

### 13 SEER, 7.7 HSPF, PACKAGE HEAT PUMP, 2.5 to 5 TONS

208/230-3-60, 460-3-60

#### REFRIGERATION CIRCUIT

- Environmentally sound R-410A refrigerant
- Copper tube/aluminum fin condenser and evaporator coils
- Scroll compressor standard on all models
- Short-cycling protection for the compressor is built into the defrost control board
- Dehumidification mode (airflow reduction) on all models

#### EASY TO INSTALL AND SERVICE

- Installs easily on a rooftop or at ground level
- Easy three-panel accessibility for maintenance and installation
- Easily converts to down discharge applications
- Combination electric heating and cooling

#### BUILT TO LAST

- 2" spacing wire grilles standard on all models
- High efficiency ECM indoor blower motor on all models
- Pre-painted steel cabinet
- Vertical condenser fan discharge
- Full perimeter steel base rails
- High and low pressure switches provide added reliability for the compressor

#### WARRANTY

- 5 year compressor limited warranty
- 1 year parts limited warranty



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

UNIT PERFORMANCE DATA							
Model Number	COOLING			HEATING		Unit Dimensions Height x Width x Depth in (mm)	Operating Weight lbs (kg)
	Capacity BTU/h	SEER	EER	Capacity BTU/h	HSPF		
PHD330000H000C	29,000	13.5	11.5	29,000	7.7	42 <sup>1</sup> / <sub>8</sub> x48 <sup>3</sup> / <sub>16</sub> x32 <sup>5</sup> / <sub>8</sub> (1070x1224x829)	332 (150)
PHD336000^000C	35,000	13.5	11.5	35,000	7.7	42 <sup>1</sup> / <sub>8</sub> x48 <sup>3</sup> / <sub>16</sub> x32 <sup>5</sup> / <sub>8</sub> (1070x1224x829)	336 (152)
PHD342000^000C	40,000	13.2	11.5	40,000	7.7	44 <sup>3</sup> / <sub>4</sub> x48 <sup>3</sup> / <sub>16</sub> x44 <sup>1</sup> / <sub>8</sub> (1137x1225x1122)	411 (186)
PHD348000^000C	47,000	13.5	11.5	46,500	7.7	44 <sup>3</sup> / <sub>4</sub> x48 <sup>3</sup> / <sub>16</sub> x44 <sup>1</sup> / <sub>8</sub> (1137x1225x1122)	429 (194)
PHD360000^000C	57,000	13.5	11.5	57,000	7.7	48 <sup>3</sup> / <sub>4</sub> x48 <sup>3</sup> / <sub>16</sub> x44 <sup>1</sup> / <sub>8</sub> (1238x1225x1122)	454 (206)

^ H = 208/230 V, L = 460 V

MODEL NOMENCLATURE											
MODEL SERIES	1	2	3	4	5,6	7,8,9	10	11,12	13	14	15
	P	H	D	3	36	000	H	00	0	C	1
P = Package		TYPE		SEER		VOLTAGE		FACTORY INSTALLED OPTIONS		FEATURE CODE	
H = Heat Pump		D = Standard		3 = 13 4 = 14		30 = 30,000 BTUH = 2.5 Tons 36 = 36,000 BTUH = 3 Tons 42 = 42,000 BTUH = 3.5 Tons 48 = 48,000 BTUH = 4 Tons 60 = 60,000 BTUH = 5 Tons		000 = no factory heat		0 = Standard	
		NOMINAL COOLING CAPACITY		NOMINAL HEATING BTUH (input)		00 = No options		0 = Standard		Sales Model Digit	
										Engineering Digit	

## AHRI\* CAPACITIES

COOLING CAPACITIES AND EFFICIENCIES – PHD3					
UNIT PHD3	NOMINAL TONS	STANDARD CFM	COOLING CAPACITIES (Btuh)	EER**	SEER†
30	2-1/2	1000	29,000	11.5	13.5
36	3	1200	35,000	11.5	13.5
42	3-1/2	1400	40,000	11.5	13.2
48	4	1600	47,000	11.5	13.5
60	5	1850	57,000	11.5	13.5

HEAT PUMP HEATING CAPACITIES AND EFFICIENCIES – PHD3					
UNIT PHD3	HEATING CAPACITY (Btuh) @ 47°F (8.3°C)	COP @ 47°F (8.3°C)	HEATING CAPACITY (Btuh) @ 17°F (-8.3°C)	COP @ 17°F (-8.3°C)	HSPF†
30	29,000	3.5	15,900	2.2	7.7
36	35,000	3.4	20,400	2.3	7.7
42	40,000	3.4	22,000	2.2	7.7
48	46,500	3.6	26,200	2.3	7.7
60	57,000	3.5	31,000	2.3	7.7

### LEGEND

dB – Sound Levels (decibels)

db – Dry Bulb

SEER – Seasonal Energy Efficiency Ratio

wb – Wet Bulb

COP – Coefficient of Performance

HSPF – Heating Season Performance Factor

\* Air Conditioning, Heating & Refrigeration Institute.

\*\*At "A" conditions—80°F (26.7°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor db.

†Rated in accordance with U.S. Government DOE (Department of Energy) test procedures and/or AHRI Standards 210/240.

### Notes:

1. Ratings are net values, reflecting the effects of circulating fan heat.

Ratings are based on:

**Cooling Standard:** 80°F (26.7°C) db, 67°F (19.4°C) wb indoor entering–air temperature and 95°F (35°C) db outdoor entering–air temperature.

2. Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

**ELECTRICAL DATA – PHD3**

**208/230V – 3 Ph – 60 Hz**

UNIT	NOMINAL V-PH-HZ	VOLTAGE RANGE		COMPRESSOR			OFM	IFM	ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	RLA	LRA	MCC	FLA	FLA	NOMINAL kW 208/230	FLA 208/230	MCA 208/230	MOCPP 208/230
PHD330H	208/230-3-60	197	253	10.9	58	13.9	1.2	4.1	-/-	-/-	18.9	25
									3.8/5	10.4/12	31.9/33.9	35/35
									7.5/10	20.8/24.1	44.9/49.1	45/50
									11.3/15	31.2/36.1	57.9/64.1	60/70
PHD336H	208/230-3-60	197	253	13	73	16.3	1.2	6.0	-/-	-/-	23.5	30
									3.8/5	10.4/12	36.5/38.5	40/40
									7.5/10	20.8/24.1	49.5/53.6	50/60
									11.3/15	31.2/36.1	62.5/68.6	70/70
PHD342H	208/230-3-60	197	253	13.5	88	21.1	1.2	6.0	-/-	-/-	24.1	35
									3.8/5	10.4/12	37.1/39.1	40/40
									7.5/10	20.8/24.1	50.1/54.2	60/60
									11.3/15	31.2/36.1	63.1/69.2	70/70
PHD348H	208/230-3-60	197	253	14.8	83.1	21.4	1.2	7.6	-/-	-/-	27.3	40
									3.8/5	10.4/12	40.3/42.3	45/45
									7.5/10	20.8/24.1	53.3/57.4	60/60
									11.3/15	31.2/36.1	66.3/72.4	70/80
PHD360H	208/230-3-60	197	253	18.4	110	24.9	1.2	7.6	-/-	-/-	27.3	40
									3.8/5	10.4/12	44.8/46.8	40/50
									7.5/10	20.8/24.1	57.8/61.9	60/70
									11.3/15	31.2/36.1	70.8/76.9	80/80
									15/19.91	41.4/47.9	83.6/91.7	90/100

**460V – 3 Ph – 60 Hz**

PHD336L	460-3-60	414	506	6	38	9.0	0.5	3.0	-	-	11	15
									5	6	18.5	20
									10	12	26	30
									15	18	33.5	35
PHD342L	460-3-60	414	506	6.2	44	9.3	0.5	3.0	-	-	11.3	15
									5	6	18.8	20
									10	12	26.3	30
									15	18	33.8	35
PHD348L	460-3-60	414	506	6.5	41	9.7	0.5	3.8	-	-	12.4	15
									5	6	19.9	20
									10	12	27.4	30
									15	18	34.9	35
PHD360L	460-3-60	414	506	8	52	12.1	0.5	3.8	-	-	14.3	20
									5	6	21.8	25
									10	12	29.3	30
									15	18	36.8	40
									20	24.1	44.4	45

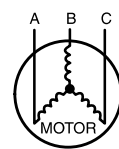
See Legend and Notes below.

**LEGEND**

- FLA -- Full Load Amps
- LRA -- Locked Rotor Amps
- MCA -- Minimum Circuit Amps
- MOCPP -- Maximum Overcurrent Protection
- RLA -- Rated Load Amps



EXAMPLE: Supply voltage is 230-3-60.



- AB = 228 v
- BC = 231 v
- AC = 227 v

$$\text{Average Voltage} = \frac{228 + 231 + 227}{3}$$

$$= \frac{686}{3}$$

$$= 229$$

Determine maximum deviation from average voltage.

- (AB) 229 - 228 = 1 v
- (BC) 231 - 229 = 2 v
- (AC) 229 - 227 = 2 v

Maximum deviation is 2 v.

Determine percent of voltage imbalance

$$\% \text{ Voltage Imbalance} = 100 \times \frac{2}{229}$$

$$= 0.8\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

**NOTES:**

1. In compliance with NEC (National Electrical Code) requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be Power Supply fuse. The CGA (Canadian Gas Association) units may be fuse or circuit breaker.
2. Minimum wire size is based on 60 C copper wire. If other than 60 C wire is used, or if length exceeds wire length in table, determine size from NEC.
3. Unbalanced 3-Phase Supply Voltage  
*Never operate a motor where a phase imbalance in supply voltage is greater than 2%.* Use the following formula to determine the percentage of voltage imbalance

$$\% \text{ Voltage imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

PHYSICAL DATA - UNIT PHD3						
UNIT SIZE		30	36	42	48	60
NOMINAL CAPACITY (ton)		2.5	3	3.5	4	5
SHIPPING WEIGHT (lb)		340	343	419	437	462
(kg)		154	156	190	198	210
COMPRESSOR QUANTITY		1				
TYPE		SCROLL COMPRESSOR				
REFRIGERANT		R-410A				
REFRIGERANT	Quantity (lb)	10.2	7.9	10.0	9.6	12.3
	Quantity (kg)	4.6	3.6	4.5	4.4	5.6
METERING DEVICE ID	DEVICE ID	TXV				
ORIFICE OD	(in.) (mm)	0.035 (2)	0.037 (2)	0.038 (Left OD Coil)	0.046 (2)	0.052 (2)
		.89	.94	0.040 (Right OD Coil)	1.2	1.3
OUTDOOR COIL	Rows... Fins/in. face area (sq. ft.)	2...21	2...21	2...21	2...21	2...21
		11.9	11.9	13.6	13.6	17.5
OUTDOOR FAN	Nominal Airflow (CFM)	2700	2700	3100	3100	3100
	Fan Diameter (in.)	24	24	26	26	26
	Fan Diameter (mm)	610	610	660	660	660
	Diameter Motor HP (RPM)	1/5 (810)	1/5 (810)	1/5 (810)	1/5 (810)	1/5 (810)
INDOOR COIL	Rows... Fins/in. face area (sq. ft.)	3...17	3...17	3...17	3...17	3...17
		3.7	3.7	4.7	4.7	5.7
INDOOR BLOWER	Nominal Cooling Airflow (CFM)	1000	1200	1400	1600	1850
	Size (in.)	10x10	11x10	11x10	11x10	11x10
	(mm)	254x254	279x254	279x254	279x254	279x254
	Motor (HP)	1/2	3/4	3/4	1.0	1.0
HIGH-PRESSURE SWITCH (psig)	Cutout Reset (Auto)	650±15				
		420±25				
LOSS-OF-CHARGE/LOW-PRESSURE SWITCH	(Liquid Line) (psig) Cutout Reset (Auto)	20±5				
		45±10				
RETURN-AIR FILTERS*†	throwaway (in.) (mm)	20x24x1	24x30x1			24x36x1
		508x610x25	610x762x25			610x914x25

\*Required filter sizes shown are based on the larger of the AHRI (Air conditioning, Heating, and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for throwaway type or 450 ft/minute for high-capacity type. Air filter pressure drop for non-standard filters must not exceed 0.08 in wc.

† If using accessory filter rack refer to the filter rack installation instructions for correct filter size and quantity.

