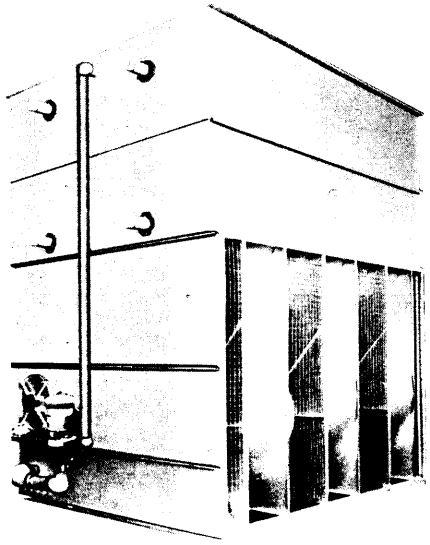
Baltimore Aircoil

Series V

Evaporative Condensers

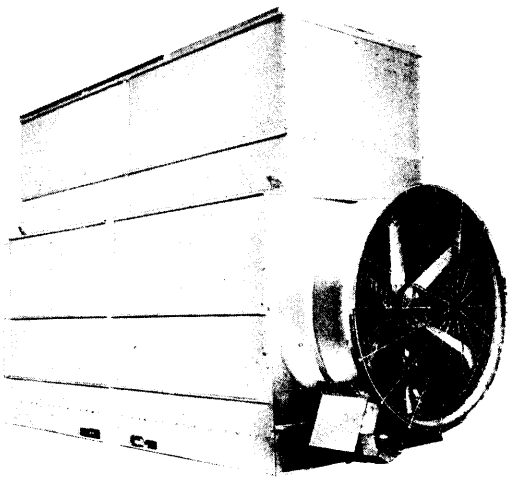
Available with ASME Code U Construction Coil
Extended Surface Coil

Model C1000
Centrifugal Fan



10 TO 1608 NOMINAL TONS

Model C2000
Multi-Stage Axial Fan



10 TO 1504 NOMINAL TONS

With the Exclusive **BALTIBOND®** **Corrosion Protection System**

Selection

Two methods of selection are presented in this section, *the heat rejection method* shown on these two pages, and *the evaporator ton method* shown on Pages 14 and 15. Selections may be made from the heat rejection method for any type of positive displacement compressor: open reciprocating, hermetic reciprocating, or rotary screw. The evaporator ton method is based on evaporator heat input only, and is limited to systems utilizing open reciprocating compressors.

Heat Rejection Method

In a mechanical refrigeration system, the function of an evaporative condenser is to reject heat to the environment. The heat to be rejected is the sum of the heat input at the evaporator and the energy input at the compressor. For a given set of operating conditions, the energy input through the compression process can vary for the several types of compressors—centrifugal, rotary screw, open reciprocating, and hermetic reciprocating. Therefore, in order to accurately determine the proper evaporative condenser required, it is necessary to establish the compressor energy input as well as the heat absorbed in the evaporator.

Frequently the total heat rejection of a system is specified. When it is not specified, it can be readily calculated. Total heat rejection is the sum of the compressor evaporator capacity in BTUH at the specified operating conditions, and the energy corresponding to the compressor brake horsepower in BTUH.

For open compressors:

Total heat rejection = Compressor evaporator capacity (BTUH) + Compressor BHP × 2545

For multi-stage open compressor systems, total heat rejection is calculated from the *high stage* compressor capacity and brake horsepower, expressed in BTUH.

In the case of hermetic compressors, compressor input is commonly expressed in KW and must be converted to BTUH:

Total heat rejection = Compressor evaporator capacity (BTUH) + Compressor KW × 3415

The base heat rejection of each Baltimore Aircoil Evaporative Condenser is shown in Tables 1 and 2. This represents the total heat rejection of each unit when operating at 105°F condensing temperature and 78°F wet bulb temperature, using refrigerants R-12, R-22, R-500, or R-502. Tables 3 and 4 present correction factors to be applied to the system heat rejection for other operating conditions of condensing temperature, wet bulb temperature, and refrigerant.

Selection Procedure

1. Establish total heat rejection required by the system (See above).
2. Determine the refrigerant and design conditions for condensing temperature and wet bulb temperature.
3. Using the appropriate factor (Tables 3 and 4) for the proper refrigerant, determine the correction factor to be applied to the system heat rejection.
4. Multiply the correction factor by the total system heat rejection.
5. Using Table 1 or 2, select the evaporative condenser whose base total heat rejection equals or exceeds the corrected heat rejection calculated in Step 4.

TABLE 1 – Base Heat Rejection – Model C1000 (MBH-Thousands of BTU's per Hour)

MODEL NO.	HEAT REJECTION MBH	MODEL NO.	HEAT REJECTION MBH	MODEL NO.	HEAT REJECTION MBH
C1710-B	147.0	C1442-M	3,572.1	C1402-N	10,495.8
C1711-D	220.5	C1442-N	3,777.9	C1663-O	10,510.5
C1712-E	294.0	C1443-N	4,233.6	C1402-O	10,966.2
C1712-G	367.5	C1444-O	4,630.5	C1664-O	10,995.6
C1720-G	441.0	C1462-N	5,247.9	C1682-O	11,348.4
C1721-G	558.6	C1462-O	5,483.1	C1664-P	11,818.8
C1722-G	676.2	C1642-O	5,674.2	C1403-O	12,259.8
C1722-H	764.4	C1463-O	6,129.9	C1683-O	12,818.4
C1723-H	852.6	C1643-O	6,409.2	C1684-O	13,347.6
C1723-J	955.5	C1644-O	6,673.8	C1683-P	13,729.8
C1732-H	1,058.4	C1643-P	6,864.9	C1404-P	13,818.0
C1732-J	1,176.0	C1464-P	6,909.0	C1684-P	14,317.8
C1733-J	1,323.0	C1482-M	7,144.2	C1684-Q	15,170.4
C1742-J	1,470.0	C1644-P	7,158.9	C1602-M	17,022.6
C1742-K	1,617.0	C1482-N	7,555.8	C1602-N	17,992.8
C1743-K	1,837.5	C1644-Q	7,585.2	C1603-N	20,080.2
C1743-L	1,984.5	C1483-N	8,467.2	C1603-O	21,021.0
C1842-K	2,205.0	C1662-M	8,511.3	C1604-O	21,991.2
C1843-K	2,425.5	C1662-N	8,996.4	C1604-P	23,637.6
C1843-L	2,719.5	C1484-O	9,261.0		
C1844-M	3,013.5	C1663-N	10,040.1		

TABLE 2 – Base Heat Rejection – Model C2000 (MBH-Thousands of BTU's per Hour)

MODEL NO.	HEAT REJECTION MBH	MODEL NO.	HEAT REJECTION MBH	MODEL NO.	HEAT REJECTION MBH
C2710-A	147.0	C2442-K	3,410.4	C2663-M	10,113.6
C2711-C	220.5	C2443-K	3,836.7	C2664-M	10,451.7
C2712-D	294.0	C2444-L	4,424.7	C2402-L	10,466.4
C2712-F	367.5	C2642-K	5,027.4	C2664-N	11,054.4
C2720-F	441.0	C2462-L	5,233.2	C2682-L	11,083.8
C2721-F	558.6	C2642-L	5,541.9	C2403-L	11,642.4
C2722-F	676.2	C2463-L	5,821.2	C2404-L	12,230.4
C2722-G	749.7	C2464-L	6,115.2	C2683-L	12,348.0
C2723-G	837.9	C2643-L	6,174.0	C2404-M	13,112.4
C2723-H	955.5	C2464-M	6,556.2	C2683-M	13,259.4
C2732-G	1,043.7	C2643-M	6,629.7	C2601-L	14,082.6
C2732-H	1,176.0	C2482-K	6,820.8	C2602-K	15,464.4
C2733-H	1,323.0	C2661-L	7,056.0	C2602-L	17,081.4
C2742-H	1,470.0	C2483-K	7,673.4	C2602-M	18,316.2
C2742-J	1,617.0	C2662-K	7,732.2	C2603-L	18,874.8
C2743-J	1,837.5	C2662-L	8,540.7	C2603-M	20,227.2
C2842-H	2,028.6	C2484-L	8,849.4	C2604-M	20,903.4
C2842-J	2,205.0	C2662-M	9,158.1	C2604-N	22,108.8
C2843-J	2,499.0	C2663-L	9,437.4		
C2844-K	2,807.7	C2682-K	10,054.8		

Desuperheaters

Because of space limitations, it is occasionally necessary to specify a desuperheater coil on an ammonia evaporative condenser to obtain the required capacity. (See Page 24 for details). A desuperheater will remove most of the superheat from the refrigerant prior to its entry into the condensing coil, thus permitting additional condensing capacity in the unit.

