

**300 THROUGH 2,100 CFM**



**AMB Series**  
(2-pipe, cooling and heating)



**AMB-HW Series**  
(4-pipe, cooling and heating)



**AMBE Series**  
(2-pipe, cooling with electric heat)

Contractor shall furnish and install high quality air handling units as indicated on plans. Sizes and capacities shall be shown in the Unit Schedule included on the drawings. All units shall be the products of Applied Environmental Air (AE-Air) series fan coils and listed by UL or ETLC (listed in accordance with UL 1995.) Units shall be designed, tested and manufactured in accordance with ARI-410, 430, 440 and 350.

**Cabinets** shall be fabricated of lock forming quality (min) steel. External and internal parts are to be made with heavy gauge galvanized steel. Large access panels shall be provided to permit full access to internal components. The structural integrity of the cabinets shall remain unaffected by the removal of any or all access panels.

**Insulation** shall be blanket-type made from glass fibers bonded with a thermosetting resin. Insulation shall be one and-one-half pound density providing effective acoustical and thermal control, fire safety, and resistance to air erosion. This insulation must meet the requirements of ASTM C 1071, ASTM G 21, ASTM G22, NFPA 90A and UL-181.

**Coils** shall be of the staggered tube type constructed with seamless copper tubes and headers, and deep corrugated aluminum fins with straight edges. Manufacturer shall supply full depth collars, drawn in the fin stock to provide accurate control of fin spacing and completely cover the copper tubes to lengthen coil life. The tubes are to be mechanically expanded into the fins for a permanent primary to secondary surface bond, assuring maximum heat transfer efficiency. The coils are to be tested at 350 PSI for operation at 300 PSI gauge. The coils provided shall be suitable for the application and comply with the required performance as described in the Unit Schedule.

**Drain pans** shall be positive drainage and shall be fabricated of heavy gauge galvanized steel or optional 304 stainless steel and coated for corrosion protection.

**Fan Wheels** shall be double width, double inlet, forward curved, centrifugal type. They shall be statically and dynamically balanced for smooth, quiet operation. The housing shall be constructed of heavy gauge steel with die-formed inlet cones.

**Motors (Direct Drive)**

Standard motors are PSC, permanently lubricated type with internal thermal overload protection and are mounted with rubber isolation bushings. Blower wheels are DWDI (double width, double inlet) centrifugal, forward curved, and dynamically balanced.

**Filters** are to be disposable type. They shall be center loading with an 85% arrestance efficiency. The filters shall be included in the units as an integral part of the cabinet with easy access provided by the manufacturer.

**Additional Features**

**Optional “Autospeed 24V” control:**

The AMB and AMB-HW models are available with an optional 24V 3-speed control board and a 24V 3-speed digital wall thermostat. This option, called the “autospeed 24V”, provides maximum comfort and efficiency by automatically selecting the appropriate High, Medium, or Low fan speed, depending on room temperature and thermostat temperature setting. Contact the factory for information.

**AMB Series**

The AMB Series 2-pipe fan coil comes with a 4 row cooling / heating coil and a 120V multi-speed motor. No controls are furnished.

**AMBE Series (240V)**

The AMBE Series 2-pipe fan coil comes with a 4 row cooling coil, 240V multi-speed motor, 240/24 transformer, and up to 25kW of factory installed electric heat. Models with more than 10kW also include a circuit breaker for branch circuit protection. Control voltage is 24V.

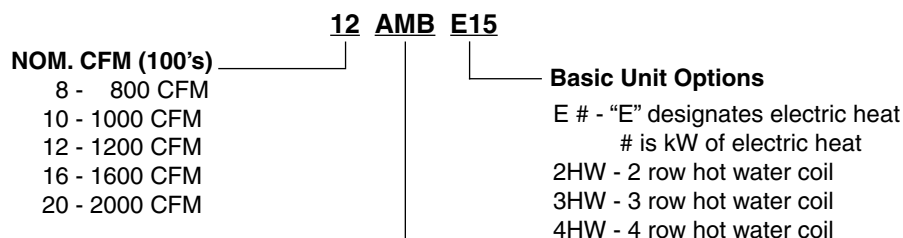
**AMBE Series (277V)**

This fan coil comes with a 4 row cooling coil, 277V multi-speed motor, and up to 10kW of factory installed electric heat. All models are U.L. Listed.