DRY COIL AIR DELIVERY* - HORIZONTAL AND DOWNFLOW DISCHARGE - UNIT PHD330-60												
UNIT	MOTOR SPEED	WIRE COLOR		EXTERNAL STATIC PRESSURE (in wc)								
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
PHD330	Low	Blue	CFM	741	638	547	415	---	---	---	---	---
	Med-Low	Pink	CFM	973	887	823	733	665	538	451	---	---
	Medium	Red	CFM	1088	1023	954	881	800	723	658	563	461
	Med-High <sup>1</sup>	Orange	CFM	1140	1064	996	915	840	758	687	564	480
PHD336	High	Black	CFM	1202	1140	1082	1015	961	881	810	732	631
	Low	Blue	CFM	1234	1168	1093	1021	961	894	825	759	687
	Med-Low	Pink	CFM	1290	1223	1154	1090	1027	977	894	828	762
	Medium <sup>1</sup>	Red	CFM	1354	1290	1226	1158	1102	1046	981	918	843
PHD342	Med-High	Orange	CFM	1606	1546	1489	1430	1371	1316	1258	1208	1140
	High	Black	CFM	1630	1580	1517	1463	1407	1339	1277	1210	1131
	Low	Blue	CFM	1295	1234	1182	1126	1075	1016	955	898	857
	Med-Low	Pink	CFM	1345	1282	1235	1194	1140	1095	1027	974	921
PHD348	Medium	Red	CFM	1505	1452	1413	1358	1323	1282	1234	1169	1130
	Med-High <sup>1</sup>	Orange	CFM	1545	1492	1449	1411	1362	1313	1278	1231	1188
	High	Black	CFM	1705	1643	1607	1568	1518	1483	1448	1404	1360
	Low	Blue	CFM	1402	1351	1311	1263	1224	1172	1136	1080	1041
PHD360	Med-Low	Pink	CFM	1457	1404	1367	1318	1284	1233	1197	1144	1104
	Medium <sup>1</sup>	Red	CFM	1736	1695	1642	1601	1553	1512	1465	1427	1381
	Med-High	Orange	CFM	2149	2111	2062	2026	1980	1945	1905	1864	1793
	High	Black	CFM	2344	2306	2259	2203	2141	2070	1991	1902	1803
PHD360	Low	Blue	CFM	1445	1389	1341	1281	1236	1189	1139	1072	1027
	Med-Low	Pink	CFM	1678	1635	1602	1558	1513	1474	1438	1404	1349
	Medium <sup>1</sup>	Red	CFM	1927	1893	1858	1824	1791	1759	1720	1689	1640
	Med-High	Orange	CFM	2131	2088	2065	2013	1982	1941	1888	1860	1785
High	Black	CFM	2461	2409	2339	2286	2192	2140	2062	1968	1874	

\* Air delivery values are without air filter and are for dry coil (See PHD3- Horizontal Wet Coil Pressure Drop Table).

<sup>1</sup> Factory-shipped cooling speed

NOTE: For horizontal applications deduct field-supplied air filter pressure drop and wet coil pressure drop to obtain external static pressure available for ducting. For downflow applications see Wet Coil Air Delivery Table for available static including wet coil, 1-in. (25 mm) filter and economizer.

Shaded areas indicate speed/static combinations that are not permitted for dehumidification speed.

**HORIZONTAL WET COIL PRESSURE DROP (in wc)**

UNIT PHD3	STANDARD CFM (S.C.F.M.)																
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	
30				0.12	0.15	0.19	0.23	0.27									
36						0.07	0.11	0.18	0.26	0.35							
42								0.04	0.07	0.1	0.15	0.21					
48										0.11	0.14	0.17	0.22	0.28			
60												0.1	0.17	0.23	0.31	0.36	

**WET COIL AIR DELIVERY (CFM) - DOWNFLOW - HIGH SPEED WITH 1-IN. (25 MM) FILTER AND ECONOMIZER**

UNIT PHD3	EXTERNAL STATIC PRESSURE (in wc)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
36	1333	1289	1256	1214	1152	1118	1076	1035	997	950
42	1612	1569	1527	1481	1451	1393	1351	1317	1278	1242
48	2166	2085	2002	1919	1798	1709	1582	1467	1270	988
60	2298	2239	2180	2110	2044	1951	1862	1777	1697	1591

**HORIZONTAL FILTER PRESSURE DROP TABLE (in wc)**

FILTER SIZE in. (mm)	CFM																		
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
20X24X1 (508X610x25)	—	—	—	.09	.10	.11	.13	.14	.15	.16	—	—	—	—	—	—	—	—	—
24X30X1 (610X762x25)	—	—	—	0.04	0.05	0.06	0.07	0.07	0.08	0.09	0.1	—	—	—	—	—	—	—	—
24X36X1 (610X914X25)	—	—	—	—	—	—	—	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.14	0.14

**ECONOMIZER 1-IN. FILTER PRESSURE DROP (in wc)**

UNIT PHD3	PRESSURE DROP
30-36	0.20
42-60	0.25

**MULTIPLICATION FACTORS**

HEATER KW RATING	VOLTAGE DISTRIBUTION	MULTIPLICATION FACTOR
240	200	0.69
	208	0.75
	230	0.92
	240	1.00

**ELECTRIC HEAT PRESSURE DROP TABLE (in wc) SMALL CABINET: PHD330-36 CFM**

	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
5kw	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.06	0.07
7.5 kw	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.05	0.07	0.08	0.09
10 kw	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.06	0.07	0.09	0.10	0.11
15 kw	0.00	0.00	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18

**ELECTRIC HEAT PRESSURE DROP TABLE (in wc) LARGE CABINET PHD342-060 CFM**

	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
5kw	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12
7.5 kw	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13
10 kw	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13
15 kw	0.00	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15
20 kw	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16

**MINIMUM AIRFLOW FOR RELIABLE ELECTRIC HEATER OPERATION (CFM)**

SIZE	PHD330	PHD336	PHD342	PHD348	PHD360
AIRFLOW (CFM)	1025	1250	1400	1710	1800

**A-WEIGHTED SOUND POWER LEVEL (dBA)**

MODEL PHD3	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
30	76	60.5	67.5	72.0	70.0	67.0	61.0	51.5
36	77	63.0	68.0	73.0	71.0	67.0	62.0	55.0
42	78	65.0	68.5	74.5	72.5	69.5	64.5	56.5
48	78	62.0	68.5	74.0	72.5	70.0	64.0	56.0
60	76	63.0	66.5	69.5	71.0	66.0	65.0	59.0

NOTE: Tested in accordance with AHRI Standard 270 (not listed in AHRI).

**PHD330 COOLING EXTENDED PERFORMANCE TABLE**

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW
875 / 0.13	57 (13.9)	27.44	27.44	2.00	26.40	26.40	2.22	25.31	25.31	2.47	24.13	24.13	2.75	22.83	22.83	3.07	21.42	21.42	3.44
	62 (16.7)	28.39	28.39	2.00	27.09	27.09	2.22	25.75	24.11	2.47	24.34	23.30	2.75	22.88	22.88	3.07	21.45	21.45	3.44
	63* (17.2)	28.86	20.79	2.00	27.53	20.17	2.22	26.13	19.52	2.47	24.63	18.84	2.75	23.00	18.09	3.07	21.25	17.29	3.44
1000 / 0.17	67 (19.4)	31.27	21.73	2.02	29.83	21.10	2.24	28.33	20.46	2.49	26.73	19.77	2.76	25.00	19.04	3.08	23.14	18.24	3.45
	72 (13.9)	34.57	17.68	2.04	32.97	17.10	2.26	31.32	16.50	2.51	29.56	15.87	2.79	27.68	15.20	3.10	25.66	14.44	3.46
	57 (13.9)	28.78	28.78	2.04	27.67	27.67	2.26	26.49	26.49	2.50	25.23	25.23	2.78	23.84	23.84	3.11	22.33	22.33	3.47
1125 / 0.21	62 (16.7)	29.25	27.45	2.04	27.91	26.71	2.26	26.55	26.55	2.50	25.27	25.27	2.79	23.88	23.88	3.11	22.37	22.37	3.47
	63* (17.2)	29.64	22.24	2.04	28.24	21.59	2.26	26.76	20.92	2.51	25.20	20.20	2.78	23.51	19.42	3.10	21.69	18.56	3.47
	67 (19.4)	32.09	23.29	2.05	30.58	22.64	2.28	29.00	21.96	2.52	27.32	21.25	2.80	25.54	20.48	3.12	23.60	19.64	3.48
1125 / 0.21	72 (13.9)	35.47	18.74	2.08	33.78	18.14	2.30	32.02	17.52	2.55	30.20	16.83	2.82	28.25	16.11	3.14	26.14	15.32	3.49
	57 (13.9)	29.95	29.95	2.07	28.75	28.75	2.29	27.50	27.50	2.54	26.15	26.15	2.82	24.69	24.69	3.14	23.10	23.10	3.51
	62 (16.7)	30.03	30.03	2.07	28.81	28.81	2.30	27.55	27.55	2.54	26.20	26.20	2.82	24.73	24.73	3.14	23.14	23.14	3.51
1125 / 0.21	63* (17.2)	30.27	23.63	2.07	28.80	22.96	2.29	27.27	22.26	2.54	25.65	21.50	2.82	23.91	20.68	3.14	22.05	19.77	3.50
	67 (19.4)	32.74	24.80	2.09	31.17	24.11	2.31	29.54	23.41	2.56	27.80	22.67	2.83	25.95	21.86	3.15	23.97	20.96	3.51
	72 (13.9)	36.13	19.76	2.11	34.40	19.10	2.34	32.60	18.43	2.58	30.70	17.73	2.86	28.69	16.98	3.17	26.51	16.17	3.53

\*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority (TVA) rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

**PHD330 HEATING EXTENDED PERFORMANCE TABLE**

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																							
		-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)		
		EDB °F (°C)	CFM	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW	Capacity MBtuh	Total Sys KW
65 (18.3)	875	8.58	7.89	1.91	11.60	10.67	1.98	14.83	13.61	2.04	18.37	16.66	2.12	22.35	19.58	2.21	26.08	26.08	2.29	30.29	30.29	2.39	35.28	35.28	2.52
	1000	8.75	8.05	1.92	11.81	10.87	1.99	15.07	13.83	2.05	18.71	16.97	2.11	22.60	19.80	2.19	26.39	26.39	2.26	30.70	30.70	2.35	35.83	35.83	2.47
	1125	8.92	8.20	1.95	11.99	11.04	2.00	15.28	14.02	2.06	19.32	17.52	2.12	22.81	19.98	2.18	26.65	26.65	2.24	31.04	31.04	2.32	36.29	36.29	2.43
70 (21.1)	875	8.06	7.42	1.98	11.12	10.23	2.06	14.37	13.19	2.13	17.90	16.23	2.21	22.07	19.33	2.31	25.74	25.74	2.40	29.87	29.87	2.50	34.73	34.73	2.64
	1000	8.24	7.58	2.00	11.33	10.42	2.07	14.62	13.42	2.14	18.19	16.49	2.20	22.30	19.54	2.29	26.03	26.03	2.36	30.27	30.27	2.46	35.27	35.27	2.58
	1125	8.40	7.73	2.02	11.51	10.59	2.09	14.83	13.61	2.15	18.43	16.71	2.21	22.51	19.72	2.28	26.29	26.29	2.35	30.57	30.57	2.43	35.70	35.70	2.54
75 (23.9)	875	7.50	6.90	2.06	10.60	9.76	2.15	13.88	12.74	2.22	17.41	15.79	2.31	21.72	19.03	2.42	25.38	25.38	2.51	29.46	29.46	2.62	34.18	34.18	2.75
	1000	7.68	7.06	2.08	10.81	9.95	2.16	14.13	12.97	2.23	17.69	16.05	2.30	21.99	19.27	2.40	25.68	25.68	2.48	29.83	29.83	2.57	34.70	34.70	2.69
	1125	7.84	7.21	2.11	11.00	10.12	2.18	14.34	13.16	2.24	17.94	16.27	2.30	22.21	19.46	2.39	25.93	25.93	2.46	30.13	30.13	2.54	35.14	35.14	2.66

See Legend and Notes following tables.

**PHD336 COOLING EXTENDED PERFORMANCE TABLE**

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens					
1050 / 0.12	57 (13.9)	33.59	33.59	32.25	2.41	32.25	30.82	2.67	30.82	29.24	2.96	29.24	27.50	3.66	27.50	25.58	4.08		
	62 (16.7)	34.77	30.70	29.87	2.42	31.33	28.94	2.96	29.46	27.90	3.29	27.56	27.56	3.66	25.62	25.62	4.08		
	63* (17.2)	35.34	25.01	24.23	2.42	31.81	23.40	2.96	29.83	22.52	3.29	27.67	21.55	3.66	25.33	20.50	4.08		
1200 / 0.18	67 (19.4)	38.13	26.06	24.44	2.44	36.31	24.46	2.99	32.20	23.57	3.31	29.86	22.59	3.68	27.36	21.54	4.10		
	72 (13.9)	41.96	21.04	20.31	2.47	39.94	19.54	3.03	35.39	18.70	3.35	32.82	17.81	3.71	30.05	16.85	4.12		
	57 (13.9)	35.11	35.11	33.69	2.47	33.69	33.69	2.73	32.14	32.14	3.02	30.45	28.57	3.71	26.49	26.49	4.14		
1350 / 0.24	62 (16.7)	35.71	33.01	32.07	2.47	33.97	32.20	2.73	32.20	30.50	3.02	30.50	28.61	3.71	26.53	26.53	4.14		
	63* (17.2)	36.21	26.69	25.89	2.47	34.40	25.03	2.73	32.47	24.10	3.34	30.40	23.09	3.71	25.72	21.97	4.13		
	67 (19.4)	38.99	27.86	27.06	2.50	37.07	27.06	2.76	35.00	26.20	3.04	32.76	25.27	3.73	27.71	23.14	4.15		
1350 / 0.24	72 (13.9)	42.86	22.23	20.74	2.53	40.74	21.48	2.79	38.42	20.68	3.08	35.93	19.82	3.76	30.40	17.82	4.17		
	57 (13.9)	36.41	36.41	34.89	2.52	34.89	34.89	2.78	33.23	33.23	3.07	31.42	29.41	3.77	27.22	27.22	4.19		
	62 (16.7)	36.54	36.49	34.95	2.53	34.95	34.95	2.79	33.28	33.28	3.07	31.47	29.45	3.77	27.25	27.25	4.19		
1350 / 0.24	63* (17.2)	36.85	28.29	27.46	2.53	34.96	27.46	2.78	32.97	26.58	3.07	30.82	25.61	3.76	26.00	23.34	4.18		
	67 (19.4)	39.63	29.59	28.75	2.55	37.64	28.75	2.81	35.49	27.86	3.10	33.16	26.89	3.42	27.98	24.63	4.20		
	72 (13.9)	43.50	23.36	22.59	2.58	41.27	22.59	2.85	38.89	21.74	3.13	36.32	20.81	3.82	30.62	18.76	4.22		

