HEATING & COOLING PRODUCTS

PHD3

Product Specifications

13 SEER, R-410A PACKAGE HEAT PUMP, 2½ to 5 TONS
3-Phase, 208/230-3-60 and 460-3-60

REFRIGERATION CIRCUIT

- 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 into 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
- Combination electric heating and cooling

BUILT TO LAST

- Wire Grille
- Direct drive high efficiency X-13 blower motor on all models
- Heavy-duty pre-painted steel cabinet
- Vertical condenser fan discharge
- Rust-proof base with integral sloping drain
- High and low pressure switches provide added reliability for the compressor

WARRANTY

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

ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Air Conditioners

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UNIT PERFORMANCE DATA

Model Number	COOLING				HEATING* HSPF	Unit Dimensions Height x Width x Depth in (mm)	Operating Weight lb / kg
	Nominal Tons	Net Capacity BTU/h	S.E.E.R*	E.E.R**			
PHD330000H00A	2-1/2	30,000	13.2	11.2	7.8	39x48x33 (991x1226x831)	307 / 139
PHD336000(H,L)00A	3	35,400	13.5	11.5	7.8	41x48x33 (1041x1226x831)	324 / 147
PHD342000(H,L)00A	3-1/2	40,500	13.4	11.2	7.7	43x48x44 (1091x1226x1123)	382 / 173
PHD348000(H,L)00A	4	47,500	13.5	11.5	7.7	43x48x44 (1091x1226x1123)	415 / 188
PHD360000(H,L)00A	5	57,000	13.0	11.4	7.8	47x48x44 (1193x1226x1123)	434 / 197

* Rated in accordance with U.S. Government DOE (Department of Energy) test procedures and/or ARI Standards 210/240.
** "A" conditions-80°F (26.6°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor db.
H = 208/230-3-60, L = 460-3-60 (Voltage-Ph-Hz)

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Jan. 2009

UNIT SPECIFICATIONS

MODEL NUMBER	Electrical Data			Condenser							
				Coil			Fan Motor		Fan		
	Volt-Ph-Hz	Circuit Breaker or Fuse	Minimum Circuit Ampacity	Total Face Area ($ft.^2$)	Fins Per Inch / Rows	Tube Diameter (inch)	Horse Power	Full Load Amps	Diameter (inches)	RPM (Max.)	CFM (Design)
PHD330000H00A	208/230-3-60	25 amps	17.5	11.9	21 / 2	3/8	1/8	0.9	22	825	2350
PHD336000H00A	208/230-3-60	30 amps	20.0	13.6	21 / 2	3/8	1/8	0.9	22	825	2800
PHD336000L00A	460-3-60	15 amps	10.8	13.6	21 / 2	3/8	1/8	0.6	22	825	2800
PHD342000H00A	208/230-3-60	35 amps	23.7	15.5	21 / 2	3/8	1/8	0.9	22	825	2800
PHD342000L00A	460-3-60	15 amps	11.4	15.5	21 / 2	3/8	1/8	0.6	22	825	2800
PHD348000H00A	208/230-3-60	40 amps	26.7	15.5	21 / 2	3/8	1/4	1.5	22	1100	3300
PHD348000L00A	460-3-60	15 amps	12.5	15.5	21 / 2	3/8	1/4	0.9	22	1100	3300
PHD360000H00A	208/230-3-60	40 amps	29.1	19.4	21 / 2	3/8	1/4	1.5	22	1100	3300
PHD360000L00A	460-3-60	20 amps	14.4	19.4	21 / 2	3/8	1/4	0.9	22	1100	3300

