Arcoaire® Air Conditioning & Heating

PHN4

Product Specifications

14 SEER, 12 EER, 8.0 HSPF, PACKAGE HEAT PUMP, 2-1/2 to 5 TONS

Three Phase, 208/230V and 460V, 60 Hz.

REFRIGERATION CIRCUIT

- Environmentally sound R-410A refrigerant
- Copper tube/aluminum fin condenser and evaporator coils
- Scroll compressors standard on all models
- Short-cycling protection for the compressor is built in the defrost control board

EASY TO INSTALL AND SERVICE

- Installs easily on a rooftop or at ground level
- Easy single-panel accessibility for maintenance and installation
- Easily converts to down discharge applications with duct covers provided
- Convertible design for either downflow or horizontal discharge applications
- Combination electric heating and cooling

BUILT TO LAST

- Wire Grille
- Multi-speed, direct-drive indoor fan motor
- Heavy-duty pre-painted steel cabinet
- High efficiency X-13 indoor blower motor on all models
- Vertical condenser fan discharge
- Rust-proof base with integral sloping drain

WARRANTY

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

ENERGY STAR PARTNER

As an Energy Star® Partner, International Comfort Products has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Air Conditioners

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UNIT PERFORMANCE DATA

Model Number	COOLING			HEATING			Voltage 3 Ph-60 Hz	Unit Dimensions Height x Width x Depth	Operating Weight (lb)
	Nominal Capacity BTU/h	S.E.E.R	E.E.R	High Heat Capacity BTU/h	HSPF	Low Heat Capacity BTU/h			
PHN430000H00A	29,000	14.5	12.0	29,000	8.0	15,500	208/230	41 X 48 X 33	316
PHN436000H00A	36,000	14.5	12.0	34,800	8.0	18,700	208/230	43 X 48 X 44	371
PHN436000L00A	36,000	14.5	12.0	34,800	8.0	18,700	460	43 X 48 X 44	385
PHN442000H00A	41,000	14.5	12.0	41,000	8.0	22,600	208/230	47 X 48 X 44	412
PHN442000L00A	41,000	14.5	12.0	41,000	8.0	22,600	460	47 X 48 X 44	426
PHN448000H00A	46,000	14.5	12.0	45,500	8.0	23,800	208/230	47 X 48 X 44	432
PHN448000L00A	46,000	14.5	12.0	45,500	8.0	23,800	460	47 X 48 X 44	446
PHN460000H00A	59,000	14.5	12.0	60,000	8.0	33,600	208/230	47 X 48 X 44	462
PHN460000L00A	59,000	14.2	12.0	60,000	8.0	33,600	460	47 X 48 X 44	476

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UNIT SPECIFICATIONS

UNIT SIZE	PHN430	PHN436	PHN442	PHN448	PHN460
NOMINAL CAPACITY (ton)	2.5	3	3.5	4	5
OPERATING WEIGHT‡ (lb) (kg)	316 143	371 168	412 187	432 196	462 210
COMPRESSOR QUANTITY	1				
TYPE	SCROLL COMPRESSOR				
REFRIGERANT	R-410A				
Refrigerant (R-410A) Quantity (lb) Quantity (kg)	10.5 4.8	9.0 4.1	14.0 6.4	17.0 7.7	16.0 7.3
METERING DEVICE ID	TXV				
ORIFICE OD in. (Qty) mm	0.038 (2) .97	0.040 (2) 1.02	0.038 (Left OD Coil) 0.040 (Right OD Coil) .97/102	0.040 (2) 1.02	0.049 (2) 1.24
OUTDOOR COIL Rows... Fins/in. face area (sq. ft.)	 2...21 15.4	 2...21 13.6	 2...21 19.4	 2...21 19.4	 2...21 23.3
OUTDOOR FAN Nominal Airflow (CFM) Diameter Motor HP (RPM)	2600 22 1/8 (825)	3000 22 1/4 (1100)	3500 22 1/8 (825)	3500 22 1/4 (1100)	3800 22 1/3 (1100)
INDOOR COIL Rows... Fins/in. face area (sq. ft.)	 3...17 3.7	 3...17 4.7	 3...17 4.7	 3...17 5.7	 4...17 5.7
INDOOR BLOWER Nominal Cooling Airflow (CFM) Size (in.) (mm) Motor (HP)	 1000 10x10 254x254 1/2	 1200 11x10 279x254 3/4	 1400 11x10 279x254 3/4	 1600 11x10 279x254 1.0	 1750 11x10 279x254 1.0
HIGH-PRESSURE SWITCH (psig) Cutout Reset (Auto)	650±15 420±25				
LOW-PRESSURE SWITCH (Liquid Line) (psig) Cutout	20±5 45±10				
Reset (Auto)	20±5 45±10				
RETURN-AIR FILTERS*† throwaway (in.) (mm)	20x24x1 508x610x25	24x30x1 610x762x25		24x36x1 610x914x25	

*Required filter sizes shown are based on the larger of the ARI (Air conditioning 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. W.C.

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

‡ For 460 volt units, add 14 lb (6.4 kg) to the weight.

OUTDOOR SOUND: OCTAVE BAND DATA-DECIBELS

MODEL PHN4	SOUND RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
30	72	61.5	62.5	66.0	66.0	63.0	57.5	50.5
36	78	62.0	69.0	72.5	73.0	70.5	67.5	62.0
42	75	62.5	62.5	68.5	70.0	67.0	62.0	58.5
48	78	70.5	69.5	71.0	72.5	69.5	66.0	59.5
60	79	69.0	69.0	71.5	74.0	72.0	67.5	59.5

NOTE: Tested in accordance with ARI Standard 270−95 (not listed in ARI).

UNIT SPECIFICATIONS

PHN430-60 ELECTRIC HEATER USAGE

Electric Heater Model Number	Nominal Capacity (kW)	Fuses	Used With Model Sizes				
			30	36	42	48	60
ELECTRIC HEATERS (208/230—3—60)							
EHNA05H0N	5.0	0	✓	✓	✓	✓	✓
EHNA10H0N	10.0	0	✓	✓	✓	✓	
EHNA10H6F	10.0	6					✓
EHNA15H6F	15.0	6	✓	✓	✓	✓	✓
EHNA20H6F	20.0	6			✓	✓	✓
ELECTRIC HEATERS (460—3—60)							
EHNA05L0N	5.0	0		✓	✓	✓	✓
EHNA10L0N	10.0	0		✓	✓	✓	✓
EHNA15L0N	15.0	0		✓	✓	✓	✓
EHNA20L0N	20.0	0			✓	✓	✓