Table 5 provides additional capacity factors that must be used when selecting an ammonia evaporative condenser with a desuperheater. To determine the selection of an ammonia evaporative condenser with desuperheater, follow Steps 1 through 4 as outlined above, but in addition, multiply by the appropriate desuperheater selection factor from Table 5. Then from Table 1 or 2, select the evaporative condenser whose base heat rejection equals or exceeds the corrected heat rejection.

Notes:

1. Consult your B.A.C. representative for evaporative condenser selections for systems utilizing:
   a. Hydrocarbon refrigerants such as propane, butane, or propylene.
   b. Centrifugal compressors.
   c. Rotary screw compressors with water-cooled oil coolers.
2. Desuperheaters provide no capacity benefit when used on systems with rotary screw compressors, due to the low discharge gas temperatures that are characteristic of this type of compressor.

Selection Examples

1. Given:

R-22 refrigerant, hermetic reciprocating compressor
Compressor evaporator capacity = 80 tons
Compressor KW input = 58
Condensing temperature = 95°F
Wet bulb temperature = 75°F

Solution:

1. Determine the total heat rejection of the system

Compressor evaporator capacity	= 80 × 12,000 =	960,000 BTUH
Compressor KW input	= 58 × 3415 =	198,000 BTUH
	Total heat rejection =	1,158,000 BTUH

2. Determine the heat rejection capacity factor for R-22 at 95°F condensing temperature and 75°F wet bulb temperature from Table 3, which is 1.45.

3. Multiply: 1,158,000 × 1.45 = 1,679,000 BTUH (1,679 MBH)
4. From Table 1 or 2, select a unit with a base total heat rejection equal to or greater than 1,679 MBH. In this case, select a C1743-K or a C2743-J with a heat rejection rating of 1,837.5 MBH.

2. Given:

R-717 refrigerant, rotary screw compressor (refrigerant-cooled)
Compressor evaporator capacity = 480 tons
Compressor BHP = 600
Condensing temperature = 90°F
Wet bulb temperature = 72°F

Solution:

1. Determine the total heat rejection of the system

Compressor evaporator capacity	= 480 × 12,000 =	5,760,000 BTUH
Compressor BHP input	= 600 × 2545 =	1,527,000 BTUH
	Total heat rejection =	7,287,000 BTUH

2. Determine the heat rejection capacity factor for R-717 at 90°F condensing temperature and 72°F wet bulb temperature from Table 4, which is 1.59.

3. Multiply: 7,287,000 × 1.59 = 11,586,000 BTUH (11,586 MBH)
4. From Table 1 or 2, select a unit with a base total heat rejection equal to or greater than 11,586 MBH. In this case, select a C1664-P (or C2403-L), with a heat rejection rating of 11,818.8 MBH (11,642.4 MBH).

TABLE 3 – Heat Rejection Capacity Factors / Refrigerants 12, 22, 500, and 502

Condensing Pressure (PSIG)		Cond. Temp. (°F)	Entering Air Wet Bulb Temperature (°F)											
R-12	R-22		50	55	60	65	68	70	72	75	78	80	85	90
91.8	155.7	85	1.10	1.22	1.39	1.67	1.94	2.13	2.45	2.94	—	—	—	—
99.8	168.4	90	.93	1.02	1.14	1.32	1.47	1.59	1.75	2.00	2.38	2.78	—	—
108.3	181.8	95	.80	.87	.95	1.08	1.16	1.22	1.32	1.45	1.61	1.79	2.56	—
117.2	195.9	100	.71	.76	.82	.89	.93	.98	1.03	1.12	1.23	1.33	1.72	2.50
126.6	210.8	105	.63	.66	.70	.76	.79	.83	.86	.93	1.00	1.05	1.27	1.61
136.4	226.4	110	.56	.59	.62	.66	.70	.71	.75	.79	.84	.88	1.01	1.19
146.8	242.7	115	—	.52	.55	.58	.60	.62	.64	.67	.70	.73	.81	.92
157.7	259.9	120	—	—	—	.51	.53	.54	.55	.57	.60	.62	.68	.75

TABLE 4 – Heat Rejection Capacity Factors / Refrigerant 717 (Ammonia)

Cond. Press. (PSIG)	Cond. Temp. (°F)	Entering Air Wet Bulb Temperature (°F)											
		50	55	60	65	68	70	72	75	78	80	85	90
151.7	85	1.00	1.11	1.26	1.52	1.76	1.93	2.23	2.68	—	—	—	—
165.9	90	.85	.93	1.03	1.19	1.33	1.45	1.59	1.82	2.17	2.50	—	—
181.1	95	.73	.79	.87	.98	1.06	1.11	1.19	1.32	1.47	1.61	2.33	—
185.1	96.3	.71	.76	.83	.91	.98	1.04	1.11	1.23	1.36	1.49	2.13	—
197.2	100	.64	.69	.75	.81	.85	.89	.93	1.02	1.12	1.20	1.57	2.27
214.2	105	.57	.60	.64	.69	.73	.76	.79	.84	.91	.96	1.15	1.47
232.3	110	.51	.53	.56	.60	.63	.65	.68	.71	.76	.80	.92	1.08
251.5	115	—	.47	.50	.53	.55	.56	.58	.61	.64	.66	.74	.84
271.7	120	—	—	—	.46	.48	.49	.50	.52	.54	.56	.62	.68

TABLE 5 – Ammonia Desuperheater Heat Rejection Capacity Factors

Suction Pressure (PSIG)	Suction Temp. (°F)	Capacity Factor
3.6	−20	0.86
9.0	−10	0.88
15.7	0	0.89
23.8	+10	0.90
33.5	+20	0.91
45.0	+30	0.92
58.6	+40	0.93

Selection

Evaporator Ton Method

The evaporator ton selection method should only be used for selecting evaporative condensers on systems utilizing open reciprocating compressors. The selection method is based on *average* horsepower requirements for open reciprocating compressors, and cannot be considered to be precise. Critical selections of this type should be checked by the heat rejection method of Pages 12 and 13. Tables 8 and 9 give capacity correction factors for various refrigerants and operating conditions of condensing temperature, suction temperature, and wet bulb temperature. The evaporator capacity (in tons of refrigeration) must be multiplied by these capacity correction factors in order to determine the recommended evaporative condenser from Tables 6 and 7.

Selection Procedure

1. Determine the evaporator capacity in tons of refrigeration (one ton = 12,000 BTUH).
2. Determine refrigerant and design conditions of condensing temperature, suction temperature, and wet bulb temperature.
3. Using the appropriate table for the system refrigerant, (Tables 8 or 9) determine the correction factor for condensing temperature and wet bulb temperature, and the correction factor for suction temperature.
4. Multiply the evaporator capacity (in tons) by the two correction factors determined in Step 3.
5. From Tables 6 or 7, select the evaporative condenser whose model number equals or exceeds the corrected evaporator capacity calculated in Step 4.

Desuperheaters

Because of space limitations, it is occasionally necessary to specify a desuperheater coil on an ammonia evaporative condenser to obtain the required capacity. (See Page 24 for details.) A desuperheater will remove most of the superheat from the refrigerant prior to its entry into the condensing coil, thus permitting greater condensing capacity in the unit.