\*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority (TVA) rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

**PHD336 HEATING EXTENDED PERFORMANCE TABLE**

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																								
		-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)			
		EDB °F (°C)	CFM	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW					
Total	Integ			Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ									
65 (18.3)	1050	12.15	11.18	10.77	2.30	15.31	14.08	2.39	19.19	17.61	2.49	22.68	20.57	2.58	26.68	23.38	2.68	31.28	28.80	2.80	36.70	36.70	2.96	42.99	42.99	3.16
	1200	12.38	11.39	10.99	2.32	15.57	14.32	2.40	19.41	17.82	2.50	22.96	20.82	2.58	27.01	23.66	2.67	31.68	27.80	2.78	37.20	37.20	2.94	43.06	43.06	3.12
	1350	12.59	11.58	11.18	2.35	15.79	14.53	2.43	19.62	18.01	2.52	23.19	21.03	2.59	27.29	23.91	2.67	32.01	27.80	2.78	37.51	37.51	2.93	42.82	42.82	3.10
70 (21.1)	1050	11.71	10.77	10.33	2.41	14.88	13.69	2.50	18.76	17.22	2.61	22.39	20.31	2.70	26.32	23.06	2.80	30.81	26.80	2.93	36.14	36.14	3.09	42.42	42.42	3.31
	1200	11.94	10.99	10.55	2.44	15.13	13.93	2.52	19.13	17.55	2.62	22.65	20.54	2.70	26.63	23.34	2.79	31.21	27.10	2.91	36.62	36.62	3.06	42.62	42.62	3.25
	1350	12.15	11.18	10.77	2.47	15.37	14.14	2.54	19.35	17.76	2.64	22.88	20.75	2.71	26.91	23.58	2.80	31.54	27.10	2.91	37.00	37.00	3.06	42.49	42.49	3.24
75 (23.9)	1050	11.23	10.33	9.89	2.53	14.42	13.27	2.62	18.01	16.53	2.72	22.09	20.03	2.84	25.96	22.75	2.94	30.36	26.00	3.06	35.58	35.58	3.23	41.77	41.77	3.46
	1200	11.46	10.55	10.11	2.56	14.68	13.51	2.64	18.31	16.81	2.73	22.36	20.27	2.83	26.27	23.02	2.92	30.74	26.00	3.04	36.04	36.04	3.19	42.15	42.15	3.40
	1350	11.67	10.74	10.33	2.59	14.91	13.72	2.67	18.61	17.08	2.75	22.59	20.48	2.84	26.53	23.24	2.93	31.07	26.00	3.03	36.43	36.43	3.19	42.11	42.11	3.38

See Legend and Notes following tables.

**PHD342 COOLING EXTENDED PERFORMANCE TABLE**

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens					
1225 / 0.14	57 (13.9)	38.29	38.29	2.70	36.78	36.78	3.00	35.17	35.17	3.35	33.43	33.43	3.76	31.55	31.55	4.23	29.53	29.53	4.78
	62 (16.7)	39.60	35.26	2.71	37.74	34.27	3.01	35.79	33.19	3.36	33.74	32.00	3.76	31.62	31.62	4.24	29.58	29.58	4.78
	63* (17.2)	40.17	28.70	2.72	38.23	27.80	3.02	36.20	26.84	3.37	34.04	25.81	3.77	31.75	24.73	4.24	29.30	23.57	4.77
	67 (19.4)	43.43	29.99	2.76	41.34	29.07	3.07	39.13	28.10	3.42	36.80	27.07	3.83	34.33	25.98	4.30	31.69	24.82	4.85
	72 (13.9)	47.71	24.52	2.83	45.36	23.64	3.14	42.91	22.69	3.50	40.34	21.70	3.91	37.63	20.65	4.40	34.75	19.54	4.95
1400 / 0.17	57 (13.9)	40.11	40.11	2.76	38.48	38.48	3.06	36.73	36.73	3.42	34.85	34.85	3.83	32.83	32.83	4.31	30.65	30.65	4.86
	62 (16.7)	40.77	37.93	2.77	38.83	36.81	3.07	36.82	36.82	3.42	34.91	34.91	3.83	32.88	32.88	4.31	30.69	30.69	4.86
	63* (17.2)	41.23	30.65	2.77	39.19	29.70	3.07	37.04	28.70	3.42	34.77	27.63	3.83	32.38	26.48	4.29	29.83	25.25	4.83
	67 (19.4)	44.54	32.09	2.82	42.33	31.12	3.12	40.00	30.10	3.48	37.55	29.02	3.89	34.97	27.89	4.37	32.23	26.64	4.91
	72 (13.9)	48.87	25.87	2.89	46.39	24.92	3.20	43.82	23.93	3.56	41.13	22.89	3.98	36.30	21.80	4.46	35.30	20.64	5.02
1575 / 0.19	57 (13.9)	41.67	41.67	2.82	39.92	39.92	3.13	38.04	38.04	3.48	36.04	36.04	3.90	33.89	33.89	4.38	31.57	31.57	4.93
	62 (16.7)	41.78	41.78	2.82	40.00	40.00	3.13	38.10	38.10	3.49	36.09	36.09	3.90	33.94	33.94	4.38	31.61	31.61	4.94
	63* (17.2)	42.07	32.53	2.83	39.93	31.53	3.13	37.70	30.48	3.48	35.35	29.35	3.88	32.87	28.13	4.35	30.26	26.81	4.89
	67 (19.4)	45.42	34.11	2.87	43.10	33.11	3.18	40.66	32.04	3.53	38.14	30.89	3.95	35.47	29.68	4.43	32.65	28.36	4.97
	72 (13.9)	49.79	27.12	2.95	47.20	26.14	3.26	44.53	25.11	3.62	41.74	24.03	4.04	36.81	22.90	4.53	35.71	21.70	5.08

\*At 75 °F (23.9 °C) entering dry bulb—Tennessee Valley Authority [TVA] rating conditions; all others at 80 °F (26.7 °C) entering dry bulb. See Legend and Notes.

**PHD342 HEATING EXTENDED PERFORMANCE TABLE**

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																							
		-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)		
		EDB °F (°C)	CFM	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW				
Total	Integ			Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ					
65 (18.3)	1225	13.54	12.46	2.47	17.47	16.08	2.63	21.96	20.15	2.78	25.98	23.56	2.88	30.54	26.76	2.98	35.78	35.78	3.11	42.01	42.01	3.30	48.77	48.77	3.53
	1400	13.72	12.62	2.48	17.68	16.26	2.64	22.14	20.32	2.77	26.21	23.77	2.86	30.85	27.03	2.95	36.18	36.18	3.07	42.43	42.43	3.24	48.15	48.15	3.46
	1575	13.88	12.77	2.50	17.85	16.43	2.65	22.30	20.47	2.78	26.41	23.95	2.86	31.10	27.25	2.95	36.50	36.50	3.07	42.12	42.12	3.22	47.19	47.19	3.42
70 (21.1)	1225	13.21	12.15	2.61	17.11	15.75	2.77	21.74	19.96	2.92	25.70	23.30	3.02	30.15	26.42	3.12	35.27	35.27	3.25	41.37	41.37	3.44	48.32	48.32	3.70
	1400	13.40	12.33	2.62	17.33	15.95	2.78	21.94	20.14	2.91	25.93	23.52	3.00	30.45	26.68	3.10	35.67	35.67	3.22	41.86	41.86	3.40	47.84	47.84	3.62
	1575	13.57	12.48	2.64	17.52	16.12	2.79	22.13	20.31	2.92	26.14	23.71	3.00	30.72	26.91	3.09	35.97	35.97	3.21	41.84	41.84	3.37	47.03	47.03	3.59
75 (23.9)	1225	12.79	11.77	2.75	16.70	15.37	2.91	21.03	19.31	3.05	25.41	23.05	3.17	29.76	26.07	3.27	34.76	34.76	3.41	40.75	40.75	3.61	47.80	47.80	3.89
	1400	12.99	11.95	2.76	16.93	15.58	2.92	21.59	19.82	3.05	25.64	23.25	3.15	30.06	26.34	3.24	35.15	35.15	3.37	41.24	41.24	3.56	47.49	47.49	3.80
	1575	13.17	12.12	2.79	17.13	15.76	2.93	21.86	20.07	3.06	25.85	23.44	3.15	30.31	26.56	3.23	35.46	35.46	3.35	41.48	41.48	3.53	46.79	46.79	3.76

See Legend and Notes following tables.



**PHD348 COOLING EXTENDED PERFORMANCE TABLE**

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES ° F (° C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		CFM / BF	EWB ° F (° C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens					
1400 / 0.15	57 (13.9)	45.56	43.64	3.20	43.64	3.58	41.62	3.98	39.47	4.41	37.15	4.90	34.64	5.46	31.49	6.00	28.75	6.60	
	62 (16.7)	47.12	44.75	3.21	44.75	3.59	42.33	3.99	39.81	4.42	37.23	4.91	34.69	5.46	31.49	6.00	28.75	6.60	
	63* (17.2)	47.82	45.36	3.21	45.36	3.59	42.84	3.99	40.19	4.42	37.38	4.91	34.39	5.46	31.49	6.00	28.75	6.60	
1600 / 0.18	57 (13.9)	51.57	48.88	3.22	48.88	3.62	46.13	4.02	43.25	4.46	40.21	4.95	36.94	5.49	33.17	6.00	28.75	6.60	
	62 (16.7)	55.55	53.52	3.23	53.52	3.64	50.45	4.06	47.26	4.51	43.85	4.99	40.27	5.53	36.94	6.00	28.75	6.60	
	63* (17.2)	48.40	44.34	3.26	44.34	3.65	43.41	4.05	40.98	4.49	38.48	4.98	35.76	5.53	33.17	6.00	28.75	6.60	
1800 / 0.21	57 (13.9)	48.97	46.36	3.27	46.36	3.65	43.69	4.05	40.92	4.49	37.98	4.97	34.88	5.52	32.28	6.00	28.75	6.60	
	62 (16.7)	52.75	49.90	3.27	49.90	3.68	47.00	4.09	43.98	4.52	40.79	5.01	37.41	5.55	34.28	6.00	28.75	6.60	
	63* (17.2)	49.85	45.88	3.28	45.88	3.70	43.36	4.13	48.01	4.57	44.45	5.06	40.74	5.59	37.41	6.00	28.75	6.60	
1800 / 0.21	57 (13.9)	49.32	47.06	3.32	47.06	3.71	44.71	4.12	42.23	4.56	39.55	5.05	36.65	5.59	33.17	6.00	28.75	6.60	
	62 (16.7)	53.64	50.67	3.32	50.67	3.73	47.66	4.15	44.52	4.59	41.22	5.07	37.75	5.60	34.28	6.00	28.75	6.60	
	63* (17.2)	49.85	45.88	3.32	45.88	3.73	43.36	4.13	48.01	4.57	44.45	5.06	40.74	5.59	37.41	6.00	28.75	6.60	

\*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority (TVA) rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

**PHD348 HEATING EXTENDED PERFORMANCE TABLE**

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES ° F (° C)																							
		-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)		
		EDB ° F (° C)	CFM	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW				
Total	Integ			Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ					
65 (18.3)	1400	15.76	14.50	2.95	20.36	18.74	3.07	25.22	23.15	3.20	31.05	28.16	3.36	36.22	31.73	3.50	41.94	3.65	48.55	48.55	3.83	56.41	56.41	4.05	
	1600	16.01	14.73	2.98	20.64	18.99	3.09	25.55	23.46	3.21	31.36	28.44	3.35	36.59	32.06	3.48	42.42	3.61	49.17	49.17	3.77	57.12	57.12	3.95	
	1800	16.24	14.94	3.02	20.90	19.23	3.12	25.85	23.73	3.23	31.63	28.69	3.37	36.92	32.35	3.48	42.84	3.60	49.72	49.72	3.74	57.48	57.48	3.90	
70 (21.1)	1400	15.26	14.04	3.08	19.85	18.27	3.20	24.68	22.65	3.33	30.13	27.32	3.48	35.80	31.37	3.65	41.40	3.81	47.87	47.87	4.00	55.58	55.58	4.24	
	1600	15.52	14.28	3.11	20.14	18.53	3.22	25.04	22.98	3.34	30.99	28.11	3.50	36.16	31.68	3.63	41.87	3.78	48.48	48.48	3.94	56.38	56.38	4.15	
	1800	15.76	14.50	3.15	20.41	18.78	3.25	25.33	23.25	3.36	31.28	28.37	3.51	36.49	31.97	3.63	42.28	3.76	49.01	49.01	3.91	56.82	56.82	4.09	
75 (23.9)	1400	14.68	13.51	3.22	19.29	17.74	3.34	24.12	22.14	3.47	29.34	26.61	3.63	35.38	31.00	3.82	40.85	3.98	47.21	47.21	4.18	54.77	54.77	4.43	
	1600	14.95	13.76	3.25	19.59	18.03	3.36	24.47	22.46	3.48	29.76	26.99	3.62	35.73	31.31	3.79	41.31	3.94	47.80	47.80	4.12	55.56	55.56	4.35	
	1800	15.19	13.98	3.29	19.85	18.27	3.39	24.78	22.74	3.51	30.19	27.38	3.63	36.07	31.60	3.79	41.72	3.93	48.30	48.30	4.09	56.12	56.12	4.28	

See Legend and Notes following tables.