**AMB-HW Series**

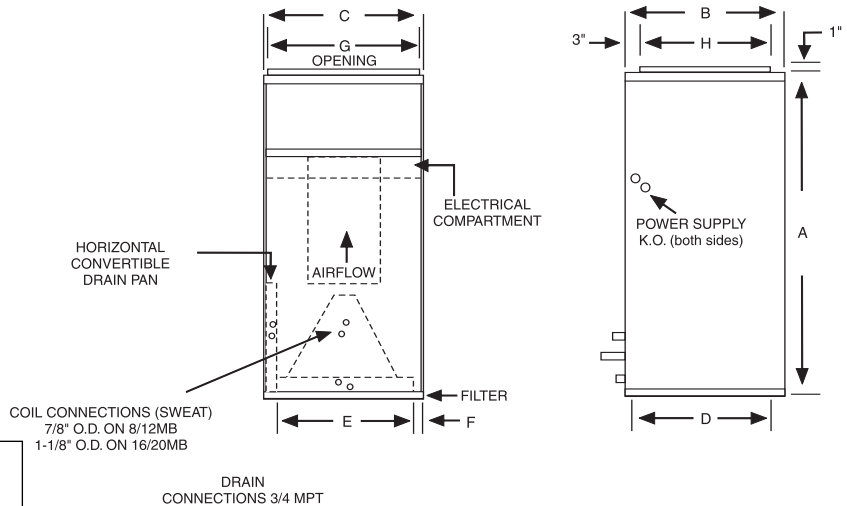
The AMB-HW Series 4-pipe fan coil includes a 4 row cooling coil, a 2, 3, or 4 row heating coil installed in the reheat position, and a 120V multi-speed motor. No controls are furnished.

**Model Number Nomenclature**



**PHYSICAL DIMENSIONS**

UNIT MODEL	A	B	C	D	E	F	G	H	COIL CONNECTIONS	FILTER SIZE	SHIP WT. (LBS)
8AMB	40	20	20	18-1/2	16	2	18	16	7/8 SWEAT	18 X 20 X 1	115
12AMB	42	23	20	21-1/2	16	2	18	19	7/8 SWEAT	20 X 22 X 1	120
16/20AMB	48	28	21-1/4	26-1/4	17-1/4	2	18	24	1-1/8 SWEAT	20 X 25 X 1	210



**NOTE: See Page 6 for cooling capacities and hand/motorized valves**

**Features:**

1. 4 row cooling / heating coil
2. 120V multi-speed motor
3. Vertical / Horizontal drain pan (right-to-left and left-to right airflow)
4. Manual air vent
5. Throw away filter

**HEATING DATA - 180°F EWT, 70° EAT**

UNIT MODEL	CFM	GPM	P.D. (FT. WTR.)	HEAT BTUH (1000)	LVG AIR °F	LVG WTR °F
8AMB	800	3.0	2.5	57.7	137	132
		4.5	5.5	52.2	142	142
		6.0	9.5	65.0	145	148
12AMB	1200	3.0	2.5	47.8	144	138
		4.5	5.5	51.0	149	147
		6.0	9.5	53.1	152	152
16AMB	1600	4.0	2.4	83.9	135	128
		6.0	4.8	90.9	140	140
		8.0	7.9	95.2	144	146
20AMB	2000	4.0	2.4	74.7	139	133
		6.0	4.8	80.3	144	143
		8.0	7.9	83.8	148	149
8AMB	800	6.0	3.3	118.7	138	131
		8.0	5.4	124.7	142	139
		10.0	7.9	129.5	145	144
12AMB	1200	6.0	3.3	108.3	142	134
		8.0	5.4	114.0	145	142
		10.0	7.9	118.1	148	146
16AMB	1600	7.0	4.3	141.6	136	126
		10.0	7.9	151.3	140	140
		13.0	12.5	157.5	143	146
20AMB	2000	7.0	4.3	121.7	140	135
		10.0	7.9	129.5	145	144
		13.0	12.5	134.4	148	149