ELECTRIC HEATER ELECTRICAL DATA

Unit PHN4	Nominal V-PH-HZ	Voltage Range		Compressor		OFM	IFM	Electric Heat		Power Supply		
		MIN	MAX	RLA	LRA	FLA	FLA	Nominal kW	FLA	MCA	FUSE or HACR BKR	MOCP
30	208/230-3-60	187	253	10.3	58.0	0.9	4.1	-/-	-/-	17.8/17.8	25/25	-
								3.8/5	10.4/12	30.9/32.9	35/35	-
								7.5/10	20.8/24.1	43.9/47.9	45/50	-
								11.3/15	31.3/36.1	56.9/62.9	-	60/70
36	208/230-3-60	187	253	11.3	88.0	1.5	6.0	-/-	-/-	21.6/21.6	30/30	-
								3.8/5	10.4/12	34.7/36.7	35/40	-
								7.5/10	20.8/24.1	47.7/51.7	50/60	-
								11.3/15	31.3/36.1	60.7/66.7	-	70/70
42	208/230-3-60	187	253	14.1	88.0	0.9	6.0	-/-	-/-	24.6/24.6	35/35	-
								3.8/5	10.4/12	37.6/39.6	40/40	-
								7.5/10	20.8/24.1	50.6/54.7	60/60	-
								11.3/15	31.3/36.1	63.7/69.7	-	70/70
								15/20	41.4/47.9	76.5/84.5	-	80/90
48	208/230-3-60	187	253	15.9	83.0	1.5	7.6	-/-	-/-	29.0/29.0	40/40	-
								3.8/5	10.4/12	42.0/44.0	45/45	-
								7.5/10	20.8/24.1	55.0/59.0	60/60	-
								11.3/15	31.3/36.1	68.1/74.1	-	70/80
								15/20	41.4/47.9	80.9/88.8	-	90/90
60	208/230-3-60	187	253	17.0	110.0	1.9	7.6	-/-	-/-	30.7/30.7	45/45	-
								3.8/5	10.4/12	43.8/45.8	45/50	-
								7.5/10	20.8/24.1	56.8/60.8	-	60/70
								11.3/15	31.3/36.1	69.8/75.8	-	70/80
								15/20	41.4/47.9	82.6/90.6	-	90/100
36	460-3-60	414	506	5.8	38.0	0.6	3.0	-/-	-/-	10.8	15	-
								3.8/5	6.0	18.3	20	-
								7.5/10	12.0	25.9	30	-
								11.3/15	18.0	33.4	35	-
42	460-3-60	414	506	6.6	44.0	0.6	3.0	-/-	-/-	11.8	15	-
								3.8/5	6.0	19.3	20	-
								7.5/10	12.0	26.9	30	-
								11.3/15	18.0	34.4	35	-
								15/20	24.1	41.9	45	-
048	460-3-60	414	506	7.2	41.0	0.9	3.8	-/-	-/-	13.6	20	-
								3.8/5	6.0	21.2	25	-
								7.5/10	12.0	28.7	30	-
								11.3/15	18.0	36.2	40	-
								15/20	24.1	43.7	45	-
60	460-3-60	414	506	7.8	52.0	0.9	3.8	-/-	-/-	14.4	20	-
								3.8/5	6.0	21.9	25	-
								7.5/10	12.0	29.4	30	-
								11.3/15	18.0	37.0	40	-
								15/20	24.1	44.5	45	-

See Legend and Notes.

UNIT AIRFLOW, Horizontal Discharge CFM, Dry Coil

Unit (Voltage)	Motor Speed	Wire Color	External Static Pressure (IN. W.C.)								
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
PHN430 (208/230-3-60)	Low	Blue	741	638	547	415	---	---	---	---	---
	Med-Low	Pink	898	820	738	662	536	---	---	---	---
	Medium	Red	973	887	823	733	665	538	451	---	---
	Med-High[1]	Orange	1140	1064	996	915	840	758	687	564	480
	High[1]	Black	1202	1140	1082	1015	961	881	810	732	631
PHN436 (208/230-3-60) (460-3-60)	Low	Blue	1295	1234	1182	1126	1075	1016	955	898	857
	Med-Low[1]	Pink	1345	1282	1235	1194	1140	1095	1027	974	921
	Medium	Red	1505	1452	1413	1358	1323	1282	1234	1169	1130
	Med-High	Orange	1545	1492	1449	1411	1362	1313	1278	1231	1188
	High	Black	1705	1643	1607	1568	1518	1483	1448	1404	1360
PHN442 (208/230-3-60) (460-3-60)	Low	Blue	1295	1234	1182	1126	1075	1016	955	898	857
	Med-Low	Pink	1345	1282	1235	1194	1140	1095	1027	974	921
	Medium	Red	1505	1452	1413	1358	1323	1282	1234	1169	1130
	Med-High[1]	Orange	1545	1492	1449	1411	1362	1313	1278	1231	1188
	High	Black	1705	1643	1607	1568	1518	1483	1448	1404	1360
PHN448 (208/230-3-60) (460-3-60)	Low	Blue	1445	1389	1341	1281	1236	1189	1139	1072	1027
	Med-Low[1]	Pink	1678	1635	1602	1558	1513	1474	1438	1404	1349
	Medium	Red	1962	1915	1880	1843	1794	1753	1711	1675	1628
	Med-High	Orange	2131	2088	2065	2013	1982	1941	1888	1860	1785
	High	Black	2461	2409	2339	2286	2192	2140	2062	1968	1874
PHN460 (208/230-3-60) (460-3-60)	Low	Blue	1448	1321	1282	1235	1192	1145	1101	1057	1011
	Med-Low	Pink	1722	1675	1614	1543	1499	1442	1408	1356	1308
	Medium[1]	Red	1887	1847	1783	1726	1677	1625	1578	1527	1432
	Med-High	Orange	2055	2008	1958	1927	1900	1768	1685	1581	1458
	High	Black	2292	2238	2158	2049	1935	1840	1732	1635	1513

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

[1] Factory–shipped cooling/heat pump heating speed

NOTE: Deduct field–supplied air filter pressure drop and wet coil pressure drop to obtain external static pressure available for ducting.

Filter Pressure Drop Table (IN. W.C.)

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)	—	—	—	—	0.09	0.10	0.11	0.13	0.14	0.15	0.16	—	—	—	—	—	—	—	—
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

PHN4 Wet Coil Pressure Drop (in. W.C.)

UNIT SIZE	STANDARD CFM (S.C.F.M)														
	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

Electric Heat Pressure Drop Table - Small Cabinet: 30-36 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
20 kw	0.00	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19

Electric Heat Pressure Drop Table (in. W.C.) - Large Cabinet 42-60 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

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHN430 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			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
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
875 / 0.05	57 (13.9)	28.47	28.47	1.94	27.21	27.21	2.15	25.85	25.85	2.37	24.39	24.39	2.62	22.78	22.78	2.88	20.95	20.95	3.15
	62 (16.7)	29.18	25.42	1.94	27.67	24.95	2.15	26.09	24.39	2.37	24.42	24.42	2.62	22.78	22.78	2.88	20.95	20.95	3.15
	63* (17.2)	29.61	20.60	1.94	28.05	20.16	2.15	26.40	19.65	2.38	24.64	19.08	2.62	22.73	18.41	2.88	20.62	17.62	3.15
	67 (19.4)	31.91	21.40	1.95	30.23	20.96	2.16	28.45	20.46	2.38	26.52	19.88	2.63	24.44	19.21	2.89	22.12	18.39	3.16
	72 (22.2)	34.97	17.28	1.96	33.11	16.85	2.17	31.12	16.32	2.39	28.99	15.72	2.64	26.68	15.03	2.90	24.10	14.20	3.17
1000 / 0.05	57 (13.9)	29.72	29.72	1.98	28.36	28.36	2.18	26.91	26.91	2.41	25.32	25.32	2.65	23.58	23.58	2.91	21.60	21.60	3.19
	62 (16.7)	29.97	27.26	1.98	28.41	28.34	2.18	26.91	26.91	2.41	25.33	25.33	2.65	23.58	23.58	2.91	21.60	21.60	3.19
	63* (17.2)	30.31	21.98	1.98	28.67	21.52	2.18	26.94	21.00	2.41	25.10	20.40	2.65	23.10	19.69	2.91	20.89	18.83	3.18
	67 (19.4)	32.64	22.87	1.99	30.88	22.42	2.19	29.00	21.90	2.42	26.98	21.29	2.66	24.80	20.58	2.92	22.39	19.70	3.19
	72 (22.2)	35.74	18.21	2.00	33.79	17.74	2.20	31.70	17.19	2.43	29.47	16.56	2.67	27.04	15.84	2.93	24.35	14.99	3.20
1125 / 0.06	57 (13.9)	30.79	30.79	2.01	29.34	29.34	2.22	27.78	27.78	2.44	26.09	26.09	2.69	24.23	24.23	2.95	22.12	22.12	3.22
	62 (16.7)	30.79	30.79	2.01	29.34	29.34	2.22	27.79	27.79	2.44	26.09	26.09	2.69	24.23	24.23	2.95	22.12	22.12	3.22
	63* (17.2)	30.85	23.30	2.01	29.15	22.83	2.22	27.36	22.29	2.44	25.44	21.65	2.68	23.38	20.89	2.94	21.11	19.95	3.21
	67 (19.4)	33.20	24.29	2.02	31.37	23.82	2.23	29.41	23.28	2.45	27.32	22.64	2.69	25.06	21.88	2.95	22.58	20.93	3.22
	72 (22.2)	36.33	19.07	2.03	34.30	18.58	2.24	32.12	18.01	2.46	29.81	17.37	2.70	27.30	16.63	2.96	24.52	15.74	3.23

*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.