Table 10 provides additional capacity factors that must be used when selecting an ammonia evaporative condenser with a desuperheater. To determine the selection of an ammonia evaporative condenser with desuperheater, follow Steps 1 through 4 as outlined above, but in addition, multiply by the appropriate desuperheater selection factor from Table 10. Then from Table 6 or 7 select the evaporative condenser whose base capacity equals or exceeds the corrected evaporator capacity.

TABLE 6 – Base Evaporator Tons – Model C1000

MODEL NO.	CORRECTED EVAPORATOR TONS	MODEL NO.	CORRECTED EVAPORATOR TONS	MODEL NO.	CORRECTED EVAPORATOR TONS
C1710-B	10	C1442-M	243	C1402-N	714
C1711-D	15	C1442-N	257	C1663-O	715
C1712-E	20	C1443-N	288	C1402-O	746
C1712-G	25	C1444-O	315	C1664-O	748
C1720-G	30	C1462-N	357	C1682-O	772
C1721-G	38	C1462-O	373	C1664-P	804
C1722-G	46	C1642-O	386	C1403-O	834
C1722-H	52	C1463-O	417	C1683-O	872
C1723-H	58	C1643-O	436	C1684-O	908
C1723-J	65	C1644-O	454	C1683-P	934
C1732-H	72	C1643-P	467	C1404-P	940
C1732-J	80	C1464-P	470	C1684-P	974
C1733-J	90	C1482-M	486	C1684-Q	1032
C1742-J	100	C1644-P	487	C1602-M	1158
C1742-K	110	C1482-N	514	C1602-N	1224
C1743-K	125	C1644-Q	516	C1603-N	1366
C1743-L	135	C1483-N	576	C1603-O	1430
C1842-K	150	C1662-M	579	C1604-O	1496
C1843-K	165	C1662-N	612	C1604-P	1608
C1843-L	185	C1484-O	630		
C1844-M	205	C1663-N	683		

TABLE 7 – Base Evaporator Tons – Model C2000

MODEL NO.	CORRECTED EVAPORATOR TONS	MODEL NO.	CORRECTED EVAPORATOR TONS	MODEL NO.	CORRECTED EVAPORATOR TONS
C2710-A	10	C2442-K	232	C2663-M	688
C2711-C	15	C2443-K	261	C2664-M	711
C2712-D	20	C2444-L	301	C2402-L	712
C2712-F	25	C2642-K	342	C2664-N	752
C2720-F	30	C2462-L	356	C2682-L	754
C2721-F	38	C2642-L	377	C2403-L	792
C2722-F	46	C2463-L	396	C2404-L	832
C2722-G	51	C2464-L	416	C2683-L	840
C2723-G	57	C2643-L	420	C2404-M	892
C2723-H	65	C2464-M	446	C2683-M	902
C2732-G	71	C2643-M	451	C2601-L	960
C2732-H	80	C2482-K	464	C2602-K	1052
C2733-H	90	C2661-L	480	C2602-L	1162
C2742-H	100	C2483-K	522	C2602-M	1246
C2742-J	110	C2662-K	526	C2603-L	1284
C2743-J	125	C2662-L	581	C2603-M	1376
C2842-H	138	C2484-L	602	C2604-M	1422
C2842-J	150	C2662-M	623	C2604-N	1504
C2843-J	170	C2663-L	642		
C2844-K	191	C2682-K	684		

Selection Example

(Open reciprocating compressors only)

Given:

R-22 refrigerant
Evaporator capacity = 150 tons refrigeration
Condensing temperature = 105°F
Suction temperature = 30°F
Wet bulb temperature = 80°F

Solution:

1. Determine the capacity factor for R-22 at 105°F condensing temperature and 80°F wet bulb temperature from Table 8—1.05.
2. Determine the suction temperature correction factor for 30°F from Table 8—1.03.
3. Multiply: 150 × 1.05 × 1.03 = 162 corrected tons.
4. From Table 6 or 7, select a unit with a base capacity equal to this or larger, in this case C1843-K (or C2843-J).

TABLE 8 – Evaporator Capacity Factors/Refrigerants 12, 22, 500 and 502

Cond. Press. (PSIG)		Cond. Temp.	Entering Air Wet Bulb Temperature (°F)											
R-12	R-22	(°F)	50	55	60	65	68	70	72	75	78	80	85	90
91.8	155.7	85	1.05	1.16	1.33	1.61	1.87	1.98	2.26	2.80	—	—	—	—
99.8	168.4	90	.90	.98	1.11	1.28	1.43	1.54	1.72	1.96	2.33	2.70	—	—
108.3	181.8	95	.78	.85	.93	1.04	1.12	1.18	1.28	1.39	1.59	1.75	2.50	—
117.2	195.9	100	.70	.75	.81	.88	.93	.97	1.03	1.11	1.22	1.32	1.70	2.53
126.6	210.8	105	.63	.66	.70	.76	.79	.83	.86	.93	1.00	1.05	1.27	1.67
136.4	226.4	110	.57	.60	.63	.67	.70	.72	.75	.80	.85	.89	1.02	1.26
146.8	242.7	115	—	.54	.57	.60	.63	.64	.66	.69	.73	.75	.84	.99
157.7	259.9	120	—	—	—	.53	.55	.56	.58	.60	.63	.65	.70	.81

Suction Temp (°F)	−20	−10	0	+10	+20	+30	+40	+50
Capacity Factor	1.32	1.23	1.17	1.11	1.07	1.03	1.00	0.97

TABLE 9 – Evaporator Capacity Factors/Refrigerant 717 (Ammonia)

Cond. Press.	Cond Temp	Entering Air Wet Bulb Temperature (°F)											
(PSIG)	(°F)	50	55	60	65	68	70	72	75	78	80	85	90
151.7	85	1.01	1.11	1.28	1.55	1.79	1.95	2.17	2.69	—	—	—	—
165.9	90	.87	.95	1.06	1.22	1.37	1.47	1.61	1.85	2.22	2.57	—	—
181.1	95	.75	.82	.89	1.00	1.09	1.15	1.22	1.35	1.54	1.72	2.41	—
185.1	96.3	.73	.79	.85	.95	1.03	1.09	1.16	1.28	1.41	1.56	2.14	—
197.2	100	.67	.72	.79	.85	.90	.94	1.00	1.08	1.18	1.29	1.65	2.45
214.2	105	.61	.64	.68	.74	.78	.81	.85	.89	.97	1.03	1.23	1.62
232.3	110	.55	.58	.61	.65	.68	.70	.73	.77	.83	.87	.98	1.22
251.5	115	—	.52	.55	.58	.61	.62	.64	.67	.70	.73	.81	.96
271.7	120	—	—	—	.52	.54	.55	.56	.58	.61	.63	.68	.79

Suction Temp (°F)	−20	−10	0	+10	+20	+30	+40	+50
Capacity Factor	1.25	1.16	1.11	1.04	1.00	0.97	0.93	0.91

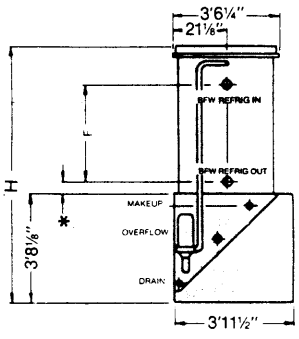
TABLE 10 – Ammonia Desuperheater Capacity Factors

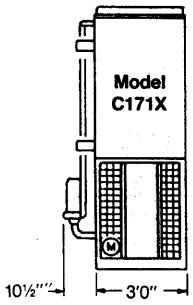
Suction Press. (PSIG)	3.6	9.0	15.7	23.8	33.5	45.0	58.6
Suction Temp (°F)	−20	−10	0	+10	+20	+30	+40
Capacity Factor	0.86	0.88	0.89	0.90	0.91	0.92	0.93

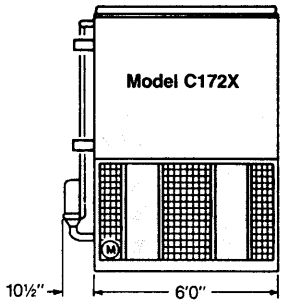
Engineering Data

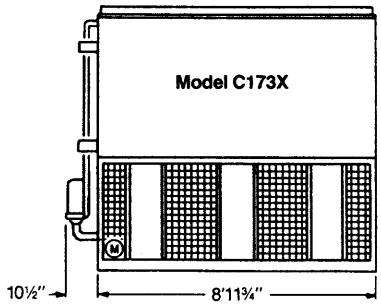
Do not use for construction. Refer to factory certified dimensions.
This brochure includes data current at the time of publication which should be reconfirmed at the time of purchase.