**PHD360 COOLING EXTENDED PERFORMANCE TABLE**

**CONDENSER ENTERING AIR TEMPERATURES °F (°C)**

EVAPORATOR AIR		75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	
				Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		
1750 / 0.19	57 (13.9)	56.42	58.42	3.97	54.09	54.09	4.39	51.60	51.60	4.86	48.89	48.89	5.40	45.87	45.87	6.01	42.80	42.80	6.70
	62 (16.7)	58.00	51.82	3.99	55.15	50.34	4.40	52.19	48.67	4.87	49.10	48.72	5.40	45.94	45.94	6.01	42.86	42.86	6.70
	63* (17.2)	58.78	42.05	4.00	55.87	40.69	4.41	52.77	39.25	4.88	49.45	37.72	5.41	45.84	36.06	6.01	42.01	34.26	6.69
1850 / 0.20	67 (19.4)	63.34	43.86	4.05	60.17	42.48	4.47	56.78	41.02	4.94	53.14	39.45	5.46	49.23	37.77	6.06	45.09	35.96	6.74
	72 (13.9)	69.39	35.42	4.13	65.81	34.15	4.55	62.02	32.72	5.02	57.99	31.19	5.54	53.69	29.56	6.13	49.14	27.85	6.80
	57 (13.9)	56.94	56.94	3.99	54.57	54.57	4.41	52.03	52.03	4.88	49.27	49.27	5.42	46.23	46.23	6.03	42.88	42.88	6.72
2250 / 0.27	62 (16.7)	58.33	52.61	4.01	55.44	51.08	4.42	52.47	49.35	4.89	49.36	49.36	5.42	46.30	46.30	6.03	42.94	42.94	6.72
	63* (17.2)	59.07	42.62	4.02	56.12	41.24	4.43	53.00	39.80	4.90	49.63	38.25	5.42	45.98	36.56	6.03	42.13	34.74	6.71
	67 (19.4)	63.63	44.47	4.08	60.42	43.08	4.49	57.00	41.60	4.96	53.31	40.02	5.48	49.37	38.31	6.08	45.20	36.48	6.75
2250 / 0.27	72 (13.9)	69.68	35.83	4.15	66.07	34.51	4.57	62.25	33.07	5.04	58.17	31.52	5.56	53.84	29.88	6.15	49.25	28.16	6.82
	57 (13.9)	60.87	60.87	4.19	58.14	58.14	4.61	55.23	55.23	5.08	52.05	52.05	5.62	48.61	48.61	6.22	44.88	44.88	6.90
	62 (16.7)	60.95	60.95	4.19	58.23	58.23	4.61	55.31	55.31	5.08	52.12	52.12	5.62	48.67	48.67	6.22	44.93	44.93	6.90
2250 / 0.27	63* (17.2)	61.07	47.50	4.19	57.83	46.01	4.61	54.45	44.43	5.07	50.81	42.69	5.60	46.95	40.79	6.19	42.89	38.69	6.87
	67 (19.4)	65.61	49.74	4.25	62.14	48.23	4.67	58.42	46.60	5.13	54.47	44.84	5.66	50.28	42.93	6.25	45.90	40.82	6.92
	72 (13.9)	71.73	39.07	4.33	67.82	37.60	4.75	63.70	36.05	5.21	59.34	34.41	5.74	54.72	32.67	6.32	49.88	30.83	6.98

\*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority (TVA) rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

**PHD360 HEATING EXTENDED PERFORMANCE TABLE**

**OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)**

INDOOR AIR		-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)		
		EDB °F (°C)	CFM	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	
				Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total
65 (18.3)	1750	19.26	17.72	3.62	24.88	22.89	3.77	30.79	28.26	3.91	37.20	33.74	4.06	44.98	39.41	4.26	51.96	51.96	4.43	60.02	60.02	4.64	69.62	69.62	4.91
	1800	19.34	17.79	3.63	24.98	22.98	3.78	30.90	28.37	3.92	37.33	33.85	4.07	45.09	39.50	4.26	52.09	52.09	4.42	60.19	60.19	4.62	69.84	69.84	4.89
	2250	20.06	18.45	3.75	25.74	23.69	3.88	31.75	29.14	4.00	38.31	34.75	4.12	45.93	40.25	4.28	53.12	53.12	4.41	61.48	61.48	4.58	71.51	71.51	4.81
70 (21.1)	1750	18.37	16.90	3.77	24.01	22.09	3.92	30.00	27.54	4.08	36.36	32.98	4.24	44.47	38.96	4.46	51.32	51.32	4.63	59.22	59.22	4.85	68.63	68.63	5.12
	1800	18.45	16.97	3.78	24.11	22.18	3.93	30.11	27.64	4.09	36.49	33.09	4.24	44.58	39.06	4.45	51.43	51.43	4.63	59.39	59.39	4.83	68.85	68.85	5.10
	2250	19.15	17.62	3.90	24.92	22.93	4.04	30.96	28.41	4.17	37.44	33.95	4.30	45.42	39.80	4.47	52.45	52.45	4.61	60.85	60.85	4.79	70.47	70.47	5.02
75 (23.9)	1750	17.44	16.04	3.93	23.12	21.27	4.09	29.18	26.78	4.26	35.57	32.26	4.43	43.08	37.74	4.63	50.66	50.66	4.85	58.44	58.44	5.07	67.67	67.67	5.35
	1800	17.52	16.12	3.94	23.22	21.36	4.10	29.28	26.88	4.27	35.70	32.37	4.43	43.34	37.97	4.64	50.78	50.78	4.84	58.60	58.60	5.05	67.87	67.87	5.33
	2250	18.19	16.73	4.06	23.99	22.07	4.21	30.13	27.65	4.35	36.62	33.21	4.48	44.87	39.31	4.68	51.79	51.79	4.82	59.83	59.83	5.00	69.45	69.45	5.24

**LEGEND**

- BF – Bypass Factor
- edb – Entering Dry–Bulb
- Ewb – Entering Wet–Bulb
- kW – Total Unit Power Input
- SHC – Sensible Heat Capacity (1000 Btuh)
- TC – Total Capacity (1000 Btuh) (net)
- rh – Relative Humidity

$$h_{wb} = \text{Wet-bulb temperature corresponding to enthalpy air leaving evaporator coil } (h_{wb})$$

$$h_{wb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h<sub>ewb</sub> = Enthalpy of air entering evaporator coil

4. The SHC is based on 80°F (26.7°C) edb temperature of air entering evaporator coil. Below 80°F (26.7°C) edb, subtract (corr factor x cfm) from SHC. Above 80°F (26.7°C) edb, add (corr factor x cfm) to SHC.

Correction Factor = 1.10 x (1 + BF) x (edb + 80).

5. Integrated capacity is maximum (instantaneous) capacity less the effect of frost on the outdoor coil and the heat required to defrost it.

6. The SHC is based on 80°F (26.7°C) edb temperature of air entering evaporator coil. Below 80°F (26.7°C) edb, subtract (corr factor x cfm) from SHC. Above 80°F (26.7°C) edb, add (corr factor x cfm) to SHC.

Correction Factor = 1.10 x (1 + BF) x (edb + 80).

7. Integrated capacity is maximum (instantaneous) capacity less the effect of frost on the outdoor coil and the heat required to defrost it.

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT IN/MM		CENTER OF GRAVITY IN/MM					
		LB	KG	"A"	"A"	X	Y	Z			
PHD330H	208/230-3-60	332	150.7	42-1/8	1070	19-3/4	501.7	14-3/4	374.7	16	406.4
PHD336H	208/230-3-60	336	152.3	42-1/8	1070	19-3/4	501.7	14-3/4	374.7	16	406.4
PHD336L	480-3-60	350	158.6	42-1/8	1070	19-3/4	501.7	14-3/4	374.7	16	406.4

UNITS	CORNER WEIGHT LB/KG			
	"1"	"2"	"3"	"4"
PHD330H	208/230 66.5 [30.2]	53.7 [24.1]	79.7 [36.2]	132.9 [60.3]
PHD336H	208/230 67.2 [30.5]	53.7 [24.4]	80.6 [36.6]	134.3 [61.0]
PHD336L	480 67.2 [30.5]	53.7 [24.4]	89.6 [40.7]	139.3 [63.2]

NOTE: ALL TABLE DATA RELEVANT FOR ALL FACTORY INSTALLED OPTIONS EXCEPT ECONOMIZER

**REQUIRED CLEARANCES TO COMBUSTIBLE MATL.**

TOP OF UNIT.....	INCHES (MM)
TOP OF UNIT.....	4 [102.6]
TOP OF UNIT.....	14 [355.6]
SIDE OPPOSITE DIGITS.....	14 [355.6]
BOTTOM OF UNIT.....	0 [0.0]
ELECTRICAL PANEL.....	36 [914.4]

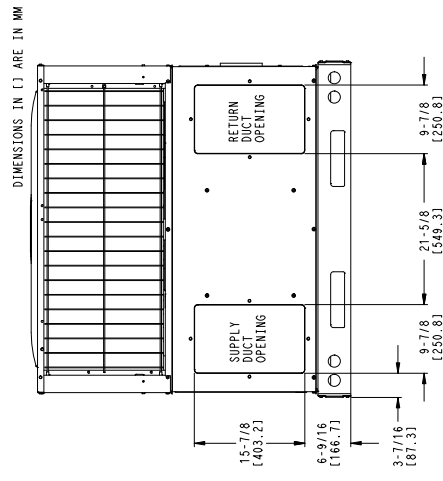
**NEC REQUIRED CLEARANCES**

BETWEEN UNITS, POWER ENTRY SIDE.....	INCHES (MM)
BETWEEN UNITS, POWER ENTRY SIDE.....	42 [1066.8]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE.....	36 [914.0]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE.....	42 [1066.8]

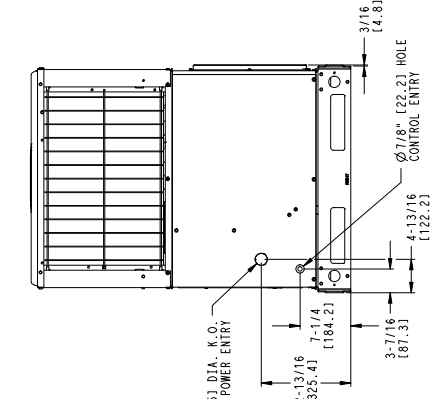
**REQUIRED CLEARANCE FOR OPERATION AND SERVICING**

EVAP. COIL ACCESS SIDE.....	INCHES (MM)
EVAP. COIL ACCESS SIDE.....	36 [914.0]
POWER ENTRY SIDE.....	36 [914.0]
POWER ENTRY SIDE.....	42 [1066.8]
UNIT TOP OR NEC REQUIREMENTS.....	48 [1219.2]
UNIT TOP OR NEC REQUIREMENTS.....	36 [914.0]
SIDE OPPOSITE DIGITS.....	36 [914.0]
SIDE OPPOSITE DIGITS.....	12 [304.8]

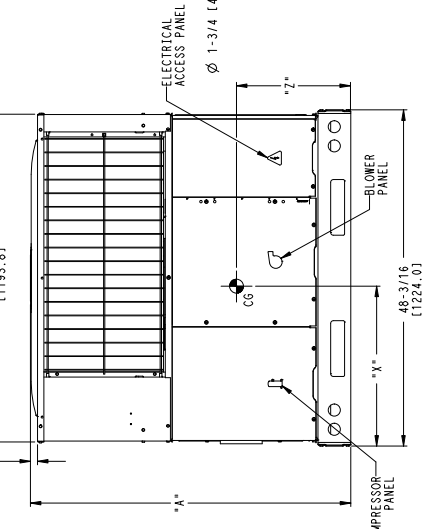
\*MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 [304.8] FROM WALL SYSTEM, THEN SYSTEM PERFORMANCE MAY BE COMPROMISED.



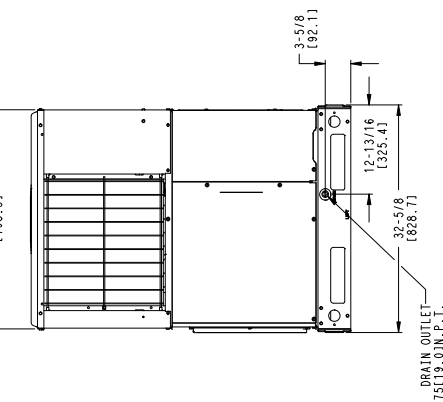
REAR VIEW



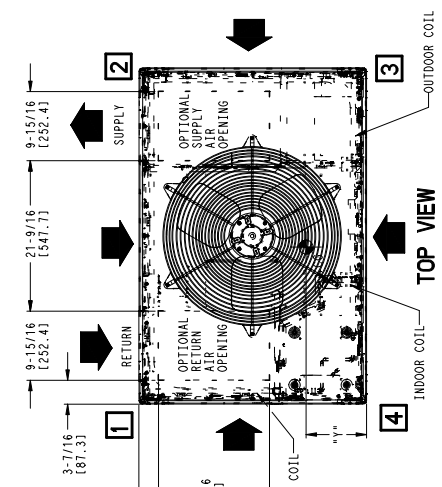
RIGHT SIDE VIEW



FRONT VIEW



LEFT SIDE VIEW



TOP VIEW

REV 3.0  
50EZ500357

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT IN/MM		CENTER OF GRAVITY IN/MM					
		LB	KG	"A"	"X"	"Z"	"X"	"Z"			
PHD342H	208/230-1, 208/230-3-60	411	186.3	44-3/4	1137	19-1/2	495.3	16-1/2	419.1	117	431.8
PHD342L	460-3-60	425	192.7	44-3/4	1137	19-1/2	495.3	16-1/2	419.1	117	431.8
PHD348H	208/230-1, 208/230-3-60	429	194.7	44-3/4	1137	19-1/2	495.3	16-1/2	419.1	117	431.8
PHD348L	460-3-60	443	201.1	44-3/4	1137	19-1/2	495.3	16-1/2	419.1	117	431.8
PHD360H	208/230-1, 208/230-3-60	454	206.0	48-3/4	1238	19-1/2	495.3	16-1/2	419.1	118	457.2
PHD360L	460-3-60	468	212.4	48-3/4	1238	19-1/2	495.3	16-1/2	419.1	118	457.2