PHN430 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)		
		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
EDB	CFM	Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ	
65 (18.3)	875	9.06	8.34	1.90	12.11	11.14	1.98	15.26	14.00	2.04	18.55	16.82	2.12	22.03	19.31	2.19	25.87	25.87	2.28	30.37	30.37	2.39	35.63	35.63	2.54
	1000	9.26	8.52	1.92	12.33	11.34	1.99	15.48	14.21	2.05	18.79	17.05	2.10	22.30	19.54	2.17	26.34	26.34	2.24	30.84	30.84	2.34	36.27	36.27	2.47
	1125	9.43	8.68	1.94	12.51	11.51	2.00	15.68	14.39	2.05	19.00	17.24	2.10	22.53	19.74	2.16	26.65	26.65	2.22	31.24	31.24	2.31	36.86	36.86	2.43
70 (21.1)	875	8.53	7.85	1.98	11.67	10.73	2.06	14.87	13.65	2.14	18.21	16.51	2.22	21.71	19.03	2.30	25.47	25.47	2.40	29.91	29.91	2.52	35.05	35.05	2.67
	1000	8.73	8.03	2.00	11.89	10.94	2.08	15.11	13.87	2.14	18.46	16.74	2.21	21.99	19.26	2.28	25.82	25.82	2.36	30.36	30.36	2.46	35.68	35.68	2.59
	1125	8.91	8.20	2.02	12.08	11.11	2.09	15.31	14.05	2.15	18.68	16.94	2.21	22.22	19.47	2.27	26.12	26.12	2.34	30.74	30.74	2.42	36.20	36.20	2.55
75 (23.9)	875	7.95	7.31	2.06	11.18	10.29	2.15	14.45	13.27	2.24	17.84	16.18	2.33	21.38	18.73	2.42	25.11	25.11	2.52	29.46	29.46	2.64	34.49	34.49	2.80
	1000	8.15	7.50	2.08	11.40	10.49	2.17	14.70	13.49	2.24	18.10	16.41	2.32	21.66	18.97	2.39	25.43	25.43	2.48	29.90	29.90	2.58	35.09	35.09	2.72
	1125	8.33	7.66	2.11	11.60	10.67	2.18	14.90	13.68	2.25	18.32	16.61	2.32	21.89	19.18	2.38	25.72	25.72	2.45	30.27	30.27	2.55	35.60	35.60	2.67

PERFORMANCE DATA-STANDARD X-13 INDOOR MOTOR

PHN436 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
	EWB	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys
CFM / BF	°F (°C)	Total	Sens	KW	Total	Sens	KW	Total	Sens	KW	Total	Sens	KW	Total	Sens	KW	Total	Sens	KW
1050 / 0.08	57 (13.9)	38.00	38.00	2.44	34.81	34.81	2.69	31.68	31.68	2.95	28.58	28.58	3.23	25.51	25.51	3.53	22.43	22.43	3.85
	62 (16.7)	39.23	34.90	2.45	35.69	32.70	2.69	32.23	30.51	2.95	28.85	28.27	3.23	25.55	25.55	3.53	22.43	22.43	3.85
	63* (17.2)	39.74	28.36	2.45	36.13	26.48	2.69	32.59	24.60	2.95	29.11	22.76	3.24	25.68	20.90	3.53	22.28	19.03	3.85
	67 (19.4)	42.90	29.50	2.46	39.01	27.57	2.70	35.20	25.66	2.97	31.45	23.75	3.25	27.77	21.86	3.55	24.10	19.94	3.87
	72 (22.2)	46.93	24.09	2.47	42.69	22.40	2.72	38.51	20.71	2.98	34.42	19.04	3.27	30.38	17.37	3.57	26.35	15.68	3.89
1200 / 0.09	57 (13.9)	39.72	39.72	2.48	36.36	36.36	2.72	33.04	33.04	2.99	29.76	29.76	3.27	26.51	26.51	3.57	23.26	23.26	3.88
	62 (16.7)	40.35	37.43	2.48	36.71	35.04	2.72	33.12	33.12	2.99	29.77	29.77	3.27	26.52	26.52	3.57	23.26	23.26	3.88
	63* (17.2)	40.77	30.20	2.48	37.03	28.20	2.72	33.35	26.23	2.99	29.75	24.28	3.27	26.21	22.32	3.57	22.70	20.32	3.88
	67 (19.4)	43.99	31.47	2.49	39.95	29.42	2.74	36.00	27.40	3.00	32.13	25.39	3.28	28.31	23.39	3.58	24.52	21.34	3.90
	72 (22.2)	48.09	25.31	2.51	43.69	23.54	2.75	39.37	21.78	3.02	35.13	20.04	3.30	30.95	18.29	3.60	26.79	16.52	3.92
1350 / 0.10	57 (13.9)	41.20	41.20	2.51	37.67	37.67	2.76	34.19	34.19	3.02	30.76	30.76	3.30	27.36	27.36	3.60	23.95	23.95	3.92
	62 (16.7)	41.37	39.65	2.51	37.69	37.69	2.76	34.19	34.19	3.02	30.76	30.76	3.30	27.36	27.36	3.60	23.95	23.95	3.92
	63* (17.2)	41.60	31.96	2.51	37.74	29.86	2.76	33.95	27.79	3.02	30.25	25.74	3.30	26.62	23.66	3.60	23.02	21.54	3.91
	67 (19.4)	44.85	33.35	2.52	40.70	31.21	2.77	36.63	29.08	3.03	32.65	26.97	3.31	28.73	24.84	3.61	24.84	22.67	3.93
	72 (22.2)	49.01	26.47	2.54	44.48	24.63	2.78	40.03	22.80	3.05	35.68	20.98	3.33	31.39	19.16	3.63	27.12	17.31	3.95

*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.

PHN436 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)		
		Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys	Capacity MBtuh		Total Sys
EDB	CFM	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW	Total	Integ	KW
65 (18.3)	1050	11.29	10.39	2.23	14.77	13.59	2.33	18.36	16.85	2.42	22.15	20.09	2.51	26.29	23.04	2.61	31.12	31.12	2.74	36.45	36.45	2.89	43.29	43.29	3.09
	1200	11.49	10.57	2.25	14.97	13.78	2.33	18.58	17.05	2.41	22.39	20.30	2.48	26.60	23.31	2.57	31.43	31.43	2.68	37.07	37.07	2.82	43.51	43.51	2.98
	1350	11.66	10.72	2.26	15.15	13.94	2.34	18.77	17.23	2.40	22.59	20.49	2.47	26.87	23.54	2.55	31.76	31.76	2.64	37.79	37.79	2.77	42.96	42.96	2.92
70 (21.1)	1050	10.75	9.89	2.33	14.33	13.18	2.43	17.99	16.51	2.53	21.82	19.79	2.64	25.90	22.70	2.74	30.63	30.63	2.88	35.89	35.89	3.03	42.54	42.54	3.25
	1200	10.95	10.08	2.34	14.54	13.38	2.43	18.22	16.72	2.52	22.06	20.01	2.61	26.21	22.96	2.70	31.01	31.01	2.82	36.42	36.42	2.96	43.07	43.07	3.13
	1350	11.13	10.24	2.35	14.72	13.55	2.44	18.41	16.90	2.52	22.27	20.20	2.60	26.47	23.19	2.68	31.48	31.48	2.78	37.12	37.12	2.91	42.78	42.78	3.06
75 (23.9)	1050	10.16	9.34	2.42	13.83	12.73	2.54	17.57	16.13	2.65	21.46	19.46	2.76	25.55	22.39	2.88	30.22	30.22	3.02	35.36	35.36	3.18	41.76	41.76	3.40
	1200	10.36	9.53	2.43	14.06	12.94	2.54	17.81	16.35	2.64	21.71	19.69	2.74	25.83	22.63	2.84	30.58	30.58	2.96	35.87	35.87	3.10	42.56	42.56	3.29
	1350	10.53	9.69	2.45	14.25	13.11	2.55	18.01	16.53	2.64	21.92	19.88	2.72	26.07	22.84	2.81	30.89	30.89	2.92	36.37	36.37	3.05	42.48	42.48	3.21