**BLOWER DATA**

UNIT MODEL	NOM. COOL TONS	MOTOR HP-AMP (120V)	MOTOR SPEED	CFM vs. EXTERNAL STATIC PRESSURE					
				0.05	0.10	0.20	0.30	0.40	0.50
8AMB	2	1/5-3.0	High	920	890	825	750	680	580
			Med-Hi	750	730	680	610	540	450
			Med-Low	555	530	480	420	330	---
			Low	350	310	240	170	100	---
12AMB	3	1/3-6.0	High	1220	1185	1120	1070	1015	960
			Med-Hi	1085	1060	1010	960	910	865
			Med-Low	935	915	875	830	775	700
			Low	750	730	695	650	605	550
16AMB	4	1/2-8.0	High	1730	1690	1620	1540	1450	1350
			Med	1580	1550	1490	1430	1360	1270
			Low	1360	1340	1310	1270	1210	1100
20AMB	5	3/4-10.5	High	2030	2000	1950	1900	1840	1770
			Med	1630	1615	1580	1540	1490	1440
			Low	1280	1270	1240	1210	1180	1140

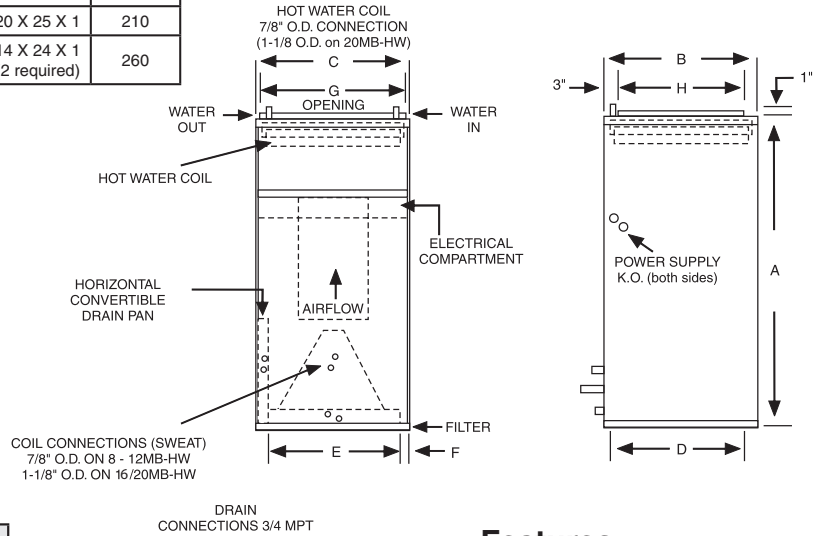
**NOTE: Discharge air temperature must not exceed 150 degrees.**

**Product Specifications**

Upflow Wall / Closet Fan Coils  
4-Pipe Chilled Water / Hot Water

**AMB-HW**

PHYSICAL DIMENSIONS										
UNIT MODEL	A	B	C	D	E	F	G	H	FILTER SIZE	SHIP WT. (LBS)
8AMB-HW	40	20	20	18-1/2	16	2	18	16	18 X 20 X 1	115
10/12AMB-HW	42	23	20	21-1/2	16	2	18	19	20 X 22 X 1	120
16AMB-HW	48	28	21-1/4	26-1/4	17-1/4	2	18	24	20 X 25 X 1	210
20AMB-HW	52	28	25-1/4	26-1/2	21-1/4	2	22	24	14 X 24 X 1 (2 required)	260