MODEL NUMBER	Evaporator								Scroll Compressor		Factory Refrigerant Charge R-410A (lbs / kg)	Sound Ratings dBA
	Coil			Motor		Blower						
	Total Face Area ($ft.^2$)	Fins Per Inch / Rows	Tube Diam. (inch)	HP	Full Load Amps	Size (inches)	RPM (Max)	CFM (Rated)	Rated Load Amps	Locked Rotor Amps		
PHD330000H00A	3.7	17 / 3	3/8	1/2	4.1	10 x 10	1050	1000	10.0	71.0	7.4 / 3.4	76
PHD336000H00A	3.7	15 / 4	3/8	3/4	6.0	11 x 10	1000	1200	10.4	88.0	9.6 / 4.4	75
PHD336000L00A	3.7	15 / 4	3/8	3/4	3.0	11 x 10	1000	1200	5.8	38.0	9.6 / 4.4	75
PHD342000H00A	4.7	17 / 3	3/8	3/4	6.0	11 x 10	1075	1400	13.5	88.0	10.2 / 4.6	74
PHD342000L00A	4.7	17 / 3	3/8	3/4	3.0	11 x 10	1075	1400	6.3	44.0	10.2 / 4.6	74
PHD348000H00A	5.7	17 / 3	3/8	1.0	7.6	11 x 10	1075	1600	14.1	83.1	9.9 / 4.5	78
PHD348000L00A	5.7	17 / 3	3/8	1.0	3.8	11 x 10	1075	1600	6.2	41.0	9.9 / 4.5	78
PHD360000H00A	5.7	17 / 4	3/8	1.0	7.6	11 x 10	1040	1750	16.0	110.0	12.5 / 5.7	78
PHD360000L00A	5.7	17 / 4	3/8	1.0	3.8	11 x 10	1040	1750	7.8	52.0	12.5 / 5.7	78

PRESSURE SWITCHES

Switch Type	Cut-out PSIG	Reset (automatic) PSIG
High	650 +/- 15	420 +/- 15
Loss of Charge (Low)	20 +/- 5	45 +/- 10

UNIT PERFORMANCE DATA - HEATING

Model Number	HEATING			
	High Heat Capacity BTU/h @ 47°F (8.3°C)	High Heat COP @ 47°F (8.3°C)	Low Heat Capacity BTU/h @ 17°F (-8.3°C)	Low Heat COP @ 17°F (-8.3°C)
PHD330000H	30,000	3.5	17,600	2.3
PHD336000(H,L)	35,400	3.5	19,000	2.2
PHD342000(H,L)	40,500	3.5	21,800	2.2
PHD348000(H,L)	47,000	3.6	25,600	2.3
PHD360000(H,L)	56,000	3.5	30,800	2.2

UNIT PERFORMANCE DATA (Cont)

Economizer 1-in. Filter Pressure Drop (in. wc)

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

Multiplicaton Factors

HEATER kW RATING	VOLTAGE DISTRIBUTION	MULTIPLICATION FACTOR
240	200	0.69
	208	0.75
	230	0.92
	240	1.00
480	460	0.92

Electric Heat Pressure Drop Table, Small Cabinet - PHD330-36

	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, Large Cabinet - PHD342-60

	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

PHD3 Wet Coil Pressure Drop

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

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
20X20X1 (508X508X25)	0.05	0.07	0.08	0.1	0.12	0.13	0.14	0.15	—	—	—	—	—	—	—	—	—	—	—
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

UNIT AIRFLOW, Horizontal and Downflow Discharge, Dry Coil

Unit	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
PHD330	Low	Blue	CFM	741	638	547	415	--	--	--	--	--
	Med-Low	Pink	CFM	898	820	738	662	536	--	--	--	--
	Medium	Red	CFM	973	887	823	733	665	538	451	--	--
	Med-High[1]	Orange	CFM	1140	1064	996	915	840	758	687	564	480
	High[1]	Black	CFM	1202	1140	1082	1015	961	881	810	732	631
PHD336	Low	Blue	CFM	1206	1151	1085	1033	961	901	839	769	694
	Med-Low[1]	Pink	CFM	1369	1317	1262	1208	1152	1095	1037	979	919
	Medium	Red	CFM	1419	1370	1315	1269	1209	1161	1101	1043	984
	Med-High	Orange	CFM	1557	1507	1464	1412	1365	1310	1265	1212	1154
	High	Black	CFM	1599	1553	1505	1460	1410	1361	1310	1262	1203
PHD342	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
	Medium	Red	CFM	1505	1452	1413	1358	1323	1282	1234	1169	1130
	Med-High[1]	Orange	CFM	1545	1492	1449	1411	1362	1313	1278	1231	1188
	High	Black	CFM	1705	1643	1607	1568	1518	1483	1448	1404	1360
PHD348	Low	Blue	CFM	1445	1389	1341	1281	1236	1189	1139	1072	1027
	Med-Low[1]	Pink	CFM	1678	1635	1602	1558	1513	1474	1438	1404	1349
	Medium	Red	CFM	1962	1915	1880	1843	1794	1753	1711	1675	1628
	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
PHD360	Low	Blue	CFM	1448	1321	1282	1235	1192	1145	1101	1057	1011
	Med-Low	Pink	CFM	1722	1675	1614	1543	1499	1442	1408	1356	1308
	Medium[1]	Red	CFM	1887	1847	1783	1726	1677	1625	1578	1527	1432
	Med-High	Orange	CFM	2055	2008	1958	1927	1900	1768	1685	1581	1458
	High	Black	CFM	2292	2238	2158	2049	1935	1840	1732	1635	1513