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHN442 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			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
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1225 / 0.19	57 (13.9)	39.54	39.54	2.66	37.86	37.86	2.97	36.04	36.04	3.31	34.09	34.09	3.68	33.27	33.27	3.64	29.41	29.41	4.50
	62 (16.7)	41.07	37.14	2.68	39.05	35.92	2.99	36.93	34.59	3.32	34.67	33.19	3.69	33.74	32.57	3.64	29.46	29.46	4.50
	63* (17.2)	41.31	30.04	2.68	39.26	28.92	2.99	37.09	27.73	3.32	34.77	26.46	3.69	33.77	25.92	3.64	29.35	23.46	4.50
	67 (19.4)	44.64	31.32	2.72	42.44	30.19	3.03	40.10	28.99	3.36	37.58	27.69	3.73	36.64	27.22	3.69	31.64	24.59	4.54
	72 (22.2)	48.47	25.70	2.76	46.05	24.64	3.07	43.49	23.53	3.41	40.72	22.32	3.77	39.79	21.91	3.74	34.12	19.42	4.59
1400 / 0.21	57 (13.9)	41.22	41.22	2.72	39.41	39.41	3.03	37.47	37.47	3.37	35.37	35.37	3.74	34.56	34.56	3.70	30.33	30.33	4.56
	62 (16.7)	42.17	39.64	2.73	40.08	38.31	3.04	37.89	36.85	3.38	35.52	35.52	3.74	34.66	34.66	3.70	30.34	30.34	4.56
	63* (17.2)	42.36	31.75	2.74	40.21	30.57	3.04	37.94	29.32	3.37	35.51	27.98	3.74	34.52	27.44	3.70	29.83	24.80	4.55
	67 (19.4)	45.76	33.17	2.78	43.45	31.97	3.08	41.00	30.70	3.42	38.36	29.32	3.78	37.43	28.87	3.75	32.13	26.08	4.59
	72 (22.2)	49.65	26.83	2.82	47.11	25.72	3.13	44.43	24.56	3.46	41.52	23.28	3.83	40.63	22.89	3.80	34.63	20.24	4.64
1575 / 0.23	57 (13.9)	42.65	42.65	2.78	40.73	40.73	3.09	38.67	38.67	3.43	36.45	36.45	3.80	35.65	35.65	3.76	31.08	31.08	4.62
	62 (16.7)	43.14	41.90	2.79	40.94	40.94	3.09	38.75	38.75	3.43	36.45	36.45	3.80	35.65	35.65	3.76	31.08	31.08	4.62
	63* (17.2)	43.20	33.36	2.79	40.97	32.13	3.09	38.61	30.82	3.42	36.08	29.41	3.79	35.10	28.88	3.75	30.20	26.10	4.60
	67 (19.4)	46.66	34.92	2.83	44.26	33.67	3.13	41.71	32.33	3.47	38.97	30.89	3.83	38.06	30.44	3.80	32.50	27.49	4.64
	72 (22.2)	50.59	27.89	2.87	47.95	26.72	3.18	45.17	25.51	3.51	42.14	24.18	3.88	41.29	23.80	3.86	35.01	21.00	4.69

*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.

PHN442 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	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
		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ	
65 (18.3)	1225	13.75	12.65	2.45	17.57	16.17	2.56	21.58	19.81	2.68	25.83	23.43	2.81	30.61	26.82	2.96	36.10	36.10	3.14	42.45	42.45	3.36	50.07	50.07	3.66
	1400	13.97	12.85	2.47	17.81	16.38	2.57	21.83	20.04	2.68	26.10	23.67	2.79	30.97	27.13	2.92	36.56	36.56	3.08	43.06	43.06	3.29	50.69	50.69	3.55
	1575	14.17	13.03	2.49	18.01	16.57	2.58	22.05	20.23	2.68	26.32	23.87	2.78	31.28	27.40	2.90	36.94	36.94	3.05	43.53	43.53	3.26	50.61	50.61	3.51
70 (21.1)	1225	13.24	12.18	2.57	17.15	15.78	2.70	21.21	19.47	2.82	25.49	23.12	2.96	30.16	26.42	3.11	35.59	35.59	3.30	41.83	41.83	3.53	49.28	49.28	3.84
	1400	13.47	12.39	2.59	17.39	16.00	2.70	21.46	19.70	2.82	25.76	23.37	2.94	30.51	26.74	3.07	36.03	36.03	3.24	42.41	42.41	3.45	50.08	50.08	3.72
	1575	13.67	12.57	2.61	17.60	16.19	2.72	21.68	19.90	2.82	26.00	23.58	2.93	30.82	27.00	3.05	36.40	36.40	3.21	42.88	42.88	3.41	50.18	50.18	3.67
75 (23.9)	1225	12.69	11.67	2.69	16.68	15.35	2.83	20.80	19.09	2.97	25.13	22.79	3.12	29.77	26.08	3.28	35.10	35.10	3.47	41.22	41.22	3.71	48.53	48.53	4.02
	1400	12.91	11.88	2.71	16.93	15.57	2.84	21.07	19.34	2.96	25.41	23.04	3.09	30.09	26.37	3.24	35.53	35.53	3.41	41.79	41.79	3.63	49.30	49.30	3.91
	1575	13.12	12.07	2.74	17.14	15.77	2.85	21.29	19.54	2.97	25.65	23.26	3.08	30.37	26.61	3.21	35.88	35.88	3.37	42.24	42.24	3.58	49.68	49.68	3.84

PERFORMANCE DATA-STANDARD X-13 INDOOR MOTOR

PHN448 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			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
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1400 / 0.09	57 (13.9)	48.07	48.07	2.99	44.60	44.60	3.35	41.11	41.11	3.74	37.59	37.59	4.18	33.97	33.97	4.66	30.20	30.20	5.18
	62 (16.7)	49.24	42.95	3.00	45.38	40.81	3.35	41.54	38.58	3.75	37.68	37.68	4.18	33.97	33.97	4.66	30.20	30.20	5.18
	63* (17.2)	49.85	34.74	3.00	45.89	32.91	3.35	41.92	31.03	3.75	37.95	29.14	4.18	33.92	27.18	4.66	29.77	25.09	5.17
	67 (19.4)	53.72	36.13	3.02	49.45	34.25	3.38	45.16	32.34	3.77	40.85	30.39	4.21	36.48	28.37	4.68	31.96	26.23	5.20
	72 (22.2)	58.70	29.21	3.05	54.00	27.52	3.41	49.26	25.79	3.80	44.53	24.03	4.24	39.71	22.21	4.72	34.74	20.27	5.23
1600 / 0.10	57 (13.9)	50.08	50.08	3.05	46.40	46.40	3.41	42.70	42.70	3.81	38.95	38.95	4.25	35.11	35.11	4.72	31.11	31.11	5.24
	62 (16.7)	50.54	45.92	3.06	46.59	43.48	3.41	42.71	42.71	3.81	38.95	38.95	4.25	35.11	35.11	4.72	31.11	31.11	5.24
	63* (17.2)	50.98	36.96	3.06	46.86	35.03	3.41	42.75	33.06	3.81	38.62	31.05	4.24	34.44	28.96	4.72	30.16	26.75	5.23
	67 (19.4)	54.90	38.50	3.08	50.46	36.52	3.44	46.00	34.50	3.83	41.53	32.45	4.27	37.00	30.30	4.74	32.34	28.01	5.26
	72 (22.2)	59.95	30.65	3.11	55.05	28.88	3.47	50.14	27.08	3.86	45.24	25.24	4.30	40.25	23.33	4.77	35.12	21.31	5.28
1800 / 0.11	57 (13.9)	51.77	51.77	3.11	47.91	47.91	3.47	44.01	44.01	3.87	40.06	40.06	4.31	36.03	36.03	4.79	31.82	31.82	5.30
	62 (16.7)	51.79	51.79	3.11	47.91	47.91	3.47	44.02	44.02	3.87	40.06	40.06	4.31	36.03	36.03	4.79	31.82	31.82	5.30
	63* (17.2)	51.85	39.08	3.11	47.61	37.05	3.47	43.38	34.99	3.87	39.13	32.86	4.30	34.84	30.64	4.78	30.46	28.24	5.29
	67 (19.4)	55.81	40.79	3.14	51.24	38.71	3.50	46.63	36.58	3.89	42.04	34.40	4.33	37.39	32.12	4.80	32.61	29.67	5.31
	72 (22.2)	60.91	32.02	3.17	55.86	30.17	3.53	50.80	28.29	3.92	45.76	26.38	4.36	40.65	24.40	4.83	35.38	22.30	5.34