**HEATING DATA - 180°F EWT, 70° EAT**

UNIT MODEL	CFM	GPM	P.D. (FT. WTR.)	HEATING BTUH (1000) AT ENTERING WATER TEMPERATURE (1)		
				120°F	140°F	180°F
8AMB-2HW	800	1	0.13	13.0	18.2	28.6
		2	0.51	17.4	24.3	38.2
		3	1.13	18.9	26.5	41.7
	600	1	0.13	11.3	15.8	24.8
		2	0.51	14.9	20.8	32.7
		3	1.13	16.1	22.5	35.4
8AMB-3HW	800	1	0.22	16.6	23.3	36.5
		2	0.83	22.2	31.1	48.8
		3	1.83	24.2	33.9	53.2
	600	1	0.22	14.2	19.9	31.2
		2	0.83	18.7	26.2	41.4
		3	1.83	20.2	28.3	44.5
10AMB-3HW	1000	2	1.04	26.3	36.8	57.8
		4	3.64	30.7	43.0	67.6
		6	7.55	32.8	45.9	72.2
	800	2	1.04	23.1	32.3	50.7
		4	3.64	26.7	37.4	58.8
		6	7.55	28.4	39.8	62.5
12AMB-3HW	1300	2	1.10	30.2	42.3	66.5
		4	3.64	35.9	50.3	78.9
		6	7.55	38.6	54.0	84.9
	1100	2	1.10	27.9	39.0	61.3
		4	3.64	32.7	45.7	71.8
		6	7.55	24.9	48.9	76.8
16AMB-4HW	1700	4	1.40	50.5	70.7	111.2
		6	2.89	55.0	77.0	121.0
		8	4.83	57.9	81.0	127.4
	1500	4	1.40	46.7	65.3	102.6
		6	2.89	50.6	70.9	111.4
		8	4.83	53.2	74.4	116.9
20AMB-4HW	2100	5	1.86	62.4	87.4	137.4
		7	3.33	67.0	93.9	147.5
		9	5.15	70.2	98.3	154.5
	1800	5	1.86	56.6	79.3	124.6
		7	3.33	60.6	84.3	133.3
		9	5.15	63.3	88.6	139.3

(1) Contact factory for capacities at other conditions.

**Features:**

1. Separate cooling and heating coils (4 row cooling coil)
2. 120V multi-speed motor
3. Vertical / Horizontal drain pan (right-to-left and left-to-right airflow)
4. Manual air vent
5. Throw away filter

**BLOWER DATA**

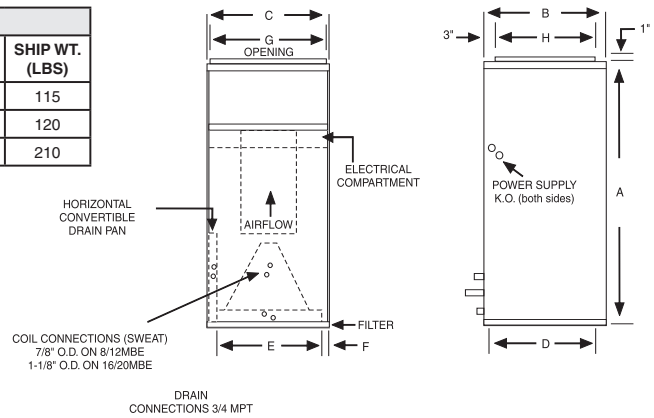
UNIT MODEL	NOM. COOL TONS	MOTOR HP-AMP (120V)	MOTOR SPEED	CFM vs. EXTERNAL STATIC PRESSURE					
				0.05	0.10	0.20	0.30	0.40	0.50
8AMB-HW	2	1/5-4.5	High	950	920	855	790	720	645
			Med	860	835	785	720	650	580
			Low	780	755	705	650	590	510
10AMB-HW	2.5	1/5-4.5	High	1120	1095	1045	995	940	880
			Med	850	840	810	780	740	690
			Low	680	670	655	625	585	510
12AMB-HW	3	1/2-8.0	High	1340	1310	1250	1190	1120	1050
			Med	1290	1260	1200	1140	1080	1000
			Low	1200	1170	1120	1070	1010	940
16AMB-HW	4	3/4-10.5	High	1810	1780	1760	1660	1590	1530
			Med	1570	1550	1510	1460	1400	1340
			Low	1280	1260	1220	1180	1130	1050
20AMB-HW	5	1-10.4	High	2160	2125	2055	1980	1895	1810
			Med	1865	1840	1785	1710	1620	1525
			Low	1560	1540	1490	1435	1365	1260