UNITS	VOLTAGE	CORNER WEIGHT LB/KG							
		"1"	"2"	"3"	"4"				
PHD342H	208/230	82.1	37.3	85.7	29.8	98.6	44.8	164.3	74.6
PHD342L	460	82.1	37.3	85.7	29.8	107.6	48.8	169.3	76.9
PHD348H	208/230	85.8	39.0	88.7	31.2	103.0	46.8	171.7	77.9
PHD348L	460	85.8	39.0	88.7	31.2	112.0	50.9	176.7	80.2
PHD360H	208/230	90.8	41.2	92.7	33.0	109.0	49.5	181.7	82.5
PHD360L	460	90.8	41.2	92.7	33.0	118.0	53.6	186.7	84.8

**REQUIRED CLEARANCES TO COMBUSTIBLE MATL.**

TOP OF UNIT	INCHES (MM)
DUCT SIDE OF UNIT	14 (355.6)
DUCT OPPOSITE DUCTS	2 (50.8)
SIDE OPPOSITE DUCTS	14 (355.6)
DUCT PANEL	12 (304.8)
ELECTRICAL PANEL	36 (914.4)

**NEC REQUIRED CLEARANCES**

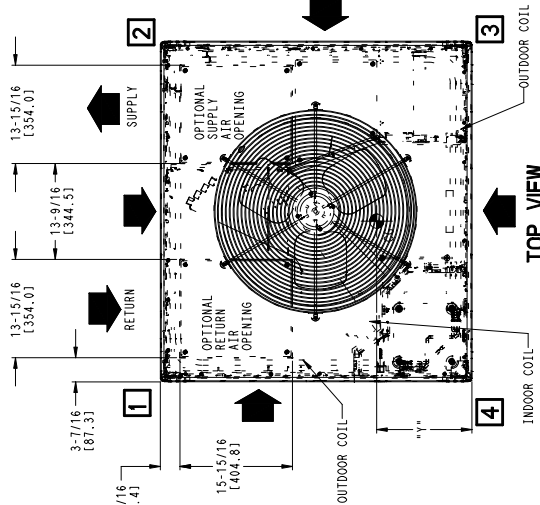
BETWEEN UNITS	INCHES (MM)
POWER ENTRY SIDE	42 (1066.8)
DUCT SIDE OF UNIT	36 (914.4)
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES - POWER ENTRY SIDE	42 (1066.8)

**REQUIRED CLEARANCE FOR OPERATION AND SERVICING**

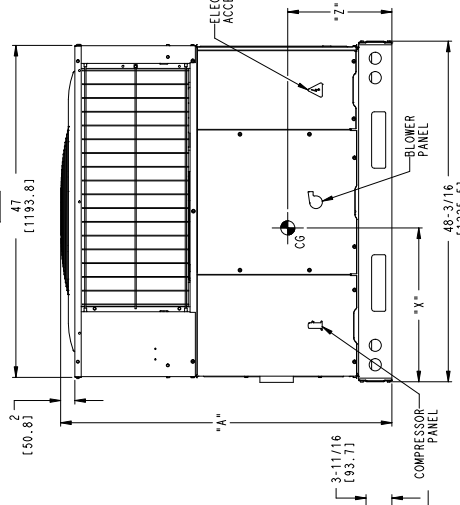
EVAP. COIL ACCESS SIDE	INCHES (MM)
POWER ENTRY SIDE	42 (1066.8)
(EXCEPT FOR NEC REQUIREMENTS)	48 (1219.2)
UNIT TOP	48 (1219.2)
SIDE OPPOSITE DUCTS	36 (914.4)
DUCT PANEL	12 (304.8)

\*MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 (304.8) FROM WALL SYSTEM, THEN SYSTEM PERFORMANCE MAYBE COMPROMISED.

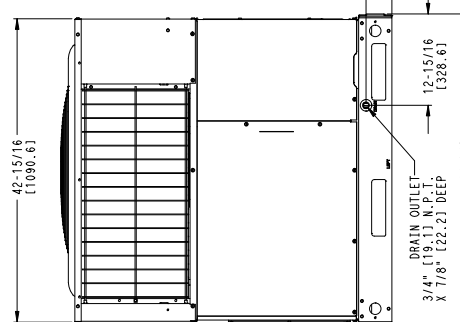
DIMENSIONS IN ( ) ARE IN MM



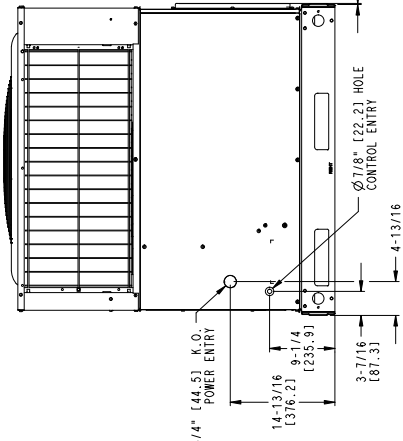
**TOP VIEW**



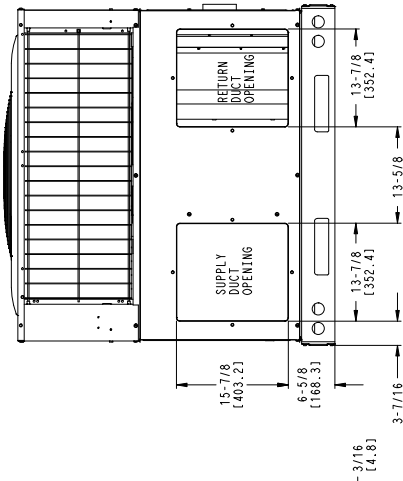
**FRONT VIEW**



**LEFT SIDE VIEW**



**RIGHT SIDE VIEW**



**REAR VIEW**

REV 3.0

50EZ500358

CONNECTION WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

SCHEMATIC  
208/230-3-60

NOTES:

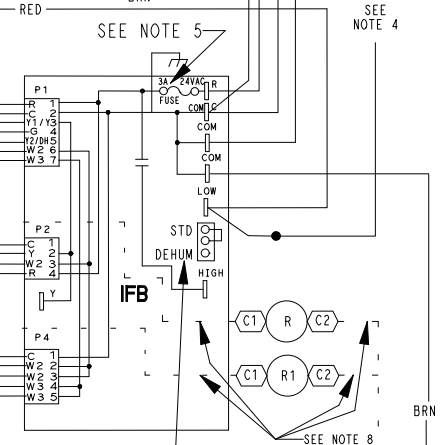
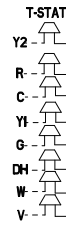
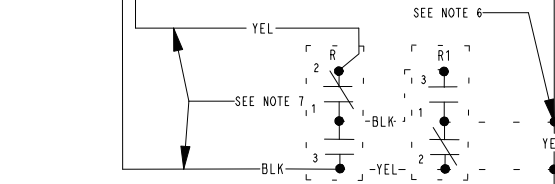
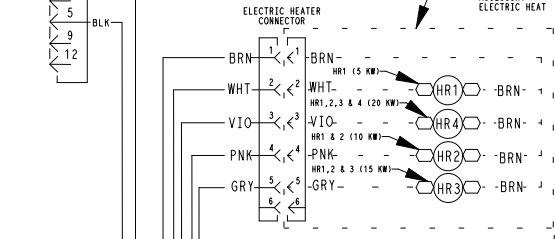
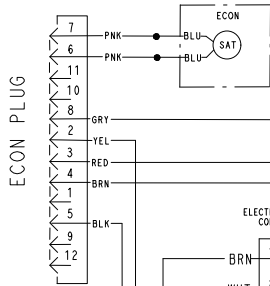
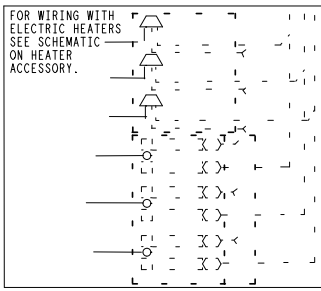
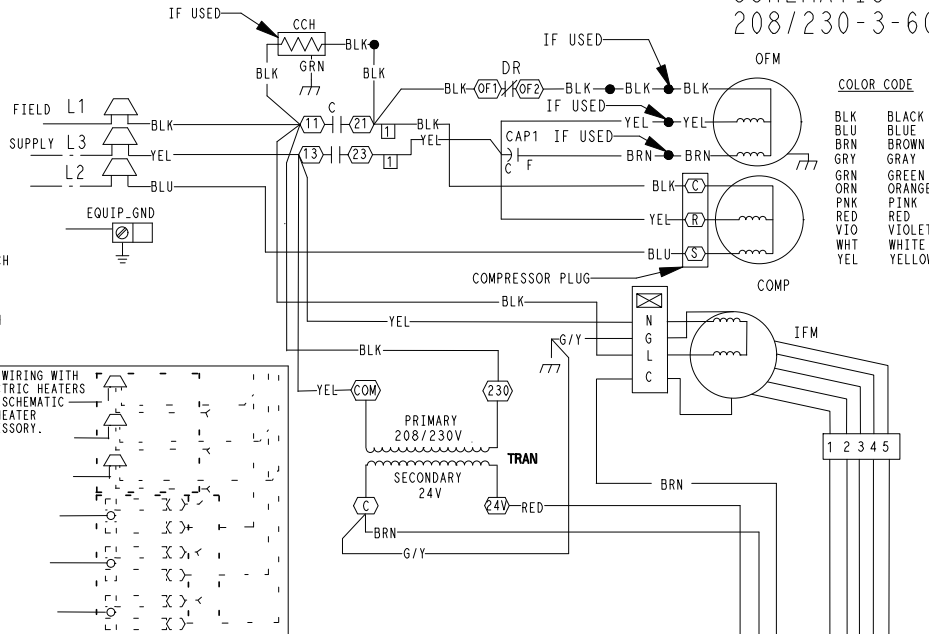
1. IF ANY OF THE ORIGINAL WIRES FURNISHED ARE REPLACED, IT MUST BE REPLACED WITH TYPE 90 DEGREE C WIRE OR IT'S EQUIVALENT.
2. USE 75 DEGREE COPPER CONDUCTORS FOR FIELD INSTALLATION.
3. REFER TO INSTALLATION INSTRUCTIONS FOR CORRECT SPEED SELECTION OF IFM.
4. RELOCATION OF SPEED TAPS MAY BE REQUIRED WHEN USING FIELD INSTALLED ELECTRIC HEATERS, CONSULT INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED TAP SETTING.
5. "DO NOT DISCONNECT PLUG UNDER LOAD."
6. THIS FUSE IS MANUFACTURED BY LITTELFUSE, P/N 257003.
7. UNIT FACTORY-SHIPPED IN STD MODE.

LEGEND

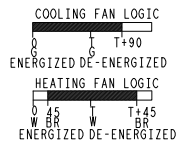
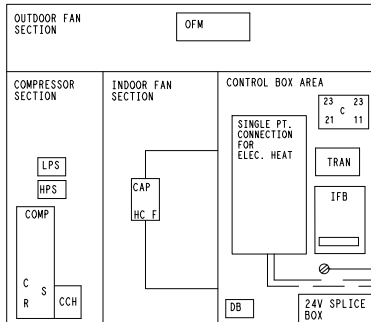
△	FIELD SPLICE	GND	GROUND
○	TERMINAL (MARKED)	HPS	HIGH PRESSURE SWITCH
●	TERMINAL (UNMARKED)	HR	HEATER RELAY
○	SPLICE (IF USED)	IFB	INDOOR FAN BOARD
○	SPLICE (MARKED)	IFM	INDOOR FAN MOTOR
---	FACTORY WIRING	LPS	LOW PRESSURE SWITCH
---	FIELD CONTROL WIRING	OFM	OUTDOOR FAN MOTOR
---	FIELD POWER WIRING	RVS	REVERSING VALVE
---	ACCESSORY OR OPTIONAL WIRING	TRAN	TRANSFORMER
		T-STAT	THERMOSTAT
C	CONTACTOR	R	ECON RELAY
CAP 1	CAPACITOR, COMP	R1	ECON RELAY
CCH	CRANK CASE HEATER	STD	STANDARD MODE
COMP	COMPRESSOR MOTOR		
DB	DEFROST BOARD		
DH	DEHUMIDIFICATION MODE		
DEHUM	DEHUMIDIFICATION MODE		
DFT	DEFROST TEMPERATURE SWITCH		
DR	DEFROST RELAY		
ECON	ECONOMIZER		
EQUIP	EQUIPMENT		

COLOR CODE

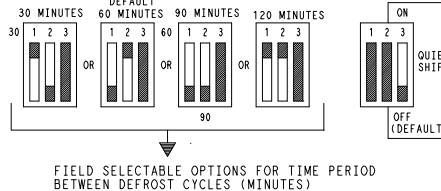
BLK	BLACK	BLU	BLUE
BLU	BLUE	BRN	BROWN
BRN	BROWN	GRY	GRAY
GRN	GREEN	ORN	ORANGE
ORN	ORANGE	PNK	PINK
RED	RED	VIO	VIOLET
VIO	VIOLET	WHT	WHITE
WHT	WHITE	YEL	YELLOW