*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.

PHN448 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	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
		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ	
65 (18.3)	1400	15.21	14.00	3.19	19.74	18.16	3.29	24.43	22.43	3.40	29.38	26.64	3.51	34.68	30.38	3.63	40.60	40.60	3.78	47.66	47.66	3.97	55.91	55.91	4.22
	1600	15.51	14.27	3.22	20.06	18.45	3.31	24.77	22.74	3.40	29.73	26.97	3.50	35.08	30.74	3.61	41.18	41.18	3.74	48.35	48.35	3.90	57.32	57.32	4.12
	1800	15.79	14.52	3.26	20.34	18.71	3.35	25.07	23.01	3.42	30.04	27.25	3.51	35.44	31.05	3.60	41.70	41.70	3.72	48.93	48.93	3.87	57.75	57.75	4.06
70 (21.1)	1400	14.51	13.35	3.32	19.15	17.62	3.44	23.92	21.96	3.56	28.91	26.22	3.68	34.20	29.97	3.81	39.99	39.99	3.97	46.96	46.96	4.17	55.04	55.04	4.42
	1600	14.81	13.63	3.36	19.47	17.92	3.46	24.26	22.27	3.57	29.28	26.55	3.67	34.61	30.33	3.79	40.53	40.53	3.92	47.63	47.63	4.09	56.25	56.25	4.32
	1800	15.09	13.88	3.40	19.76	18.18	3.50	24.57	22.55	3.59	29.60	26.84	3.68	34.97	30.64	3.78	40.99	40.99	3.90	48.19	48.19	4.06	57.10	57.10	4.25
75 (23.9)	1400	13.74	12.64	3.46	18.50	17.02	3.59	23.36	21.44	3.72	28.41	25.77	3.86	33.71	29.54	4.00	39.42	39.42	4.16	46.29	46.29	4.37	54.20	54.20	4.63
	1600	14.04	12.92	3.49	18.83	17.32	3.62	23.71	21.77	3.73	28.79	26.11	3.85	34.13	29.90	3.97	39.91	39.91	4.11	46.93	46.93	4.29	55.09	55.09	4.52
	1800	14.32	13.17	3.54	19.12	17.59	3.65	24.02	22.05	3.75	29.12	26.41	3.85	34.49	30.22	3.96	40.36	40.36	4.08	47.48	47.48	4.25	56.24	56.24	4.46

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHN460 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			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
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1750 / 0.07	57 (13.9)	63.53	63.53	3.78	58.78	58.78	4.29	53.97	53.97	4.86	49.09	49.09	5.49	44.01	44.01	6.19	42.42	42.42	6.41
	62 (16.7)	65.04	51.03	3.79	59.74	50.40	4.30	54.44	49.51	4.86	49.15	49.15	5.50	44.01	44.01	6.19	38.66	38.66	6.95
	63* (17.2)	65.92	41.28	3.80	60.47	40.65	4.31	54.99	39.84	4.87	49.48	38.85	5.50	43.83	37.60	6.19	42.07	38.16	6.40
	67 (19.4)	70.86	42.85	3.85	64.96	42.22	4.35	59.00	41.40	4.92	52.98	40.40	5.54	46.84	39.11	6.23	40.50	37.40	6.98
	72 (22.2)	77.33	34.48	3.90	70.80	33.73	4.41	64.19	32.79	4.98	57.55	31.67	5.60	50.77	30.29	6.29	43.78	28.58	7.03
2000 / 0.08	57 (13.9)	66.05	66.05	3.88	61.00	61.00	4.40	55.88	55.88	4.97	50.65	50.65	5.60	45.26	45.26	6.30	39.58	39.58	7.06
	62 (16.7)	66.61	54.49	3.89	61.13	61.13	4.40	55.88	55.88	4.97	50.66	50.66	5.60	45.25	45.25	6.30	39.57	39.57	7.06
	63* (17.2)	67.26	43.89	3.89	61.59	43.24	4.40	55.88	42.41	4.97	50.16	41.35	5.59	44.32	39.99	6.29	38.33	38.21	7.04
	67 (19.4)	72.23	45.64	3.94	66.09	45.00	4.45	59.87	44.14	5.01	53.63	43.07	5.64	47.29	41.70	6.33	40.75	39.91	7.08
	72 (22.2)	78.76	36.15	4.00	71.95	35.36	4.51	65.10	34.38	5.07	58.23	33.22	5.70	51.25	31.78	6.38	44.04	29.99	7.12
2250 / 0.09	57 (13.9)	68.16	68.16	3.98	62.83	62.83	4.50	57.41	57.41	5.07	51.90	51.90	5.70	46.22	46.22	6.40	40.27	40.27	7.16
	62 (16.7)	68.17	68.17	3.98	62.83	62.83	4.50	57.41	57.41	5.07	51.90	51.90	5.71	46.22	46.22	6.40	40.27	40.27	7.16
	63* (17.2)	68.27	46.41	3.98	62.41	45.72	4.49	56.54	44.84	5.06	50.64	43.71	5.69	44.66	42.24	6.38	38.53	40.25	7.13
	67 (19.4)	73.27	48.35	4.03	66.92	47.68	4.54	60.50	46.77	5.10	54.10	45.64	5.73	47.60	44.16	6.42	40.92	42.14	7.17
	72 (22.2)	79.84	37.74	4.09	72.79	36.91	4.60	65.73	35.91	5.16	58.70	34.70	5.79	51.53	33.23	6.48	44.15	31.39	7.22

*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.