Model C17XX





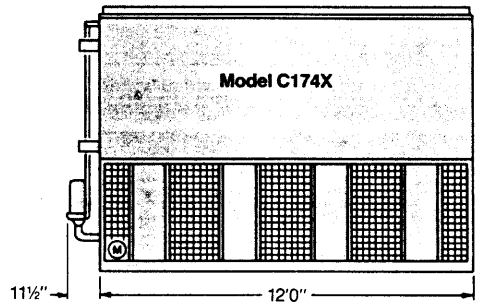




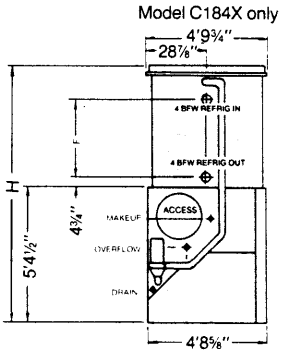
*4¼" on C171X
4¾" on C172X, C173X, C174X

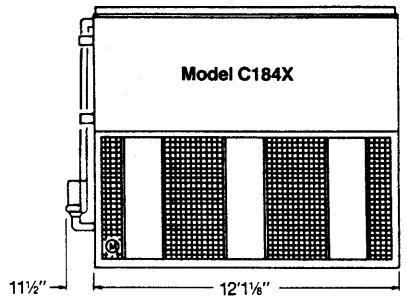
Ⓜ Fan Motor Location

Note: On Model C17XX sufficient space must be provided for entry to access doors located on side opposite air entry side.

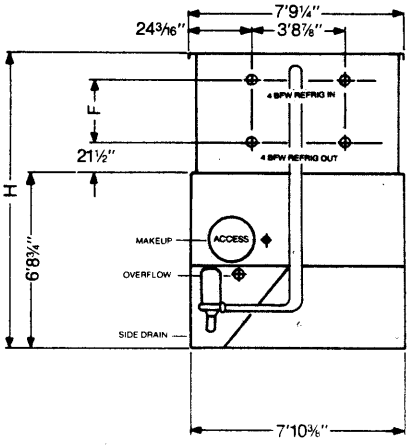


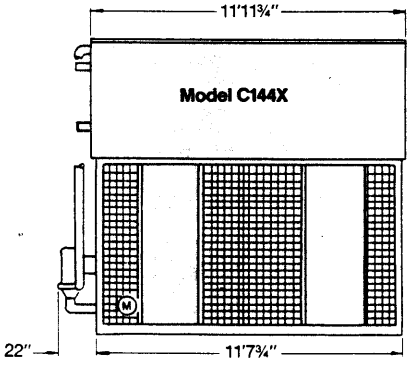
Model C184X only

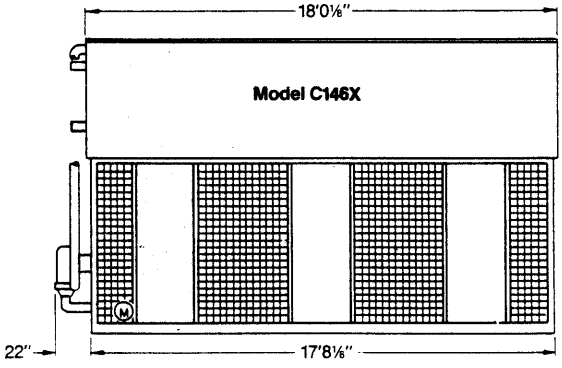




Model C14XX







MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (COIL)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP BOTTOM DRAIN SIZE	REMOTE SUMP APPROX. OPER. WEIGHT	F	H
C1710-B	1270	1400	1270*	2900	1/2	35	1/3	19	2 1/2	1220	14 1/4	77 1/2
C1711-D	1460	1600	1460*	3800	1	35	1/3	25	2 1/2	1420	22 3/4	86
C1712-E	1620	1770	1620*	4400	1 1/2	35	1/3	32	2 1/2	1590	31 1/4	94 1/2
C1712-G	1670	1820	1670*	5300	3	35	1/3	34	2 1/2	1640	31 1/4	94 1/2
C1720-G	2010	2300	2010*	8200	3	75	1/2	35	3	1990	13 1/4	77 1/2
C1721-G	2240	2560	2240*	8900	3	75	1/2	45	3	2250	21 3/4	86
C1722-G	2540	2880	2540*	8500	3	75	1/2	61	3	2570	30 1/4	94 1/2
C1722-H	2590	2930	2590*	10200	5	75	1/2	65	3	2620	30 1/4	94 1/2
C1723-H	2860	3230	1940	9800	5	75	1/2	76	3	2920	38 3/4	103
C1723-J	2930	3300	2010	11600	7 1/2	75	1/2	80	3	2990	38 3/4	103
C1732-H	3510	4210	3510*	12300	5	115	3/4	90	4	3350	33 1/4	97 1/2
C1732-J	3580	4280	3580*	14500	7 1/2	115	3/4	100	4	3810	33 1/4	97 1/2
C1733-J	4000	4750	2850	14000	7 1/2	115	3/4	110	4	4310	42 1/2	106 3/4
C1742-J	4450	5420	4450*	19600	7 1/2	150	1	120	4	4810	33 1/4	97 1/2
C1742-K	4530	5500	4530*	22000	10	150	1	130	4	4890	33 1/4	97 1/2
C1743-K	5060	6080	3640	21000	10	150	1	145	4	5470	42 1/2	106 3/4
C1743-L	5140	6160	3720	23000	15	150	1	160	4	5550	42 1/2	106 3/4
C1842-K	7480	8730	4920	28200	10	220	1 1/2	170	6	7810	33 1/4	117 7/8
C1843-K	8060	9680	5830	27200	10	220	1 1/2	210	6	8760	42 1/2	127 1/8
C1843-L	8170	9770	5930	33300	15	220	1 1/2	230	6	8860	42 1/2	127 1/8
C1844-M	8820	10420	6580	35800	20	220	1 1/2	245	6	9510	51 3/4	136 3/8
C1442-M	10720	15140	7050	46150	20	385	3	290	6	13040	33 1/4	151 3/8
C1442-N	10770	15190	7050	49700	25	385	3	290	6	13090	33 1/4	151 3/8
C1443-N	12180	16750	8460	48250	25	385	3	360	6	14650	42 1/2	160 5/8
C1444-O	13600	18310	9860	50100	30	385	3	430	6	16210	51 3/4	169 7/8
C1462-N	15680	22410	10390	65100	25	580	5	435	8	19160	33 1/4	151 3/8
C1462-O	15700	22430	10390	69200	30	580	5	435	8	19180	33 1/4	151 3/8
C1463-O	17880	24820	12570	67200	30	580	5	540	8	21570	42 1/2	160 5/8
C1464-P	20250	27410	14750	72250	40	580	5	645	8	24160	51 3/4	169 7/8

*Unit normally ships in one piece.

NOTES:

1. The standard right hand arrangement as shown has the air inlet side on the right when facing the connection end. Left hand arrangement can be furnished by special order. Water and refrigerant connections are always located on the same end of the unit.

2. Standard refrigerant connection sizes are 3-inch BFW inlet and outlet for C171X models, and 4-inch BFW inlet and outlet for all other C1000 models. Other connection sizes are available on special order.

3. For indoor application of C1000 evaporative condensers, the room may be used as a plenum with ductwork attached to the discharge only. If inlet ductwork is required, an enclosed fan section must be specified; consult your B.A.C. representative for details.

4. Models C17XX, C184X, C144X, and C146X are single coil section units. Fan cycling results only in on-off operation. For additional steps of control, the energy-miser fan system and two-speed fan motors are available. More precise capacity control can be obtained with modulating fan discharge dampers (see page 24 for details).

