germany  
Phone: (49) 2159-69560  
Fax: (49) 2159-695611  
E-mail: sturies@evapco.de

### EVAPCO Manufacturing Locations

**EVAPCO, Inc.**  
5151 Allendale Lane  
Taneytown, MD 21787 USA  
Phone: (410) 756-2600  
Fax: (410) 756-6450  
E-mail: marketing@evapco.com

**EVAPCO Midwest**  
1723 York Road  
Greenup, IL 62428 USA  
Phone: (217) 923-3431  
Fax: (217) 923-3300  
E-mail: evapcomw@rr1.net

**EVAPCO West**  
1900 West Almond Ave.  
Madera, CA 93637 USA  
Phone: (559) 673-2207  
Fax: (559) 673-2378  
E-mail: contact@evapcowest.com

**Refrigeration Valves & Systems**  
1520 Crosswind Dr.  
Bryan, TX 77808 USA  
Phone: (979) 778-0095  
Fax: (979) 778-0030  
E-mail: rvs@rvscorp.com

**M McCormack Coil Company**  
P.O. Box 1727  
6333 S.W. Lakeview Blvd.  
Lake Oswego, OR 97035 USA  
Phone: (503) 639-2137  
Fax: (503) 639-1800  
E-mail: mail@mmccoil.com

**EVAPCO Iowa**  
**Engineering & Sales Office**  
1234 Brady Blvd.  
Owatonna, MN 55060  
Phone: (507) 446-8005  
Fax: (507) 446-8239  
E-mail: evapcomn@evapcomn.com

**Manufacturing Facility**  
925 Quality Drive  
Lake View, Iowa 51450 USA  
Phone: (712) 657-3223  
Fax: (712) 657-3226

**EVAPCO Europe, N.V.**  
Heersterveldweg 19  
Industriezone Tongeren-Oost  
3700 Tongeren, Belgium  
Phone: 32 (0)11-395029  
Fax: 32 (0)11-238527  
E-mail: evapco.europe@evapco.be

**EVAPCO Europe, S.r.l.**  
Via Ciro Menotti 10  
20017 Passirana di Rho  
Milano, Italy  
Phone: (39) 02-939-9041  
Fax: (39) 02-935-00840  
E-mail: evapcoeuropa@evapco.it

**EVAPCO Europe, S.r.l.**  
Via Dosso 2  
23020 Piateda Sondrio Italy

**Air EVAPCO (Ltd.)**  
92 Asma Fahmi St., ARD El-Golf  
Heliopolis, Cairo, Egypt  
Phone: (202) 291-3610  
Fax: (202) 290-0892  
E-mail: manzgroup@tedata.net.eg

**EVAPCO S.A. (Pty.) Ltd.**  
18 Quality Road  
Isando 1600  
Republic of South Africa  
Phone: (27)11 392-6630  
Fax: (27)11-392-6615  
E-mail: evapco@icon.co.za

**Beijing Hezhong-EVAPCO Refrigeration  
Equipment Co., Ltd.**  
Yan Qi Industrial Development District  
Huai Rou County  
Beijing, P.R. China - Code 101407  
Phone: (86)10 6166-7238  
Fax: (86)10 6166-7395  
E-mail: evapcobj@evapcochina.com

**Shanghai Hezhong-EVAPCO Refrigeration  
Co., Ltd.**  
855 Yang Tai Road  
Bao Shan Area  
Shanghai, P.R. China - Code 201901  
Phone: (86)21 5680-5298  
Fax: (86)21 5680-6642  
E-mail: evapcosh@evapcochina.com

**Aqua-Cool Towers (Pty.) Ltd.**  
34-42 Melbourne St.  
P.O. Box 436  
Riverstone, N.S.W. Australia 2765  
Phone: (61)29 627-3332  
Fax: (61)29 627-1715  
E-mail: sales@aquacoolingtowers.com.au