PHN460 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	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
		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ	
65 (18.3)	1750	21.44	19.72	3.85	27.02	24.86	3.97	32.88	30.18	4.09	39.13	35.49	4.23	46.15	40.44	4.40	54.26	54.26	4.61	63.98	63.98	4.86	74.82	74.82	5.16
	2000	21.85	20.11	3.90	27.45	25.26	4.01	33.33	30.60	4.12	39.63	35.94	4.24	46.77	40.98	4.38	55.02	55.02	4.56	65.19	65.19	4.78	74.99	74.99	5.04
	2250	22.24	20.46	3.97	27.85	25.63	4.06	33.75	30.98	4.15	40.07	36.34	4.26	47.32	41.46	4.39	56.12	56.12	4.56	65.29	65.29	4.75	73.80	73.80	4.99
70 (21.1)	1750	20.75	19.09	4.03	26.44	24.33	4.16	32.38	29.72	4.30	38.64	35.04	4.45	45.62	39.97	4.62	53.55	53.55	4.84	62.76	62.76	5.10	73.96	73.96	5.41
	2000	21.17	19.48	4.09	26.88	24.73	4.20	32.84	30.14	4.32	39.14	35.50	4.45	46.18	40.46	4.60	54.29	54.29	4.79	64.31	64.31	5.02	74.39	74.39	5.29
	2250	21.56	19.84	4.15	27.28	25.11	4.25	33.25	30.52	4.36	39.59	35.91	4.47	46.68	40.90	4.61	54.93	54.93	4.78	64.77	64.77	4.98	73.71	73.71	5.23
75 (23.9)	1750	20.00	18.40	4.22	25.80	23.74	4.36	31.83	29.21	4.51	38.15	34.60	4.68	45.07	39.49	4.86	52.71	52.71	5.07	61.83	61.83	5.35	73.09	73.09	5.68
	2000	20.42	18.79	4.28	26.26	24.16	4.40	32.30	29.64	4.53	38.62	35.03	4.67	45.64	39.99	4.83	53.58	53.58	5.03	63.19	63.19	5.27	73.64	73.64	5.54
	2250	20.82	19.15	4.34	26.67	24.54	4.46	32.73	30.04	4.57	39.07	35.43	4.69	46.14	40.43	4.84	54.20	54.20	5.01	64.17	64.17	5.22	73.39	73.39	5.47

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

COOLING NOTES:

1. Ratings are net; they account for the effects of the evaporator–fan motor power and heat.
2. Direct interpolation is permissible. Do not extrapolate.
3. The following formulas may be used:

$$^{t}ldb = {}^{t}edb - \frac{\text{Sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$^{t}lwb = \text{Wet–bulb temperature corresponding to enthalpy air leaving evaporator coil } (^{h}lwb)$$

$$^{h}lwb = {}^{h}ewb - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

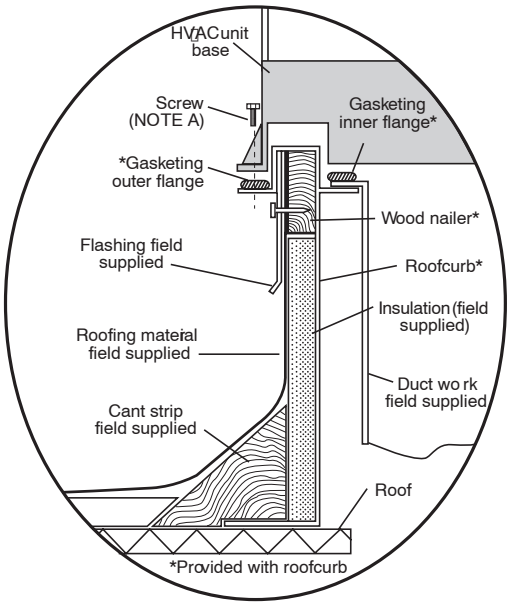
Where: ^{h}ewb = Enthalpy of air entering evaporator coil

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.

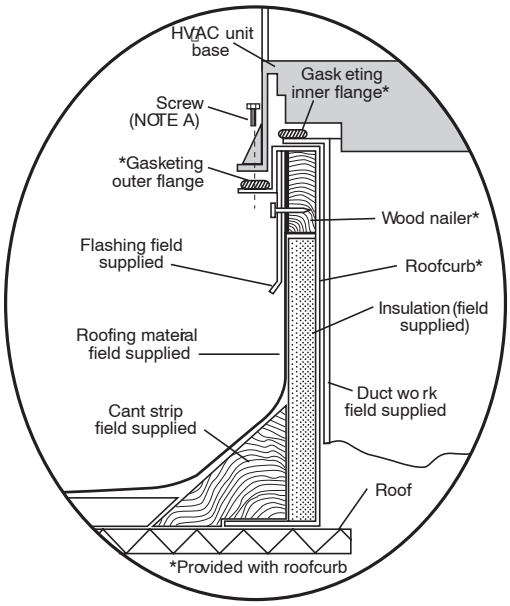
ACCESSORIES

ROOF CURBS



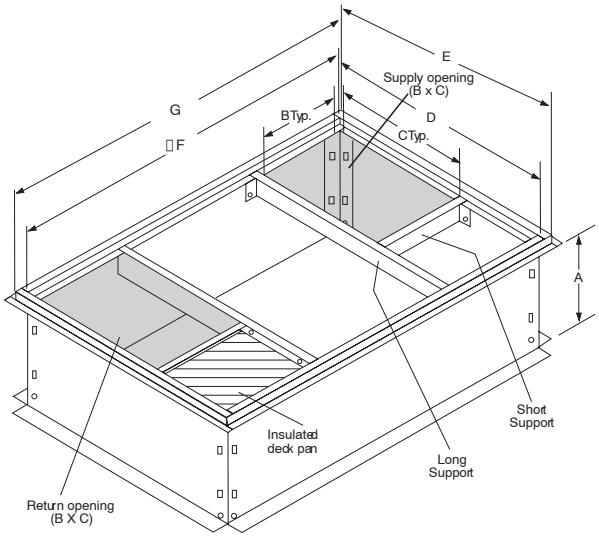
Roof Curb for Small Cabinet

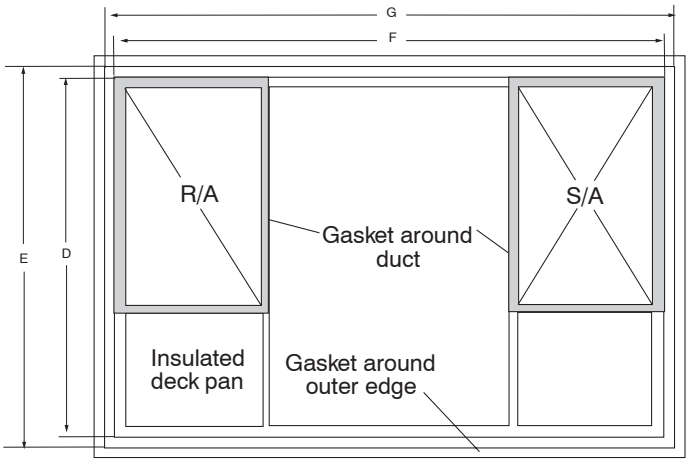
Note A: When unit mounting screw is used retainer bracket must also be used.



Roof Curb for Large Cabinet

Note A: When unit mounting screw is used retainer bracket must also be used.





UNIT SIZE	MODEL NUMBER	A IN. [MM]	B IN. [MM]	C IN. [MM]	D IN. [MM]	E IN. [MM]	F IN. [MM]	G IN. [MM]
30	NPRFCURB006A00	8 [203]	11 [279]	16-1/2 [419]	28-3/4 [730]	30-3/8 [771]	44-5/16 [1126]	45-15/16 [1167]
	NPRFCURB007A00	14 [356]	11 [279]	16-1/2 [419]	28-3/4 [730]	30-3/8 [771]	44-5/16 [1126]	45-15/16 [1167]
36, 42, 48, 60	NPRFCURB008A00	8 [203]	16-3/16 [411]	17-3/8 [441]	40-1/4 [1022]	41-15/16 [1065]	44-7/16 [1129]	46-1/16 [1169]
	NPRFCURB009A00	14 [356]	16-3/16 [411]	17-3/8 [441]	40-1/4 [1022]	41-15/16 [1065]	44-7/16 [1129]	46-1/16 [1169]

Notes:

1. Seal strip must be applied as required to unit being installed.
2. Roof curb is made of 16 gauge steel.
3. Attach ductwork to curb (flanges of duct rest on curb).
4. Insulated panels: 1—in. thick fiberglass 1 lb. density.
5. When unit mounting screw is used (see Note A), a retainer bracket must be used as well. This bracket must also be used when required by code for hurricane or seismic conditions. This bracket is available through Micrometl.