**NOTE: See Page 6 for cooling capacities and accessories**

PHYSICAL DIMENSIONS											
UNIT MODEL	A	B	C	D	E	F	G	H	COIL CONNECTIONS	FILTER SIZE	SHIP WT. (LBS)
8AMBE	40	20	20	18-1/2	16	2	18	16	7/8 SWEAT	18 X 20 X 1	115
12AMBE	42	23	20	21-1/2	16	2	18	17	7/8 SWEAT	20 X 22 X 1	120
16/20AMBE	48	28	21-1/4	26-1/4	17	2	19-7/8	18-1/2	1-1/8 SWEAT	20 X 25 X 1	210

ELECTRICAL DATA (240 / 208V)											
UNIT MODEL	ELECTRIC HEAT CAPACITY				TOTAL AMPS		MIN. CIR. AMPACITY		MAX. FUSE OR HACR BREAKER		
	kW		BTUH								
	240V	208V	240V	208V	240V	208V	240V	208V	240V	208V	
8AMBE	3	3	2.3	10,200	7,700	14	13	18	16	20	20
	4	4	3	13,600	10,200	19	16	23	20	25	20
	5	5	3.8	17,000	13,000	23	20	28	25	30	25
	6	6	4.5	20,500	15,400	27	24	36	29	40	30
	8	8	6	27,300	20,500	35	31	46	38	50	40
12AMBE	5	5	3.8	17,000	13,000	24	21	30	26	30	30
	8	8	6	27,300	20,500	36	32	46	40	50	40
	10	10	7.5	34,100	25,600	45	39	56	49	60	50
Reqs. 2 circuits (1) 15	15	15	11.3	51,100	38,500	45	39	56	49	60	50
	2ND CIRCUIT				21	18	26	23	30	25	
16AMBE	5	5	3.8	17,000	13,000	25	22	30	27	30	30
	8	8	6	27,300	20,500	37	33	47	40	50	40
	10	10	7.5	34,100	25,600	46	40	57	50	60	50
Reqs. 2 circuits (1) 15	15	15	11.3	51,100	38,500	46	40	57	50	60	50
	2ND CIRCUIT				21	18	27	23	30	25	
Reqs. 2 circuits (1) 20	20	20	15	68,200	51,100	46	40	57	50	60	50
	2ND CIRCUIT				42	36	53	46	60	50	
Reqs. 3 circuits (1) 25	25	25	18.75	85,250	63,900	46	40	57	50	60	50
	2ND CIRCUIT				42	36	53	46	60	50	
20AMBE	5	5	3.8	17,000	13,000	27	24	34	30	35	30
	8	8	6	27,300	20,500	40	35	49	44	50	45
	10	10	7.5	34,100	25,600	48	42	60	53	60	60
Reqs. 2 circuits (1) 15	15	15	11.3	51,100	38,500	48	42	60	53	60	60
	2ND CIRCUIT				21	18	27	23	30	25	
Reqs. 2 circuits (1) 20	20	20	15	68,200	51,100	48	42	60	53	60	60
	2ND CIRCUIT				42	36	53	46	60	50	
Reqs. 3 circuits (1) 25	25	25	18.75	85,250	63,900	48	42	60	53	60	60
	2ND CIRCUIT				42	36	53	46	60	50	
3RD CIRCUIT				21	18	27	23	30	25		