5. Fan motor sizes shown in the table are for 0 inches external static pressure (ESP). For additional ESP up to 1/2 inch, use next larger motor size.

6. Refrigerant charge listed is R-717 operating charge. To determine operating charge for other refrigerants, multiply by the following factors: R-12, 2.13; R-22, 1.93; R-500, 1.87; R-502, 1.99.

Engineering Data

Do not use for construction. Refer to factory certified dimensions.
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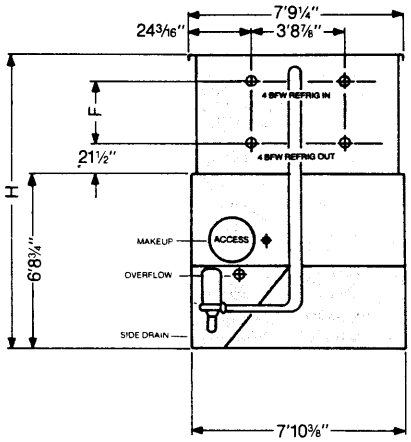
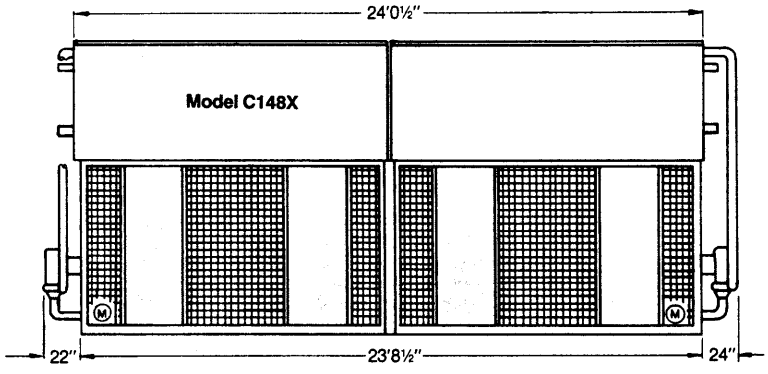
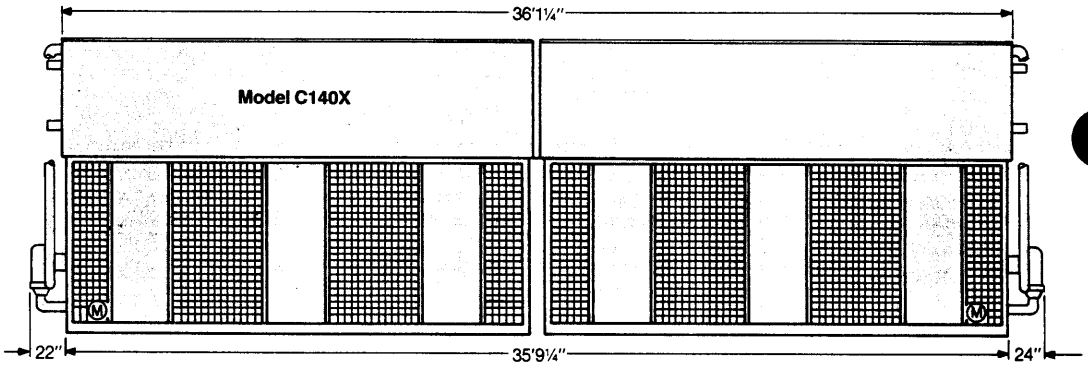




Ⓜ Fan Motor Location



MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (COIL)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP BOTTOM DRAIN SIZE	REMOTE SUMP APPROX. OPER. WEIGHT	F	H
C1482-M	21420	30340	7320*	92300	(2) 20	770	(2) 3	580	10	26080	33¼	151⅜
C1482-N	21520	30440	7420*	99400	(2) 25	770	(2) 3	580	10	26250	33¼	151⅜
C1483-N	24340	33560	8460	96500	(2) 25	770	(2) 3	720	10	29370	42½	160⅝
C1484-O	27180	36660	9860	100200	(2) 30	770	(2) 3	860	10	32490	51¾	169⅞
C1402-N	31340	44880	10560*	130200	(2) 25	1160	(2) 5	870	12	38400	33¼	151⅜
C1402-O	31380	44920	10600*	138400	(2) 30	1160	(2) 5	870	12	38440	33¼	151⅜
C1403-O	35740	49700	12570	134400	(2) 30	1160	(2) 5	1080	12	43220	42½	160⅝
C1404-P	40480	54880	14750	144500	(2) 40	1160	(2) 5	1290	12	48400	51¾	169⅞

*Pan Section

NOTES:

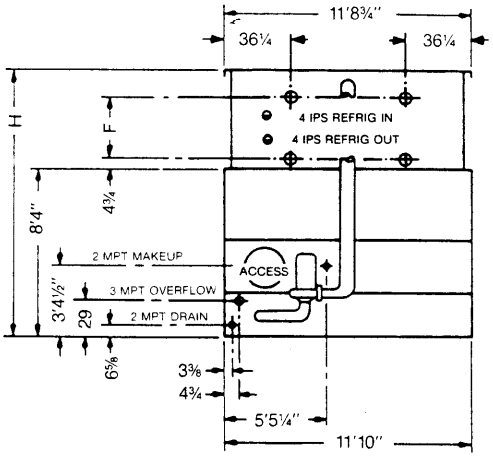
1. The standard refrigerant connection sizes for all models are 4 inch BFW inlet and outlet. Models C148X, C140X, C168X, and C160X have refrigerant connections on both ends of the unit. Other connection sizes are available on special order.

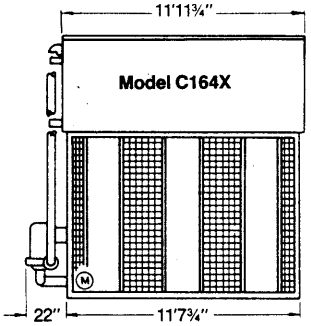
2. For indoor application of C1000 evaporative condensers, the room may be used as a plenum with ductwork attached to the discharge only. If inlet ductwork is required, an enclosed fan section must be specified; consult your B.A.C. representative for details.

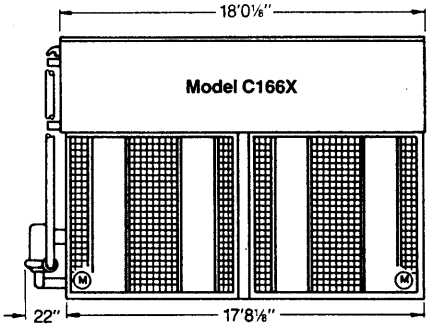
3. Models C164X and C166X are single coil section units. Fan cycling results in only on-off operation. On models C148X, C140X, C168X, and C160X, two coil sections are provided; fans for each section can be cycled to give 50% capacity control. For additional steps of control, the energy-miser fan system and two-speed fan motors are available. For more precise capacity control, all C1000 units can be furnished with modulating discharge dampers (see page 24 for details).

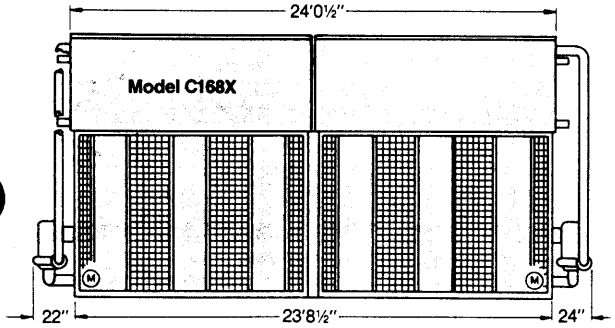
4. Fan motor sizes shown in the table are for 0-inches external static pressure (ESP). For additional ESP up to ½ inch, use next larger motor size.