ACCESSORIES

ECONOMIZERS (ALL FULLY MODULATING)

Part Number	Application	Control	Use With Model Size
NPECOMZR003A00	Horizontal, convertible to Downflow	Dry Bulb (Enthalpy Control optional)	30
NPECOMZR004A00			36, 42
NPECOMZR006A00			48, 60

All Economizers include Filter Racks but do not include filters.

MANUAL FRESH AIR DAMPERS (use in DOWNFLOW application only) *

Model Number	Control	Use With Model Size
NPMANDPR004A00	Manual	30
NPMANDPR005A00		36, 42
NPMANDPR006A00		48, 60

* Unit must have internal filters to protect evaporator coil when Fresh Air Damper is installed.
All Manual Fresh Air Dampers shipped with Filter Racks but without Filters.

FILTER RACK and FILTER (shipped with 1" filters)

Model Number	Application	Filter Size	Use With Model Size
NPFILTRK004A00	Horizontal or Downflow	12" x 20" x 1" (quan. 2) or 12" x 20" x 2" (quan. 1) **PLUS** 10" x 20" x 2" (quan.1)	30
NPFILTRK005A00		12" x 24" x 1" or 2" (3 required)	36, 42
NPFILTRK006A00		12" x 24" x 1" or 2" (3 required)	48, 60

CONCENTRIC ADAPTER – Fits 2' x 4' Drop Ceiling Grid

Model Number	Description	Use With Model Size
AXB030CTA	Adapts downflow openings thru the curb into round duct (18" dia.)	ALL

CONCENTRIC DIFFUSER (Set of 2) – Use With Curb

Model Number	Description	Use With Model Size
AXB030CSA	STEP DOWN – Adapts round duct (18" dia.) to ceiling diffuser	ALL
AXB030CFA	FLUSH MOUNT – Adapts round duct (18" dia.) to ceiling diffuser	ALL

SQUARE to ROUND TRANSITION

Model Number	Round Size	Square Size	Use With Model Size
NPDUCFLG002A00	14"	14" x 16"	ALL

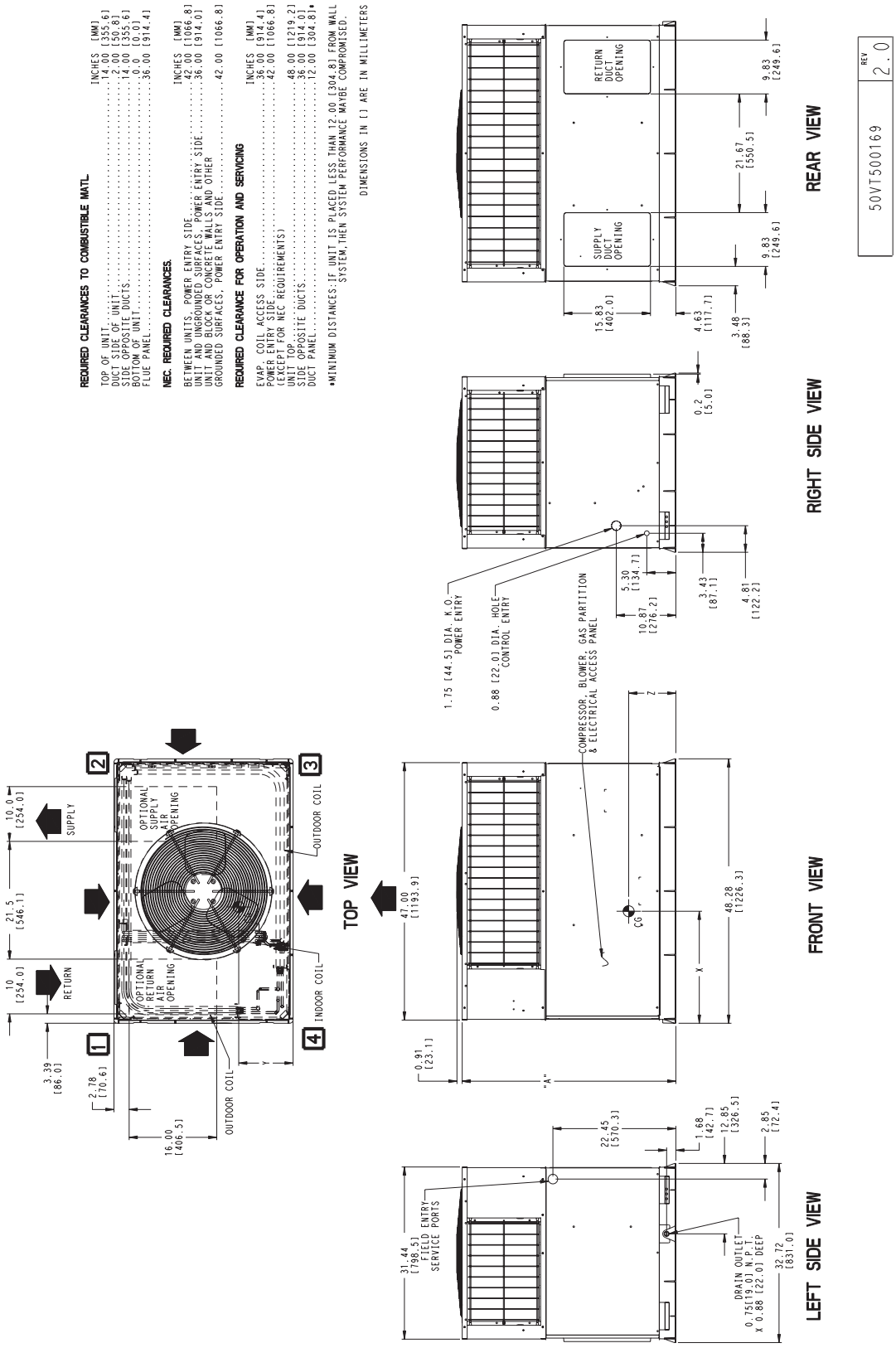
PTC COMPRESSOR START ASSIST KIT

Model Number	Description	Use With Model Size
NPHSTART001A00	PTC type compressor start assist	ALL

LIFTING / RIGGING KIT

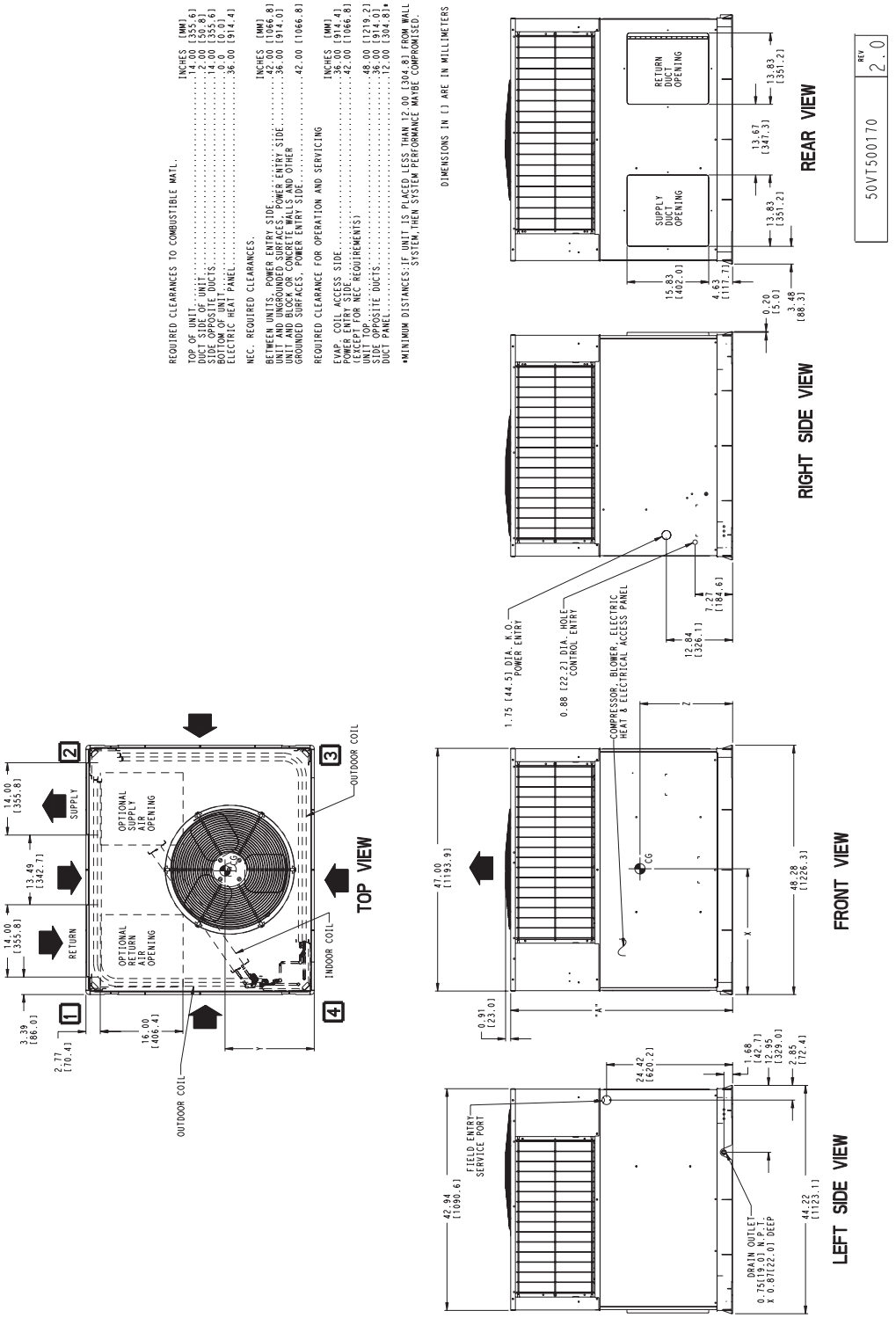
Model Number	Description	Use With Model Size
NPLIFTBK003A10	Lifting / Rigging Kit (Set of 10)	ALL