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

[1] Factory–shipped cooling speed

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

MINIMUM AIRFLOW FOR RELIABLE ELECTRIC HEATER OPERATION (CFM)

Model Size:	30	36	42	48	60
Airflow:	1000	1200	1400	1600	1750

ELECTRIC HEATER USAGE CHART

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

ELECTRIC HEATER ELECTRICAL DATA

MODEL SIZE	NOMINAL V–PH–HZ	VOLTAGE RANGE		ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	NOMINAL kW	Full Load Ampacity	Minimum Circuit Ampacity	Maximum Over–Current Protection
30	208/230–3–60	187	253	– / –	– / –	17.5 / 17.5	25 / 25
				3.8 / 5	10.4 / 12.0	30.5 / 32.5	35 / 35
				7.5 / 10	20.8 / 24.1	43.5 / 45.9	45 / 50
				11.3 / 15	31.3 / 36.1	56.6 / 62.6	60 / 70
36	208/230–3–60	187	253	– / –	– / –	20.0 / 20.0	30 / 30
				3.8 / 5	10.4 / 12.0	33.0 / 35.0	35 / 35
				7.5 / 10	20.8 / 24.1	46.0 / 50.0	50 / 60
				11.3 / 15	31.3 / 36.1	59.0 / 65.1	60 / 70
36	460–3–60	414	506	– / –	– / –	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	208/230–3–60	187	253	–/–	– / –	23.7 / 23.7	35 / 35
				3.8 / 5	10.4 / 12.0	36.8 / 38.8	40 / 40
				7.5 / 10	20.8 / 24.1	49.8 / 53.8	50 / 60
				11.3 / 15	31.3 / 36.1	62.8 / 68.8	70 / 70
				15 / 20	41.5 / 47.9	75.6 / 83.6	80 / 90
42	460–3–60	414	506	–/–	– / –	11.4	15
				3.8 / 5	6.0	19.0	20
				7.5 / 10	12.0	36.5	30
				11.3 / 15	18.0	34.0	35
				15 / 20	24.0	41.5	45
48	208/230–3–60	187	253	– / –	– / –	26.7 / 26.7	40 / 40
				3.8 / 5	10.4 / 12.0	39.7 / 41.7	40 / 45
				7.5 / 10	20.8 / 24.1	52.8 / 56.8	60 / 60
				11.3 / 15	31.3 / 36.1	65.8 / 71.8	70 / 80
				15 / 20	41.5 / 47.9	78.6 / 86.6	80 / 90
48	460–3–60	414	506	– / –	– / –	12.5	15
				3.8 / 5	6.0	20.0	20
				7.5 / 10	12.0	27.5	30
				11.3 / 15	18.0	35.0	35
				15 / 20	24.0	42.5	45
60	208/230–3–60	187	253	– / –	– / –	29.1 / 29.1	40 / 40
				3.8 / 5	10.4 / 12.0	42.1 / 44.1	45 / 45
				7.5 / 10	20.8 / 24.1	55.1 / 59.1	60 / 60
				11.3 / 15	31.3 / 36.1	68.1 / 74.2	70 / 80
				15 / 20	41.5 / 47.9	80.9 / 88.9	90 / 9
60	460–3–60	414	506	– / –	– / –	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	24.0	44.5	45