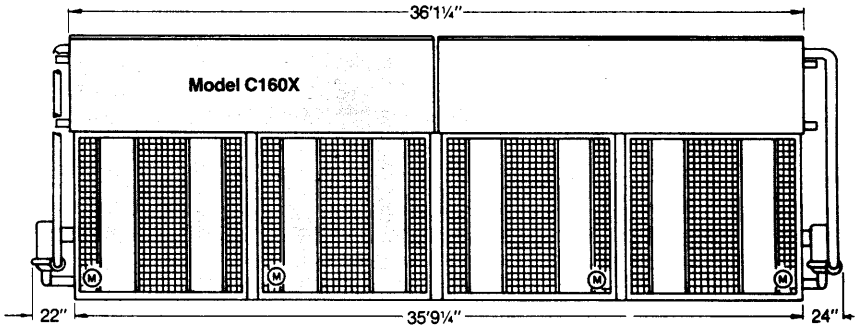
5. Refrigerant charge listed is R-717 operating charge. To determine operating charge for other refrigerants, multiply by the following factors: R-12, 2.13; R-22, 1.93; R-500, 1.87; R-502, 1.99.











MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (Coil)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP		F	H
									BOTTOM DRAIN SIZE	APPROX. OPER. WEIGHT		
C1642-O	15810	23860	10300	74250	30	585	5	445	8	19350	33¼	153¾
C1643-O	17880	26140	12370	72050	30	585	5	550	8	21630	42½	163
C1643-P	18070	26330	12370	79300	40	585	5	550	8	21820	42½	163
C1644-O	19950	28430	14440	70400	30	585	5	655	8	23920	51¾	172¼
C1644-P	20140	28620	14440	77500	40	585	5	655	8	24110	51¾	172¼
C1644-Q	20180	28660	14440	83450	50	585	5	655	8	24150	51¾	172¼
C1662-M	22870	35110	15170	107050	(2) 20	835	5	665	10	28550	33¼	153¾
C1662-N	22970	35210	15170	115300	(2) 25	835	5	665	10	28650	33¼	153¾
C1663-N	26090	38660	18290	111950	(2) 25	835	5	825	10	32100	42½	163
C1663-O	26130	38700	18290	118950	(2) 30	835	5	825	10	32140	42½	163
C1664-O	29240	42140	21400	116200	(2) 30	835	5	990	10	35580	51¾	172¼
C1664-P	29620	42520	21400	127900	(2) 40	835	5	990	10	35960	51¾	172¼
C1682-O	31560	47930	10960*	148500	(2) 30	1170	(2) 5	890	10	39760	33¼	153¾
C1683-O	35700	52490	12370	144100	(2) 30	1170	(2) 5	1100	10	44320	42½	163
C1683-P	36080	52870	12370	158600	(2) 40	1170	(2) 5	1100	10	44500	42½	163
C1684-O	39840	57070	14440	140800	(2) 30	1170	(2) 5	1310	10	48900	51¾	172¼
C1684-P	40220	57450	14440	155000	(2) 40	1170	(2) 5	1310	10	49280	51¾	172¼
C1684-Q	40300	57530	14440	166900	(2) 50	1170	(2) 5	1310	10	49360	51¾	172¼
C1602-M	45680	70420	15340*	214100	(4) 20	1670	(2) 5	1330	12	57150	33¼	153¾
C1602-N	45880	70620	15540*	230600	(4) 25	1670	(2) 5	1330	12	57350	33¼	153¾
C1603-N	52120	77520	18290	223900	(4) 25	1670	(2) 5	1650	12	64250	42½	163
C1603-O	52200	77600	18290	237900	(4) 30	1670	(2) 5	1650	12	64330	42½	163
C1604-O	58420	84480	21400	232400	(4) 30	1670	(2) 5	1980	12	71210	51¾	172¼
C1604-P	59180	85240	21400	255800	(4) 40	1670	(2) 5	1980	12	71970	51¾	172¼

*Pan Section

Engineering Data

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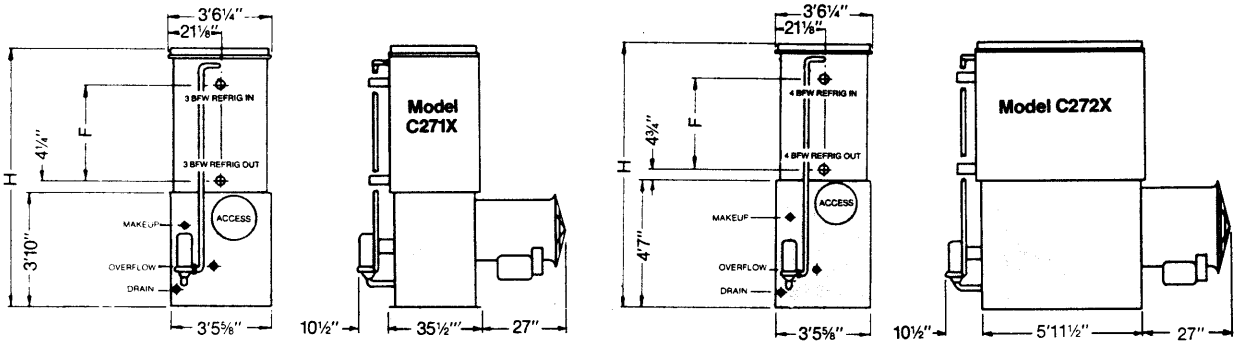
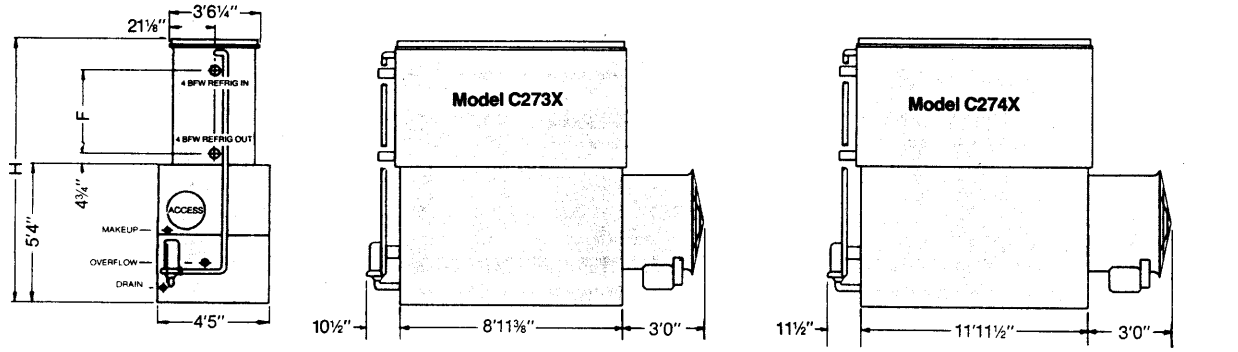
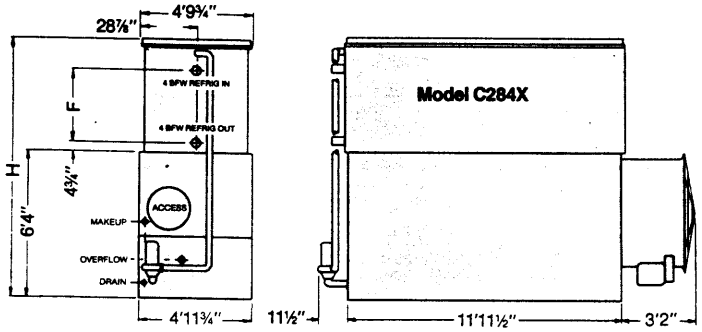
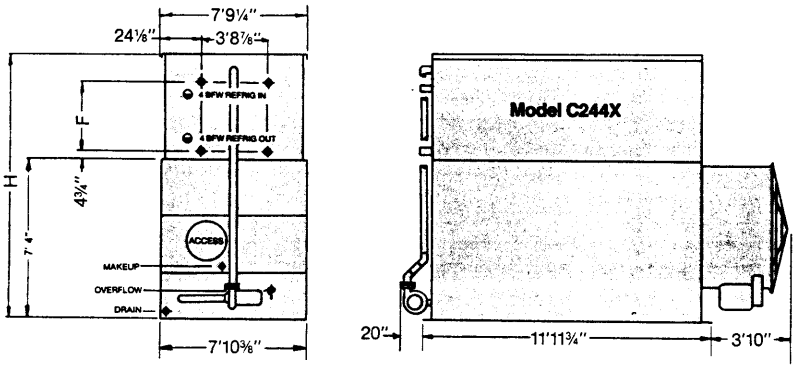