UNIT DIMENSIONS, model sizes 30



Model Size	UNIT HEIGHT IN. [MM]	CENTER OF GRAVITY IN. [MM]		
	A	X	Y	Z
30	41.02 [1042]	20.0 [508]	14.0 [356]	13.0 [330]

UNIT DIMENSIONS, model sizes 36, 42, 48, 60



Model Size	UNIT HEIGHT IN. [MM]	CENTER OF GRAVITY IN. [MM]		
	A	X	Y	Z
36	42.98 [1092]	21.0 [533]	21.5 [520]	16.6 [422]
42	46.98 [1193]	21.0 [533]	21.5 [520]	17.1 [434]
48	46.98 [1193]	21.0 [533]	20.0 [508]	17.4 [442]
60	46.98 [1193]	21.0 [533]	20.0 [508]	17.6 [447]

GUIDE SPECIFICATIONS

CABINET

Unit cabinet shall be constructed of phosphated, zinc-coated, pre-painted steel capable of with-standing 500 hours in salt spray.
Normal service shall be through a single removable cabinet panel.
The unit shall be constructed on a rust proof unit base that has an externally trapped, integrated sloped drain.
Evaporator fan compartment top surface shall be insulated with a minimum 1/2-in. thick, flexible fiberglass insulation, coated on the air side and retained by adhesive and mechanical means. The evaporator wall sections will be insulated with a minimum semi-rigid foil-faced board capable of being wiped clean. Aluminum foil-faced fiberglass insulation shall be used in the entire indoor air cavity section.

COOLING SECTION

The unit is factory charged and operationally ready upon delivery. The unit refrigerant circuit has a high efficiency scroll compressor with internal overload protection, and copper tube / aluminum fin evaporator and condenser coils. The unit is designed for cooling operation to 40º F and will be capable of being wired for field installed economizer type accessories.

COILS

The evaporator and condenser coils are fabricated with aluminum fins mechanically bonded to copper tubing. Both coils are pressure tested prior to assembly into the unit and electronically leak tested after assembly into the unit.

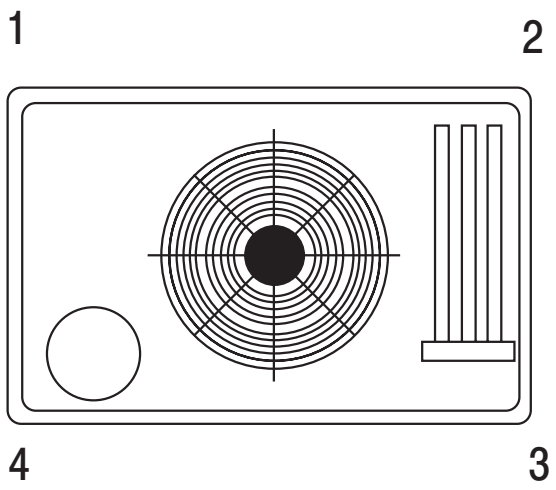
CONDENSER FAN

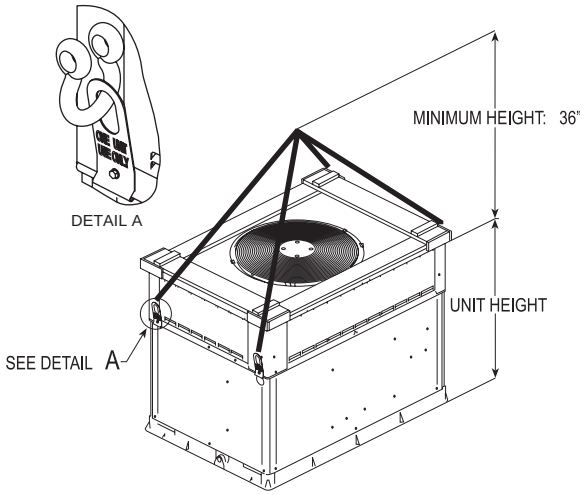
The unit has a single direct-drive propeller-fan / motor assembly. The assembly is mounted directly to a vertical-discharge grille that is easily removed for service. Motors are 825 or 1100 RPM with sleeve or ball bearings and internal overload protection.

EVAPORATOR BLOWER

All units have a direct-drive X-13 evaporator blower motor as a standard. The direct-drive evaporator blower motor has sleeve bearings and internal overload protection.

CORNER WEIGHTS and RIGGING DETAILS





Corner Weights (Small Cabinet) Lbs. (kg)	
Model Size	**30**
Total Weight	316 (143)
Corner Weight 1	63 (29)
Corner Weight 2	51 (23)
Corner Weight 3	76 (34)
Corner Weight 4	126 (57)
Rigging Weight	327 (148)
Shipping Weight	364 (165)

Corner Weights (Large Cabinet) Lbs. (kg)				
Model Size	**36**	**42**	**48**	**60**
Total Weight	371 (168)	412 (187)	432 (196)	462 (210)
Corner Weight 1	74 (34)	82 (37)	86 (39)	92 (42)
Corner Weight 2	59 (27)	66 (30)	69 (31)	74 (34)
Corner Weight 3	89 (40)	99 (45)	104 (47)	111 (50)
Corner Weight 4	148 (67)	165 (75)	173 (78)	185 (84)
Rigging Weight	382 (173)	427 (164)	447 (203)	477 (216)
Shipping Weight	419 (190)	464 (210)	484 (220)	514 (233)

MODEL NOMENCLATURE										
MODEL SERIES	**P**	**H**	**N**	**4**	**36**	**000**	**H**	**00**	**A**	**1**
P = Package										
H = Heat Pump										
N = R-410A										
4 = 14 **SEER**										
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 **NOMINAL**										
60 = 60,000 BTUH = 5 Tons **COOLING BTUH**										
000 = N/A **NOMINAL HEATING BTUH**										
H = 208/230-3-60										
L = 460-3-60 **VOLTAGE**										
00 = Standard **FACTORY INSTALLED OPTIONS**										
Sales Model Digit										
Engineering Digit										