UNIT COMPONENT ARRANGEMENT



DIP SWITCH SETTINGS



SPEED UP  JUMPED TEST PINS (USE METAL OBJECT) FIELD SPEED-UP CYCLE

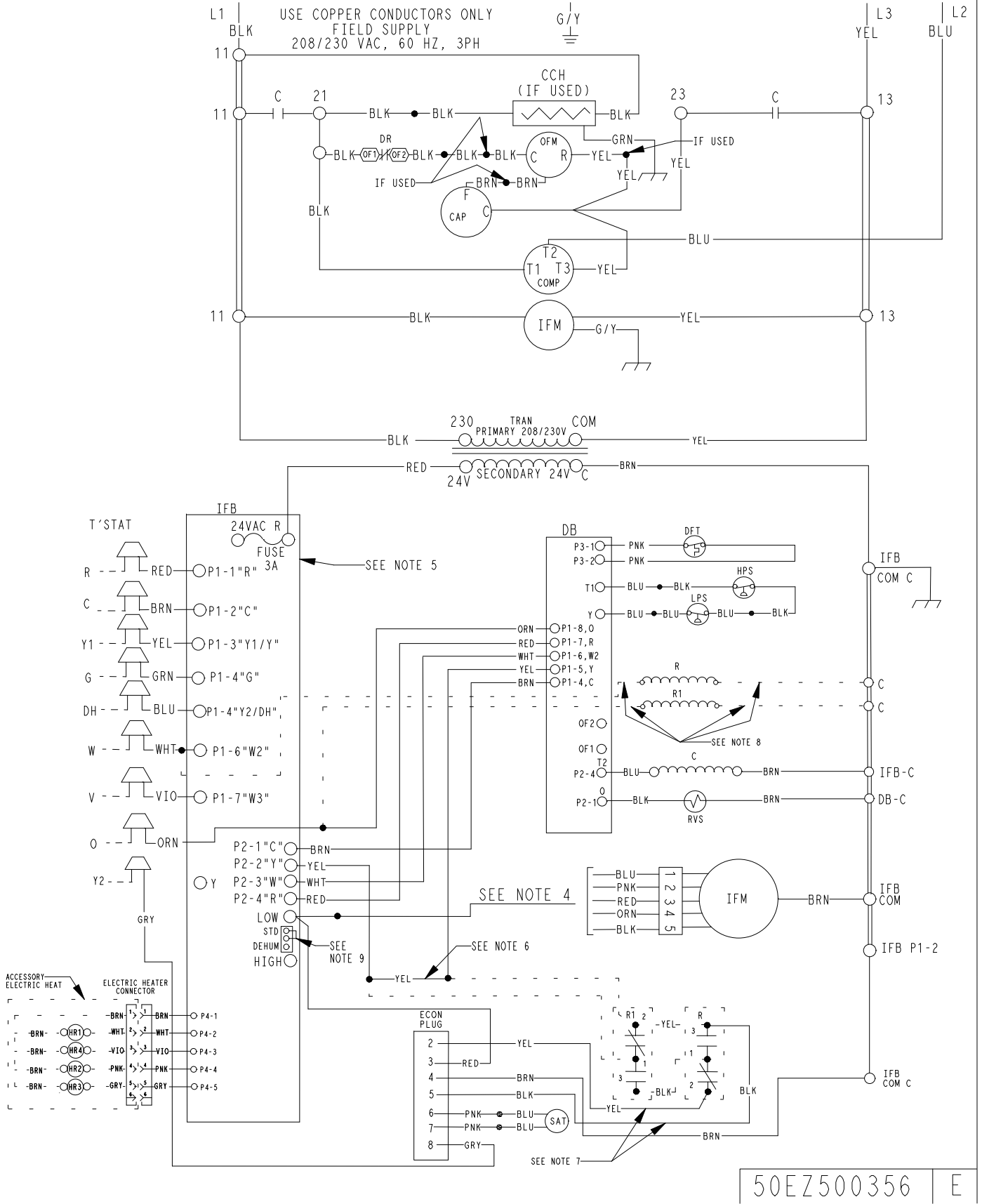
- 1) MOMENTARILY SHORT PINS AND RELEASE TO BYPASS COMPRESSOR OFF DELAY.
- 2) SHORT FOR 5+ SEC. AND RELEASE FOR FORCED DEFROST.
- 3) PERMANENT SHORT WILL BE IGNORED.

DEFROST WILL TERMINATE IN 30 SEC. IF DFT OPEN. DEFROST WILL TERMINATE NORMALLY IF DFT IS CLOSED.

THE COMPRESSOR WILL SHUT OFF FOR 30 SEC. ON DEFROST INITIATION AND TERMINATION IN THE "QUIET SHIFT" ON POSITION

LADDER WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

SCHEMATIC  
460-3-60

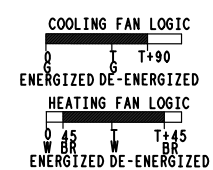
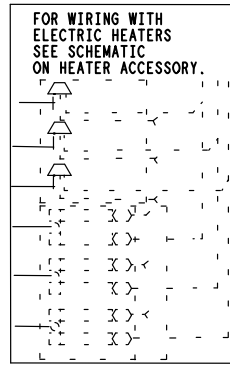
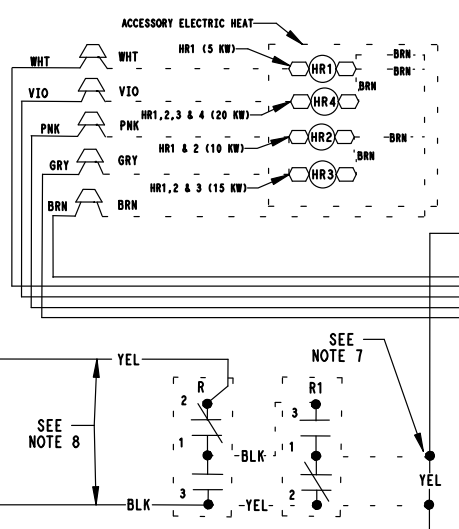
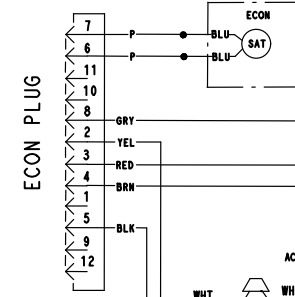
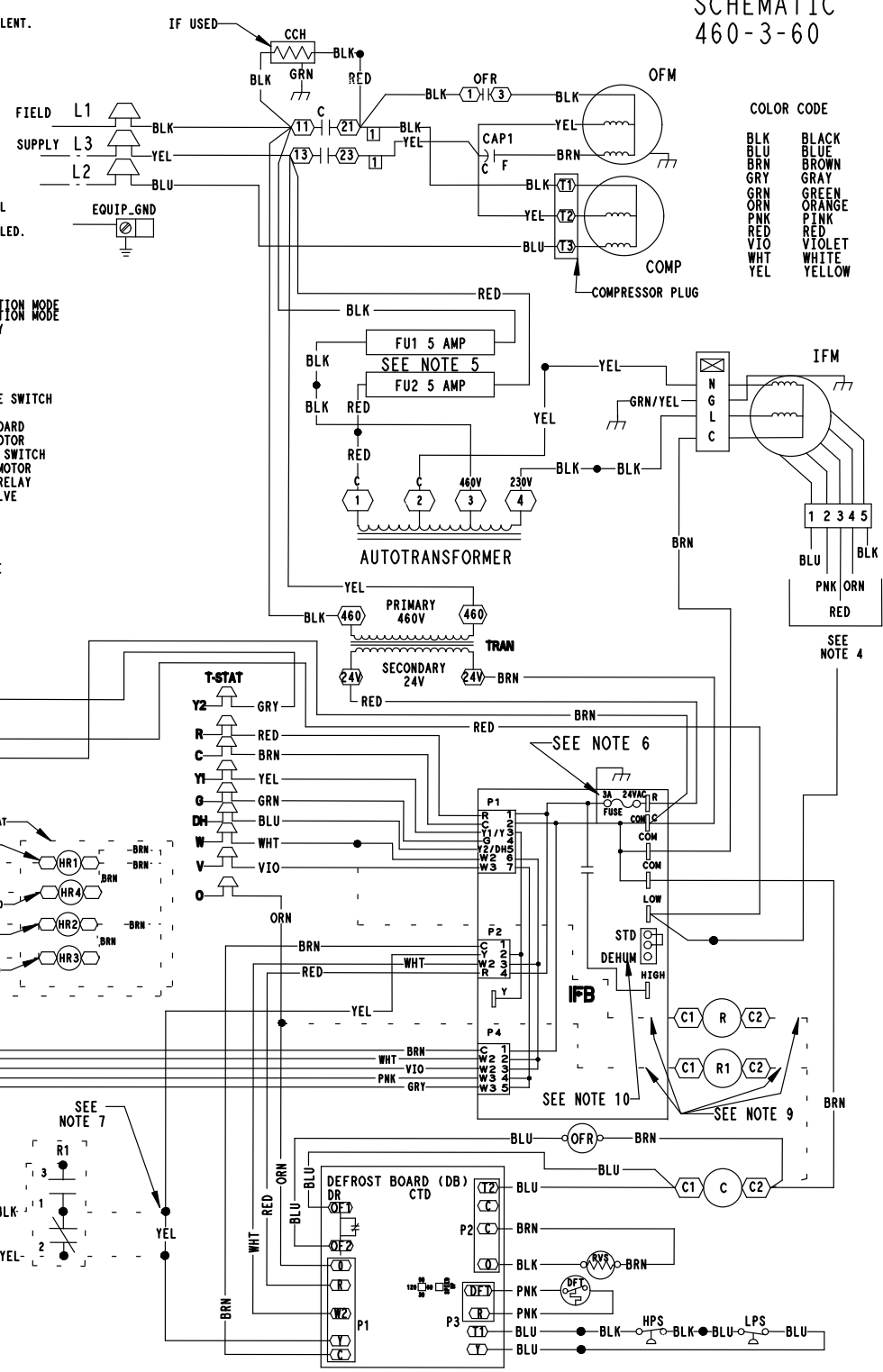
NOTES:

- IF ANY OF THE ORIGINAL WIRES FURNISHED ARE REPLACED, THEY MUST BE REPLACED WITH THE SAME WIRE OR ITS EQUIVALENT.
- USE 75 DEG. COPPER CONDUCTORS FOR FIELD INSTALLATION.
- SEE INSTALLATION INSTRUCTIONS FOR PROPER HEATING AND COOLING CONNECTIONS FOR YOUR UNIT. INDOOR FAN MOTOR PLUGS - "DO NOT DISCONNECT UNDER LOAD"
- THESE FUSES ARE MANUFACTURED BY COOPER BUSSMANN, P/N FND-12-5.
- THIS FUSE IS MANUFACTURED BY LITTELFUSE, P/N 257003.
- REMOVE YELLOW SPLICE WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED AND CONNECT TO RELAY R1 AS SHOWN. WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED, CONNECT THE YELLOW AND BLACK WIRES TO RELAY "R" AS SHOWN. RELAY KIT REQUIRED WITH ECONOMIZER AND HEAT PUMP/DUAL FUEL UNITS.
- WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED, INSTALL WIRES AS SHOWN ON THE COILS OF RELAY R AND RELAY R1.
- DEHUM FEATURE CANNOT BE USED WHEN ECONOMIZER IS INSTALLED. UNIT FACTORY-SHIPPED IN STD MODE.

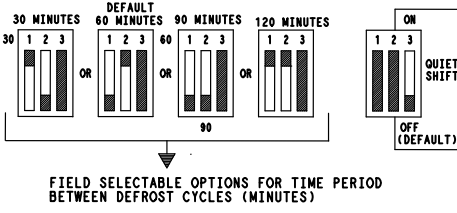
LEGEND

- |       |                              |        |                       |
|-------|------------------------------|--------|-----------------------|
| △     | FIELD SPLICE                 | DH     | DEHUMIDIFICATION MODE |
| ○     | TERMINAL (MARKED)            | DR     | DEHUMIDIFICATION MODE |
| ○     | TERMINAL (UNMARKED)          | DR     | DEFROST RELAY         |
| •     | SPLICE                       | ECON   | ECONOMIZER            |
| ○     | SPLICE (MARKED)              | EQUIP  | EQUIPMENT             |
| ---   | FACTORY WIRING               | FU     | FUSE                  |
| ---   | FIELD CONTROL WIRING         | GND    | GROUND                |
| ---   | FIELD POWER WIRING           | HPS    | HIGH PRESSURE SWITCH  |
| ---   | ACCESSORY OR OPTIONAL WIRING | HR     | HEATER RELAY          |
| AT    | AUTO TRANSFORMER             | IFB    | INDOOR FAN BOARD      |
| C     | CONTACTOR                    | IFM    | INDOOR FAN MOTOR      |
| CAP 1 | CAPACITOR, COMP              | LPS    | LOW PRESSURE SWITCH   |
| CCH   | CRANK CASE HEATER            | OFM    | OUTDOOR FAN MOTOR     |
| COMP  | COMPRESSOR MOTOR             | OFR    | OUTDOOR FAN RELAY     |
| DB    | DEFROST BOARD                | RVS    | REVERSING VALVE       |
| DFT   | DEFROST TEMPERATURE SWITCH   | TRAN   | TRANSFORMER           |
|       |                              | T-STAT | THERMOSTAT            |
|       |                              | R      | ECON RELAY            |
|       |                              | R1     | ECON RELAY            |
|       |                              | STD    | STANDARD MODE         |

- COLOR CODE
- |     |        |
|-----|--------|
| BLK | BLACK  |
| BLU | BLUE   |
| BRN | BROWN  |
| GRY | GRAY   |
| GRN | GREEN  |
| ORN | ORANGE |
| PNK | PINK   |
| RED | RED    |
| VIO | VIOLET |
| WHT | WHITE  |
| YEL | YELLOW |