ELECTRICAL DATA (227V)						
UNIT MODEL	ELECTRIC HEAT CAPACITY			TOTAL AMPS	MIN. CIR. AMPACITY	MAX. FUSE OR HACR BREAKER
	kW	HP	BTUH			
8AMBE	0		-	1.2	-	-
	3		10,200	12	15	15
	5	1/6	17,000	20	24	25
	6		20,500	23	29	30
	8		27,300	30	38	40
12AMBE	0		-	2.4	-	-
	5	1/3	17,000	21	26	30
	8		27,300	32	40	40
16AMBE	0		-	3.0	-	-
	5	1/2	17,000	21	27	30
	8		27,300	32	40	40
20AMBE	0		-	4.0	-	-
	5	3/4	17,000	22	28	30
	8		27,300	33	40	40
10		34,100	40	50	50	



BLOWER DATA									
UNIT MODEL	NOM. COOL TONS	MOTOR HP-AMP (240V)	MOTOR SPEED	CFM vs. EXTERNAL STATIC PRESSURE					
				0.05	0.10	0.20	0.30	0.40	0.50
8AMBE	2	1/6-2.0	High Low	900 740	880 710	830 660	790 630	700 570	600 490
12AMBE	3	1/3-2.5	High Low	1410 1170	1380 1150	1310 1100	1270 1080	1190 1030	1060 970
16AMBE	4	1/2-3.5	High Med Low	1760 1490 1280	1730 1460 1260	1640 1400 1210	1580 1370 1190	1480 1300 1130	1360 1210 1080
20AMBE	5	3/4-5.0	High Low	2130 1690	2110 1680	2060 1640	2025 1620	1930 1580	1820 1540

**NOTE:**  
16MBE is factory wired on high speed for cooling.

**Features:**

1. Factory installed electric heat
2. 4 row cooling coil
3. 208/240V motor
4. 240/24V transformer
5. Circuit breaker disconnect (above 10kW) (Except 277V)
6. Manual air vent
7. Throw away filter
8. Vertical / horizontal drain pan (right-to-left and left-to-right airflow)
9. 277 V models available (10kW max)

(1) 15kW and 20kW models require 2 supply circuits. 25kW models require 3 supply circuits.