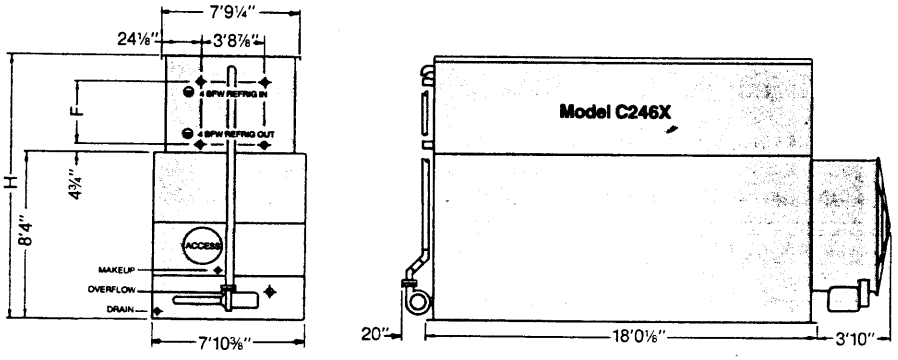


MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (Coil)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP BOTTOM DRAIN SIZE	REMOTE SUMP APPROX. OPER. WEIGHT	F	H
C2710-A	1070	1380	1070*	2900	1/3	35	1/3	19	2 1/2	1140	14 1/4	79 3/8
C2711-C	1260	1580	1260*	3800	3/4	35	1/3	25	2 1/2	1340	22 3/4	96 3/8
C2712-D	1420	1760	1000	4400	1	35	1/3	32	2 1/2	1520	31 1/4	104 7/8
C2712-F	1470	1810	1050	5300	2	35	1/3	34	2 1/2	1570	31 1/4	104 7/8
C2720-F	1850	2550	1850*	8200	2	75	1/2	35	3	2090	13 1/4	88 3/8
C2721-F	2100	2810	2100*	8900	2	75	1/2	45	3	2350	21 3/4	96 7/8
C2722-F	2390	3130	1650	8500	2	75	1/2	61	3	2670	30 1/4	105 3/8
C2722-G	2440	3180	1700	10000	3	75	1/2	65	3	2720	30 1/4	105 3/8
C2723-G	2700	3480	1940	9600	3	75	1/2	76	3	3020	38 3/4	113 7/8
C2723-H	2770	3550	2010	11600	5	75	1/2	80	3	3090	38 3/4	113 7/8
C2732-G	3670	4980	2400	12100	3	115	3/4	90	4	4230	33 1/4	117 3/8
C2732-H	3740	5050	2470	14500	5	115	3/4	100	4	4300	33 1/4	117 3/8
C2733-H	4160	5270	2850	14000	5	115	3/4	110	4	4520	42 1/2	126 5/8
C2742-H	4600	6370	3060	19600	5	150	1	120	6	5360	33 1/4	117 3/8
C2742-J	4680	6450	3140	22000	7 1/2	150	1	130	6	5440	33 1/4	117 3/8
C2743-J	5230	7060	3640	21000	7 1/2	150	1	145	6	6050	42 1/2	126 5/8
C2842-H	7130	8920	4920	25900	5	220	1 1/2	170	6	7510	33 1/4	129 3/8
C2842-J	7220	9010	5830	28300	7 1/2	220	1 1/2	190	6	7590	33 1/4	129 3/8
C2843-J	8120	9930	5930	28000	7 1/2	220	1 1/2	210	6	8510	42 1/2	138 5/8
C2844-K	8770	10580	6580	30100	10	220	1 1/2	245	6	9160	51 3/4	147 7/8
C2442-K	10450	13830	7050	44750	10	385	3	290	8	11870	33 1/4	141 3/4
C2443-K	11860	15380	8460	43400	10	385	3	360	8	13420	42 1/2	151
C2444-L	13310	16970	9860	48550	15	385	3	430	8	15010	51 3/4	160 1/4
C2462-L	15170	20260	10390	67650	15	580	5	435	10	17250	33 1/4	153 3/4
C2463-L	17350	22650	12570	65700	15	580	5	540	10	19640	42 1/2	163
C2464-L	19530	25050	14750	64200	15	580	5	645	10	22040	51 3/4	172 1/4
C2464-M	19540	25060	14750	70650	20	580	5	645	10	22050	51 3/4	172 1/4

*Unit normally ships in one piece.







NOTES:

1. Standard refrigerant connection sizes are 3-inch BFW inlet and outlet for C271X models, and 4-inch BFW inlet and outlet for all other C2000 models. Other connection sizes are available on special order.

2. Models C27XX, C284X, C244X, and C246X are single coil section units. Fan cycling results in only on-off operation. For additional steps of control, two-speed fan motors are recommended.

3. Refrigerant charge listed is R-717 operating charge. To determine operating charge for other refrigerants, multiply by the following factors: R-12, 2.13; R-22, 1.93; R-500, 1.87; R-502, 1.99.

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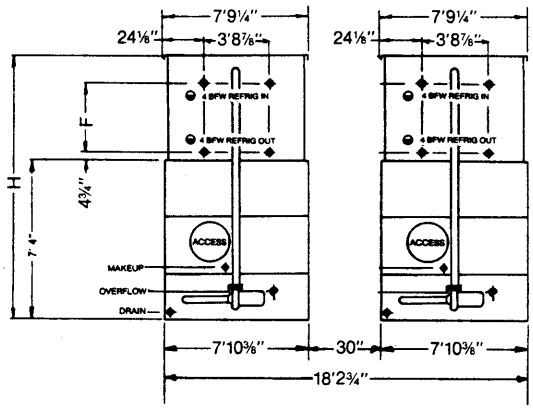
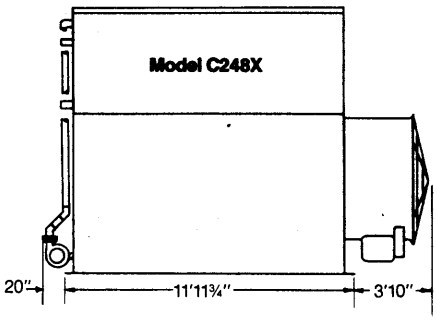
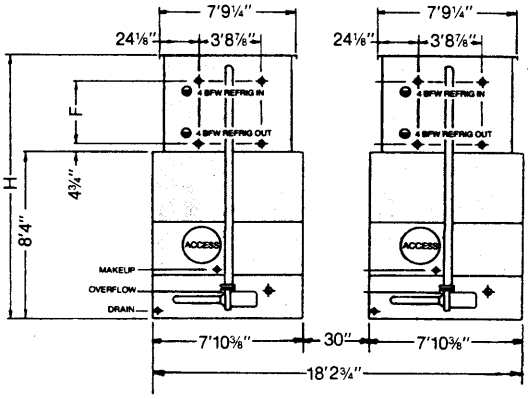
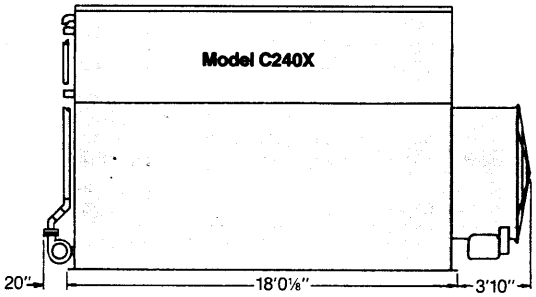