DIP SWITCH SETTINGS



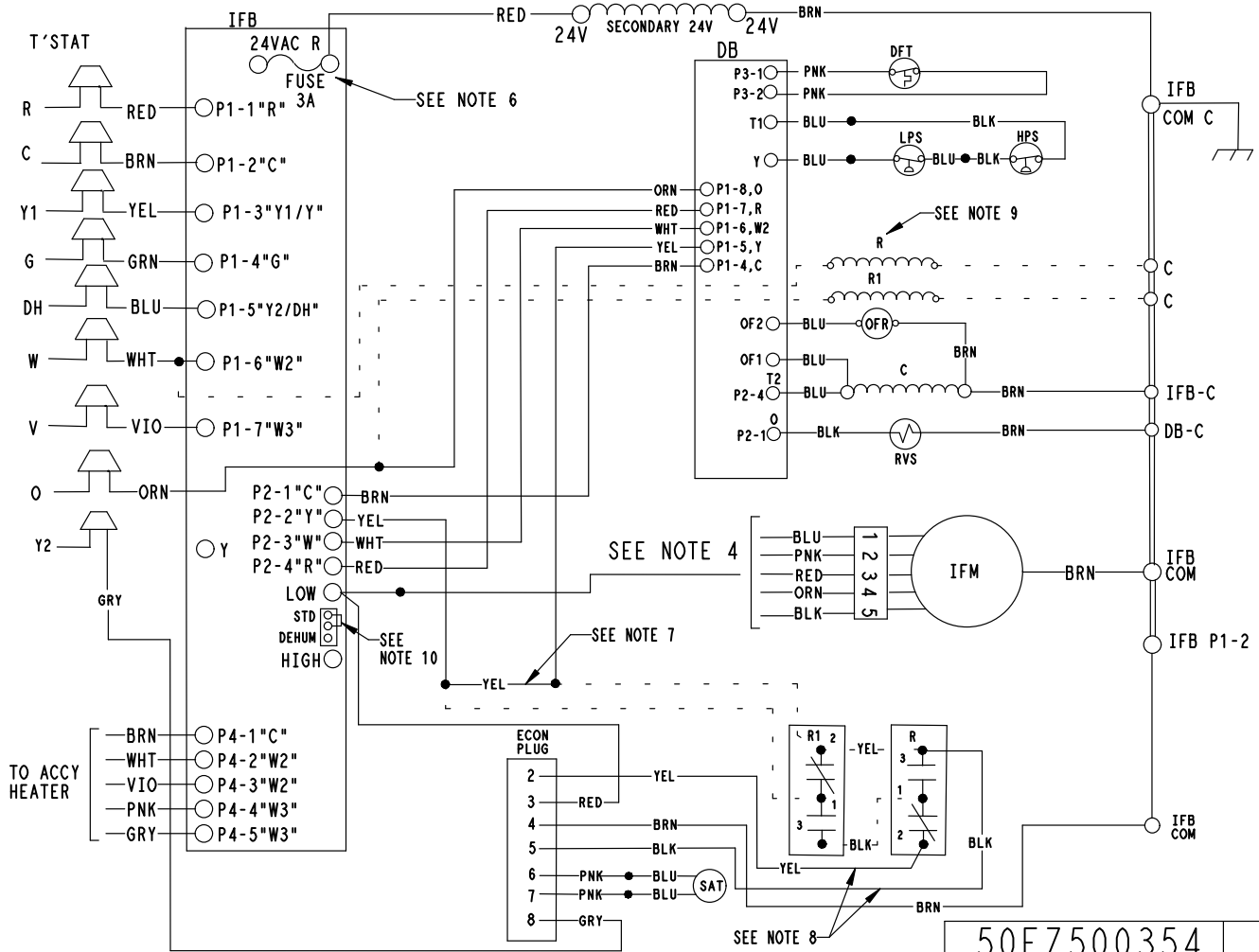
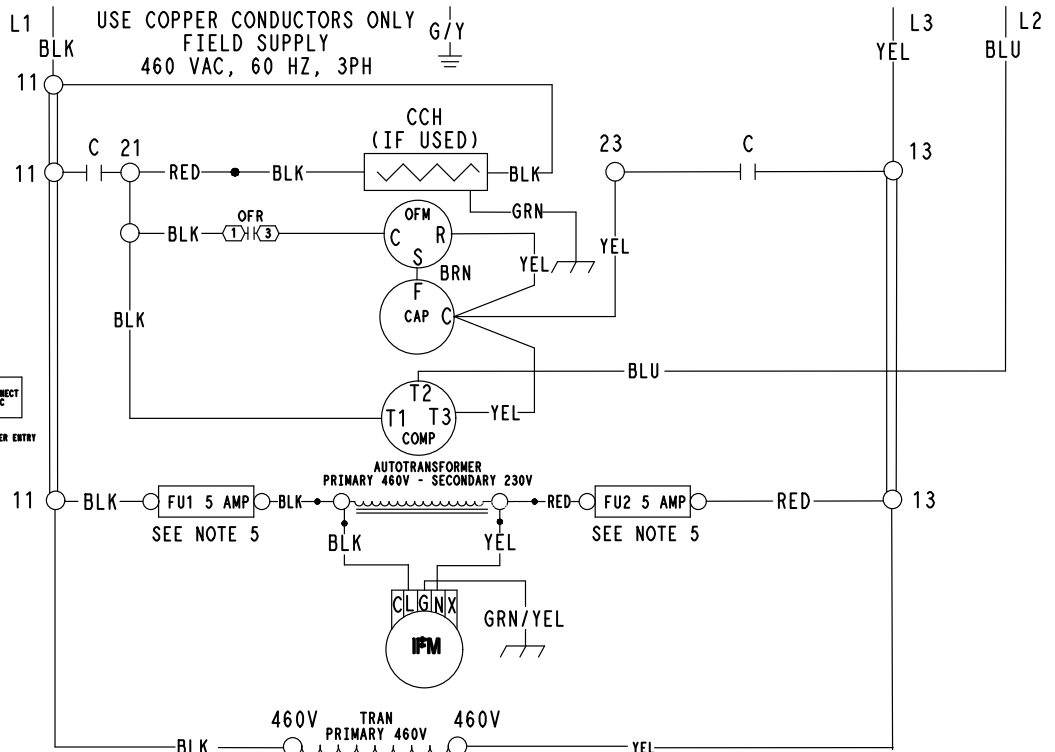
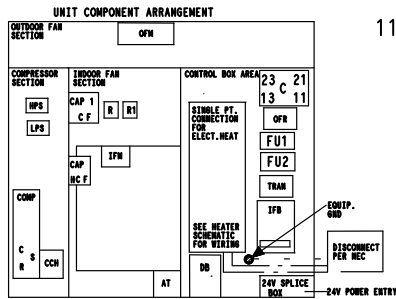
SPEED UP  JUMPED TEST PINS (USE METAL OBJECT) FIELD SPEED-UP CYCLE

- MOMENTARILY SHORT PINS AND RELEASE TO BYPASS COMPRESSOR OFF DELAY.
- SHORT FOR 5+ SEC. AND RELEASE FOR FORCED DEFROST.
- PERMANENT SHORT WILL BE IGNORED.

DEFROST WILL TERMINATE IN 30 SEC. IF DFT OPEN. DEFROST WILL TERMINATE NORMALLY IF DFT IS CLOSED.

THE COMPRESSOR WILL SHUT OFF FOR 30 SEC. ON DEFROST INITIATION AND TERMINATION IN THE "QUIET SHIFT" ON POSITION

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



50EZ500354 E



## CONTROLS

### Operating sequence

When power is supplied to unit, the transformer (TRAN) is energized.

On units with crankcase heater, heater is also energized.

**Cooling** — With the thermostat in the cooling position, the thermostat makes circuit “R” to “O”. This energizes the reversing valve solenoid (RVS) and places the unit in standby condition for cooling.

As the space temperature rises, the thermostat closes circuit “R” to “Y”. A circuit is made to contactor (C), starting the compressor (COMP) and outdoor-fan motor (OFM). Circuit “R” to “G” is made at the same time and starts the indoor-fan motor (IFM).

When the thermostat is satisfied, contacts open, deenergizing C. The COMP and OFM stop, and the IFM stops after the preselected time delay.

On the loss of the thermostat call for cooling, 24 V is removed from both the “Y1/Y” and “G” terminals (provided the fan switch is in the “AUTO” position) de-energizing the compressor contactor and opening the contacts supplying power to compressor/OFM. After a 90-second delay, the IFM shuts off. If the thermostat fan selector switch is in the “ON” position, the IFM will run continuously.

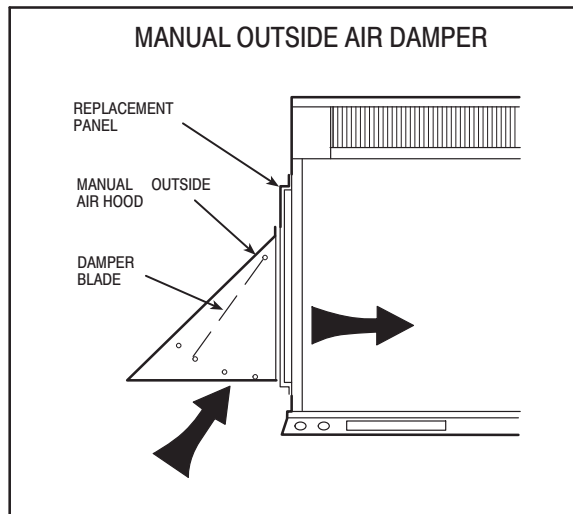
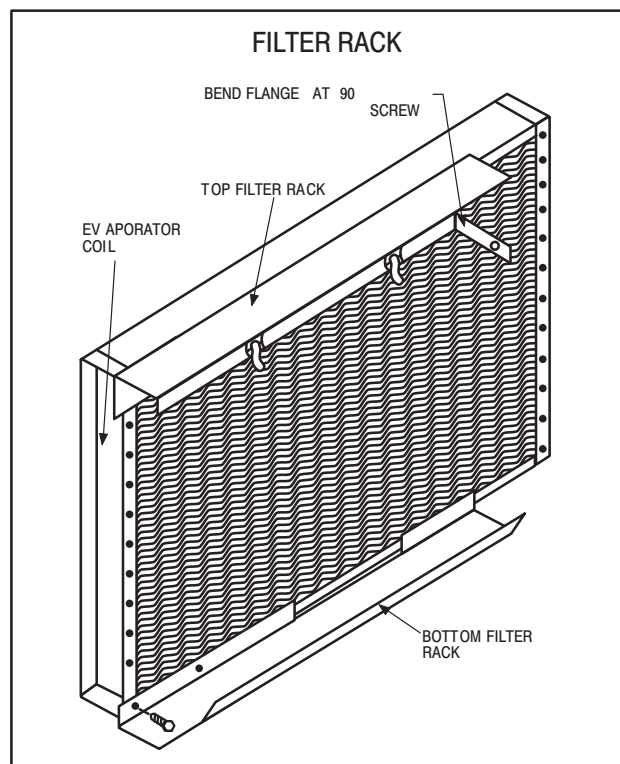
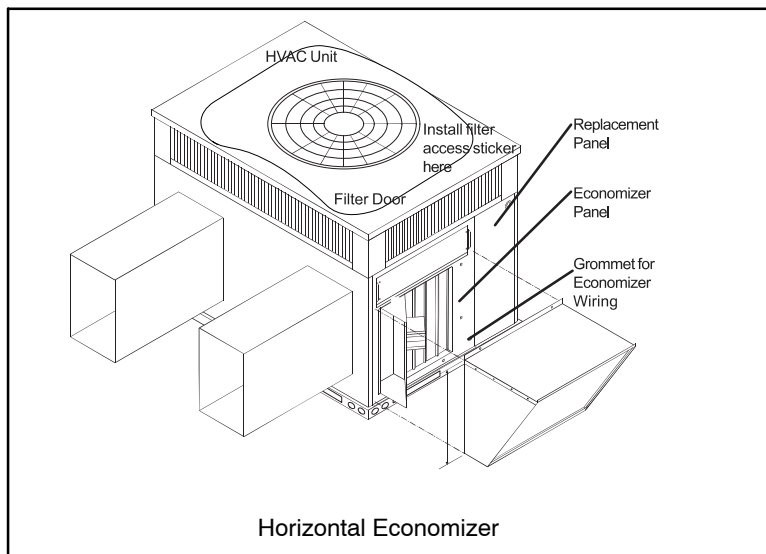
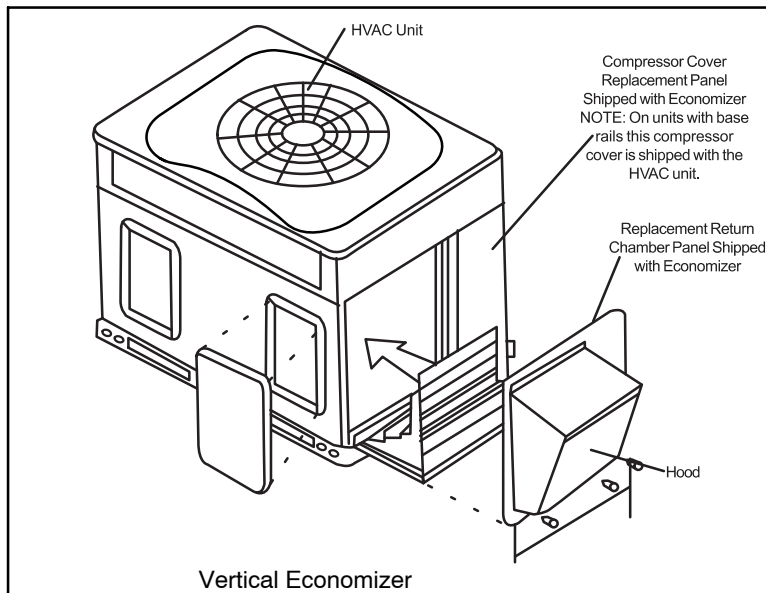
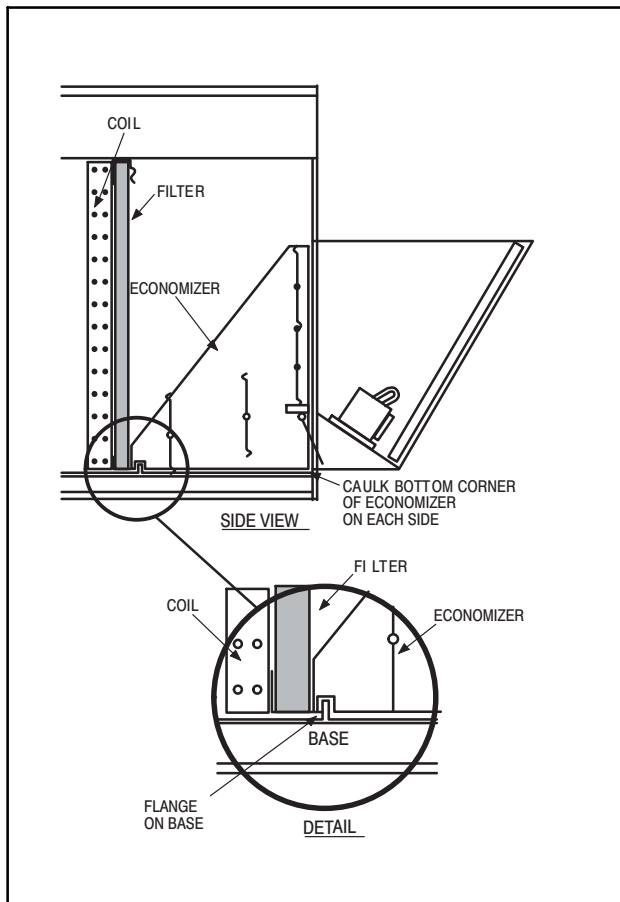
**Heating** — On a call for heat, thermostat makes circuits “R” to “Y” and “R” to “G”.