**NOTES:**  
Units suitable for installation with 0" clearance to combustible material.

**NOTE: See Page 6 for cooling capacities and accessories**



**Product Specifications**

Upflow Wall / Closet Fan Coils  
2-Pipe Cooling / Heating

**CHILLED WATER CAPACITY  
& ACCESSORIES**

CHILLED WATER COOLING CAPACITY - 4 ROW (AMB, AMB-HW, AMBE SERIES)															
UNIT MODEL	CFM	GPM	P.D. (FT. WTR.)	45°F ENTERING WATER						42°F ENTERING WATER					
				80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR			80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR		
				TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE
8AMB	600	3.0	2.5	19.0	13.8	12.7	14.5	12.1	9.7	20.7	14.4	13.8	15.8	12.6	10.5
		4.5	5.5	22.4	15.1	9.9	17.1	13.1	7.6	24.4	15.9	10.8	18.6	13.7	8.3
		6.0	9.5	24.4	15.9	8.2	18.7	13.7	6.2	26.6	16.8	8.9	20.3	14.4	6.8
	800	3.5	3.4	23.1	17.3	13.2	17.6	15.2	10.1	25.2	18.1	14.4	19.2	15.8	11.0
		5.0	6.7	26.9	18.7	10.7	20.5	16.3	8.2	29.3	19.6	11.7	22.4	17.1	8.9
		6.5	11.0	29.2	19.6	9.0	22.3	17.0	6.9	31.8	20.6	9.8	24.3	17.8	7.5
10/12AMB	1000	4.0	2.4	28.3	21.6	14.1	21.6	19.0	10.8	30.8	22.5	15.4	23.6	19.7	11.8
		6.0	4.8	33.9	23.7	11.3	25.9	20.6	8.6	36.9	24.8	12.3	28.2	21.6	9.4
		8.0	7.9	37.3	25.0	9.3	28.5	21.7	7.1	40.6	26.3	10.2	31.0	22.7	7.8
	1200	5.0	3.5	33.7	25.5	13.5	25.8	22.4	10.3	36.8	26.6	14.7	28.1	23.3	11.3
		6.5	5.5	38.0	27.1	11.7	29.1	23.7	8.9	41.5	28.4	12.8	21.7	24.7	9.7
		8.0	7.9	41.0	28.2	10.3	31.3	24.6	7.8	44.7	29.6	11.2	34.1	25.7	8.5
16AMB	1400	4.5	2.0	36.2	29.2	16.1	27.7	25.8	12.3	39.5	30.3	17.6	30.1	26.7	13.4
		6.0	3.3	42.4	31.4	14.1	32.4	27.6	10.8	46.2	32.8	15.4	35.3	28.7	11.8
		7.5	4.8	46.9	33.1	12.5	35.8	28.9	9.6	51.1	34.7	13.6	39.0	30.2	10.4
	1600	6.0	3.3	44.2	34.1	14.7	33.8	30.0	11.3	48.2	35.5	16.1	36.8	31.2	12.3
		8.0	5.4	51.0	36.6	12.7	38.9	32.0	9.7	55.5	38.3	13.9	42.4	33.4	10.6
		10.0	7.9	55.7	38.4	11.1	42.5	33.4	8.5	60.7	40.3	12.1	46.3	34.9	9.3
20AMB	1600	6.5	3.8	46.1	34.8	14.2	35.2	30.6	10.8	50.3	36.3	15.5	38.4	31.8	11.8
		8.5	6.0	52.3	37.1	12.3	39.9	32.4	9.4	57.0	38.8	13.4	43.5	33.8	10.2
		10.5	8.6	56.6	38.7	10.8	43.2	33.7	8.2	61.7	40.7	11.8	47.1	35.2	9.0
	2000	7.0	4.3	52.4	40.9	15.0	40.0	36.1	11.4	57.1	42.6	16.3	43.6	37.4	12.5
		10.0	7.9	61.7	44.3	12.3	47.1	38.8	9.4	67.3	46.4	13.5	51.4	40.5	10.3
		13.0	12.5	67.5	46.5	10.4	51.6	40.5	7.9	73.6	48.8	11.3	56.2	42.4	8.6

**NOTE:**

1. All cooling coils have four rows.
2. Contact factory for capacities at other conditions.

ACCESSORIES: (field installed) AMB, AMB-HW, AMBE Series	
<b>Power Heads: (two power heads required for 4-pipe) - For all units</b>	
E50131180 E50132180 E50137180 E50138180	24V 110V/50Hz - 120V/60 Hz 277V 220V/50 Hz - 230V/60 Hz
<b>Separate Valve Bodies: (order power heads separately)</b>	
E421317 E431317 E421417 E431417	3/4" 2-way - For (P)HYB, 8-12AMB/AMBE/AMB-HW (and 8-16AMB-HW htg.coil) 3/4" 3-way - For (P)HYB, 8-12AMB/AMBE/AMB-HW (and 8-16AMB-HW htg.coil) 1" 2-way - For 16-20AMB/AMBE/AMB-HW (and 20AMB-HW htg coil) 1" 3-way - For 16-20AMB/AMBE/AMB-HW (and 20AMB-HW htg coil)
<b>Hand Valves: (Combination balance / shut-off) (2 usually req'd per coil)</b>	
CP90 CP905	3/4" For 8-12AMB/AMBE/AMB-HW (8-16AMB-HW Htg. coil) 1" For 16-20AMB/AMBE/AMB-HW (16 and 20AMB-HW Htg. coil)
<b>Relay - Transformer</b>	
310-E301	120 / 24V for ALL 120V motors

**NOTE:**

1. Power head leads are 18".