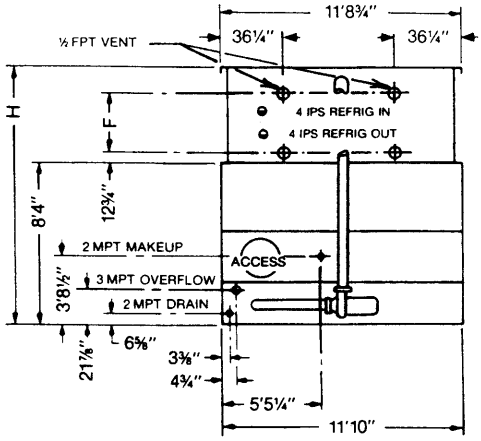
MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (Coil)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP		F	H
									BOTTOM DRAIN SIZE	APPROX. OPER. WEIGHT		
C2482-K	20900	27660	7050	89500	(2) 10	770	(2) 3	580	(2) 8	23740	33¼	141¾
C2483-K	23720	30760	8460	86800	(2) 10	770	(2) 3	720	(2) 8	26840	42½	151
C2484-L	26620	33940	9860	97100	(2) 15	770	(2) 3	860	(2) 8	30020	51¾	160¼
C2402-L	30340	40520	10390	135300	(2) 15	1160	(2) 5	870	(2) 10	34500	33¼	153¾
C2403-L	34700	45300	12570	131400	(2) 15	1160	(2) 5	1080	(2) 10	39280	42½	163
C2404-L	39060	50100	14750	128400	(2) 15	1160	(2) 5	1290	(2) 10	44080	51¾	172¼
C2404-M	39080	50120	14750	141300	(2) 20	1160	(2) 5	1290	(2) 10	44100	51¾	172¼

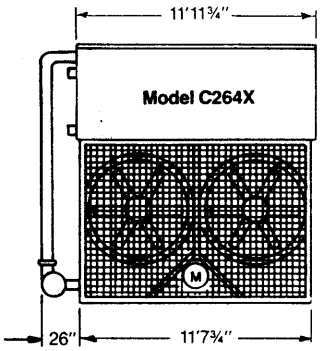
NOTES:

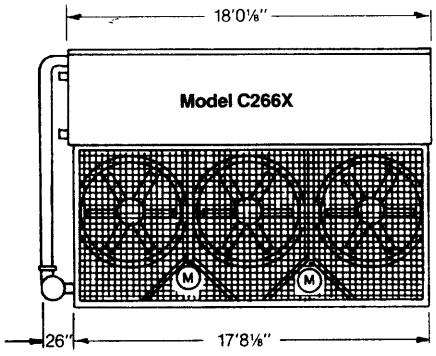
1. Standard refrigerant connection sizes are 4-inch BFW inlet and outlet for all models. Models C268X and C260X have refrigerant connections on both ends of the unit. Other connection sizes are available on special order.

2. Models C264X and C266X are single coil section units. Fan cycling results in only on-off operation. Models C248X, C240X, C268X, and C260X are furnished with two coil sections; fans for each section can be cycled to give 50% capacity control. For additional steps of control, two-speed fan motors are recommended.

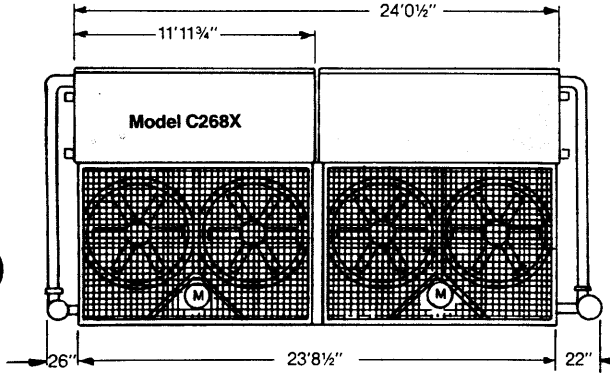
3. Refrigerant charge listed is R-717 operating charge. To determine operating charge for other refrigerants, multiply by the following factors: R-12, 2.13; R-22, 1.93; R-500, 1.87; R-502, 1.99.

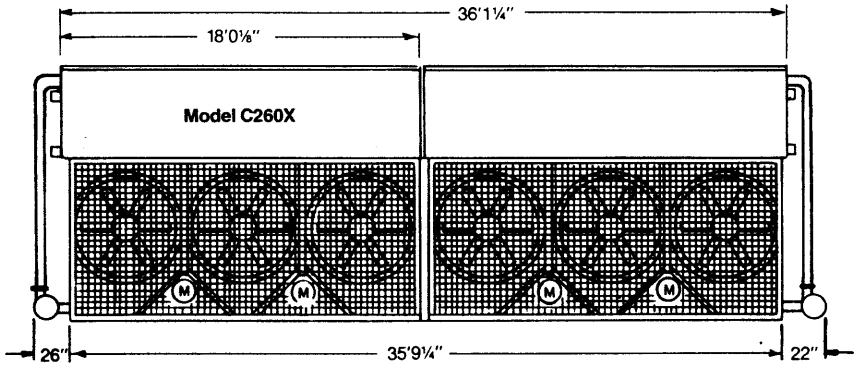






Ⓜ Fan Motor Location





MODEL NO.	APPROX. SHPG. WEIGHT	APPROX. OPER. WEIGHT	HEAVIEST SECTION (Coil)	CFM	MOTOR HP (0" ESP)	GPM	PUMP MOTOR HP	R-717 CHARGE (LBS.)	REMOTE SUMP		F	H
									BOTTOM DRAIN SIZE	APPROX. OPER. WEIGHT		
C2642-K	15290	24640	10300	59750	10	585	5	445	8	19600	33¼	161¾
C2642-L	15340	24690	10300	68400	15	585	5	445	8	19650	33¼	161¾
C2643-L	17410	26970	12370	66400	15	585	5	550	8	21930	42½	171
C2643-M	17420	26980	12370	73100	20	585	5	550	8	21940	42½	171
C2661-L	19280	33155	12120	105650	7½ & 15	835	5	500	10	25775	24	152½
C2662-K	22220	36430	15170	89700	5 & 10	835	5	665	10	29050	33¼	161¾
C2662-L	22330	36540	15170	102650	7½ & 15	835	5	665	10	29160	33¼	161¾
C2662-M	22350	36560	15170	113000	10 & 20	835	5	665	10	29180	33¼	161¾
C2663-L	25450	39990	18290	99600	7½ & 15	835	5	825	10	32610	42½	171
C2663-M	25470	40010	18290	109650	10 & 20	835	5	825	10	32630	42½	171
C2664-M	28580	43450	21400	107150	10 & 20	835	5	990	10	36070	51¾	180¼
C2664-N	28680	43550	21400	115400	15 & 25	835	5	990	10	36170	51¾	180¼
C2682-K	30570	49580	10300	119500	(2) 10	1170	(2) 5	890	10	39320	33¼	161¾
C2682-L	30670	49680	10300	136800	(2) 15	1170	(2) 5	890	10	39420	33¼	161¾
C2683-L	34810	54240	12370	132800	(2) 15	1170	(2) 5	1100	10	43980	42½	171
C2683-M	34830	54260	12370	146200	(2) 20	1170	(2) 5	1100	10	44000	42½	171
C2601-L	38540	66620	14300*	211300	(2) 7½ (2) 15	1670	(2) 5	1000	12	51690	24	152½
C2602-K	44420	73170	15170	179400	(2) 5 (2) 10	1670	(2) 5	1330	12	58240	33¼	161¾
C2602-L	44640	73390	15170	205300	(2) 7½ (2) 15	1670	(2) 5	1330	12	58460	33¼	161¾
C2602-M	44680	73430	15170	226000	(2) 10 (2) 20	1670	(2) 5	1330	12	58500	33¼	161¾
C2603-L	50880	80290	18290	199200	(2) 7½ (2) 15	1670	(2) 5	1650	12	65360	42½	171
C2603-M	50920	80330	18290	219300	(2) 10 (2) 20	1670	(2) 5	1650	12	65400	42½	171
C2604-M	57140	87210	21400	214300	(2) 10 (2) 20	1670	(2) 5	1980	12	72280	51¾	180¼
C2604-N	57340	87410	21400	230800	(2) 15 (2) 25	1670	(2) 5	1980	12	72480	51¾	180¼

*Pan section.