A circuit is made to C, starting COMP and OFM. Circuit “R” to “G” also is completed, energizing IFR and starting IFM after the selected time delay.

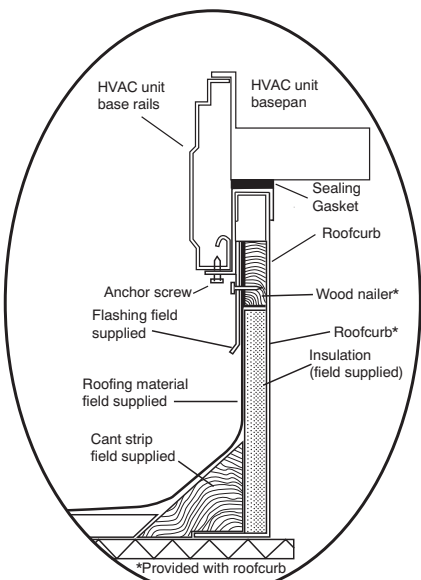
Should room temperature continue to fall, circuit “R” to “W” is made through second-stage thermostat. If optional electric heat package is used, a relay is energized, bringing on first bank of supplemental electric heat. When thermostat is satisfied, contacts open, deenergizing contactor and relay; motors and heaters deenergize.

# ACCESSORIES

## ECONOMIZER

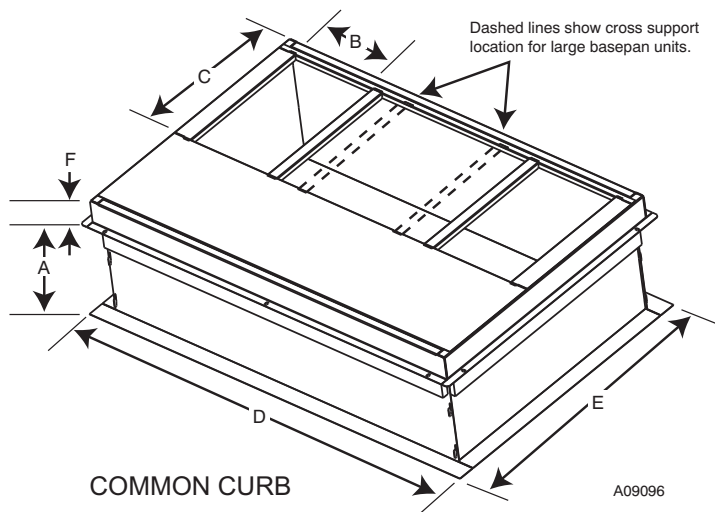


ROOF CURBS



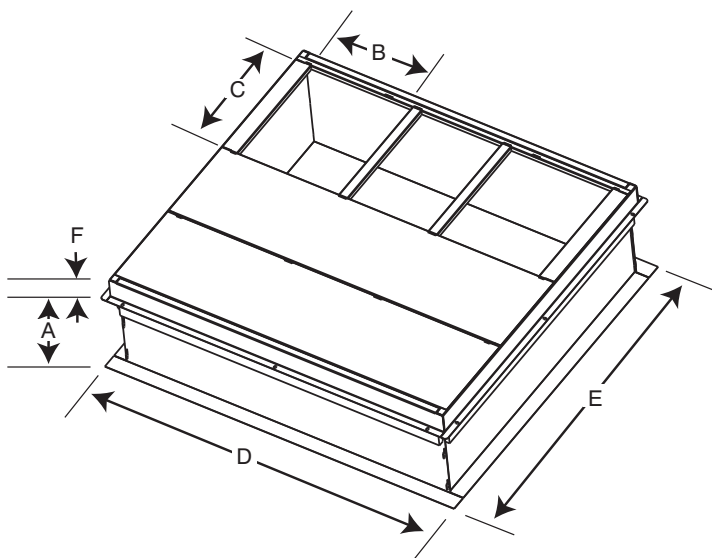
ROOF CURB DETAIL

A09090



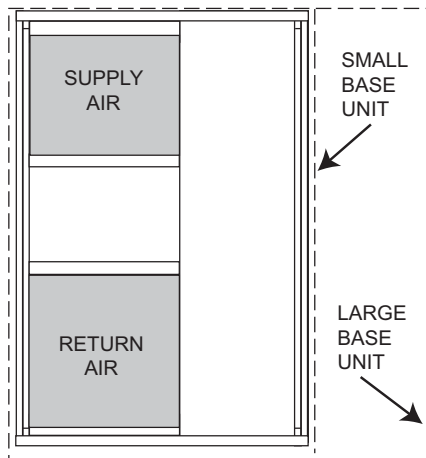
COMMON CURB

A09096



LARGE CURB

A09095



UNIT PLACEMENT ON COMMON CURB

A09094

SMALL OR LARGE BASE UNIT

UNIT SIZE	CATALOG NUMBER	A IN. (mm)	B (small base) IN. (mm)*	B (large base) IN. (mm)*	C IN. (mm)	D IN. (mm)	E IN. (mm)	F IN. (mm)
Small or Large	CPRFCURB010A00	11 (279)	10 (254)	14 (356)	16 (406)	47.8 (1214)	32.4 (822)	2.7 (69)
	CPRFCURB011A00	14 (356)					43.9 (1116)	
Large	CPRFCURB012A00	11 (279)	N/A					
	CPRFCURB013A00	14 (356)						

\* Part Numbers CPRFCURB010A00 and CPRFCURB011A00 can be used on both small and large basepan units. The cross supports must be located based on whether the unit is a small basepan or a large basepan.

NOTES:

1. Roof curb must be set up for unit being installed.
2. Seal strip must be applied, as required, to unit being installed.
3. Roof curb is made of 16-gauge steel.
4. Attach ductwork to curb (flanges of duct rest on curb).
5. Insulated panels: 1-in. (25.4 mm) thick fiberglass 1 lb. density.

## PHD3 ACCESSORIES (continued)

### ROOF CURBS

Model Number	Description	Use With Model Size
CPRFCURB010A00	Roof Curb, 11" High	30 – 60
CPRFCURB011A00	Roof Curb, 14" High	30 – 60
CPRFCURB012A00	Roof Curb, 11" High	42 – 60
CPRFCURB013A00	Roof Curb, 14" High	42 – 60

**Note:** CPRFCURB010A00 AND CPRFCURB011A00 can be used with 42–60 size units with some overhang.

### ADAPTER CURBS\*

CPADCURB001A00	Adapter Curb for use with NPRFCURB006A00 & NPRFCURB007A00	30 – 36
CPADCURB002A00	Adapter Curb for use with NPRFCURB008A00 & NPRFCURB009A00	42 – 60

\* Can also be used when replacing other manufacturer's older generation units that contain a composite base without a metal base rail.

### CONCENTRIC ADAPTERS – (Use with curb only)

NPCONADP001A00	For 18" round duct (use with curbs CPRFCURB010A00, CPRFCURB011A00)	Small Curb
NPCONADP002A00	For 18" round duct (use with curbs CPRFCURB012A00, CPRFCURB013A00)	Large Curb

### CONCENTRIC DIFFUSERS – (Ceiling or under roof)

AXB020CSA*	Step Down Diffuser – Fits 2' x 4' Ceiling Grid (16" round collars for flex conn.)	30 – 42
AXB020CFA*	Flush Mount Diffuser – Fits 2' x 4' Ceiling Grid (16" round collars for flex conn.)	30 – 42
AXB030CSA	Step Down Diffuser – Fits 2' x 4' Ceiling Grid (18" round collars for flex conn.)	30 – 60
AXB030CFA	Flush Mount Diffuser – Fits 2' x 4' Ceiling Grid (18" round collars for flex conn.)	30 – 60

\* A field supplied 18" to 16" round reducer required when used with NP concentric adaptor

### ECONOMIZERS

Model Number	Description	Use With Model Size
CPECOMZR007A00	Dedicated Vertical Economizer – Internal with solid state controller, gear driven, fully modulating damper, spring return actuator, up to 50% barometric relief, supply and dry bulb outdoor air sensors. Includes filter rack with 1" filters*.	30 – 36
CPECOMZR008A00		42 – 48
CPECOMZR009A00		60
CPECOMZR010A00	Dedicated Horizontal Economizer – Internal with solid state controller, fully modulating damper, spring return actuator, supply and dry bulb outdoor air sensor, and low ambient compressor lockout switch included. Includes filter rack with 1-inch filters*.	30 – 36
CPECOMZR011A00		42 – 48
CPECOMZR012A00		60
CPRLYKIT001A00	Economizer Relay Kit for Heat Pumps	ALL
AXB078ENT	Outdoor Enthalpy Control	ALL

\* Outdoor enthalpy available as field installed accessory; Filter rack and 1" filter, same as CPFILTRK kit

### MANUAL FRESH AIR DAMPERS

Model Number	Description	Use With Model Size
CPMANDPR007A00	Manual Outside Air Damper – (Includes filter rack and 1" filter, same as CPFILTRK kit)	30 – 36
CPMANDPR008A00		42 – 48
CPMANDPR009A00		60

### INTERNAL FILTER RACK and FILTER (shipped with 1" filters)

Model Number	Description	Use With Model Size
CPFILTRK007A00	Internal Filter Rack	30 – 36
CPFILTRK008A00		42 – 48
CPFILTRK009A00		60

### LOW AMBIENT, ANTI-CYCLE TIMER

Model Number	Description	Use With Model Size
CPLOWAMB001A00	Low ambient Control – enables cooling system to operate down to 0 Deg. F by cycling condenser fan on and off	ALL
NRTIMEGD001A00	5 minute anti-cycle timer (Note: many thermostats have inherent anti-cycle timer logic)	ALL

## PHD3 ACCESSORIES (continued)

### CRANKCASE HEATER – BELLY BAND TYPE

NPCRKHTR008A00	240V Crankcase Heater (included with 30 size models)	36
NPCRKHTR004A00	240V Crankcase Heater (included with 42 and 60 size models)	48
NPCRKHTR009A00	460V Crankcase Heater (included with 42 size models)	36
NPCRKHTR005A00	460V Crankcase Heater (included with 60 size models)	48

### HAIL GUARD / COIL PROTECTION

Model Number	Description	Use With Model Size
NAPA00501GR	3/8" spacing dense wire grilles	30, 36
NAPA00601GR	3/8" spacing dense wire grilles	42, 48
NAPA01001GR	3/8" spacing dense wire grilles	60

### ELECTRIC HEATERS

#### 208/240V

PART NO.	NOMINAL CAPACITY (kW)	FUSED	# FUSES	STAGES	Use With
EHNA05H0N	3.8 / 5.0	NO	0	1	ALL
EHNA10H0N	7.5 / 10.0	NO	0	2	30 – 48
EHNA10H6F	7.5 / 10.0	YES	6	2	ALL
EHNA15H6F	11.3 / 15.0	YES	6	2	ALL
EHNA20H6F	15.0 / 20.0	YES	6	2	42 – 60

#### 460V

EHNA05L0N	5.0	NO	0	1	ALL
EHNA10L0N	10.0	NO	0	2	ALL
EHNA15L0N	15.0	NO	0	2	ALL
EHNA20L0N	20.0	NO	0	2	42 – 60

### DUAL POINT WIRING KIT

CPDUALPT001A00	Dual Point Wiring kit, 5–20kW Heaters	ALL
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### DUCT TRANSITIONS

Model Number	Description	Use With Model Size
NPDUCFLG002A00	Square to 14" Round (1 set of 2, use with horizontal duct flanges only)	30 – 48