PERFORMANCE DATA-STANDARD X-13 INDOOR MOTOR

PHD330 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	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total
CFM / BF	°F (°C)	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW
875 / 0.09	57 (13.9)	28.90	28.90	1.75	27.66	27.66	1.98	26.34	26.34	2.23	24.91	24.91	2.50	23.31	23.31	2.79	21.49	21.49	3.10
	62 (16.7)	30.13	26.11	1.76	28.62	25.29	1.98	27.03	24.40	2.23	25.33	23.41	2.50	23.49	22.28	2.79	21.49	21.49	3.10
	63* (17.2)	30.53	21.33	1.76	28.98	20.56	1.99	27.34	19.74	2.23	25.59	18.86	2.50	23.67	17.91	2.79	21.53	16.85	3.10
	67 (19.4)	32.87	22.12	1.77	31.20	21.35	2.00	29.40	20.50	2.25	27.48	19.61	2.51	25.38	18.63	2.80	23.04	17.54	3.11
	72 (22.2)	35.81	18.16	1.79	33.93	17.39	2.01	31.94	16.59	2.26	29.81	15.73	2.53	27.48	14.79	2.82	24.87	13.74	3.12
1000 / 0.11	57 (13.9)	30.18	30.18	1.78	28.85	28.85	2.01	27.42	27.42	2.26	25.86	25.86	2.53	24.13	24.13	2.82	22.16	22.16	3.13
	62 (16.7)	30.95	27.96	1.79	29.37	27.05	2.01	27.71	26.05	2.26	25.93	25.93	2.53	24.13	24.13	2.82	22.15	22.15	3.13
	63* (17.2)	31.31	22.62	1.79	29.68	21.82	2.01	27.94	20.96	2.26	26.10	20.04	2.53	24.08	19.03	2.82	21.84	17.91	3.13
	67 (19.4)	33.68	23.51	1.80	31.90	22.68	2.03	30.00	21.80	2.27	27.99	20.86	2.54	25.79	19.83	2.83	23.33	18.68	3.13
	72 (22.2)	36.64	19.00	1.82	34.65	18.20	2.04	32.55	17.36	2.29	30.32	16.46	2.55	27.88	15.48	2.84	25.15	14.38	3.14
1125 / 0.12	57 (13.9)	31.28	31.28	1.81	29.85	29.85	2.04	28.30	28.30	2.29	26.64	26.64	2.56	24.79	24.79	2.85	22.68	22.68	3.15
	62 (16.7)	31.65	29.65	1.81	30.03	28.60	2.04	28.33	28.33	2.29	26.64	26.64	2.56	24.79	24.79	2.85	22.68	22.68	3.15
	63* (17.2)	31.93	23.86	1.82	30.22	23.02	2.04	28.41	22.12	2.29	26.48	21.16	2.56	24.39	20.11	2.84	22.07	18.92	3.15
	67 (19.4)	34.31	24.83	1.83	32.44	23.96	2.05	30.46	23.04	2.30	28.36	22.06	2.57	26.07	20.98	2.85	23.54	19.76	3.16
	72 (22.2)	37.28	19.79	1.84	35.20	18.96	2.07	33.02	18.08	2.31	30.70	17.15	2.58	28.17	16.14	2.87	25.35	14.98	3.17

*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)		
		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)	875	10.24	9.42	1.89	12.96	11.93	1.96	15.82	14.52	2.03	18.86	17.10	2.11	22.46	19.68	2.21	26.52	26.52	2.34	31.40	31.40	2.50	36.62	36.62	2.67
	1000	10.40	9.57	1.89	13.12	12.07	1.95	15.99	14.68	2.02	19.06	17.28	2.08	22.77	19.95	2.17	26.88	26.88	2.28	31.83	31.83	2.41	36.62	36.62	2.56
	1125	10.54	9.69	1.90	13.26	12.21	1.96	16.14	14.81	2.01	19.24	17.45	2.07	22.99	20.15	2.15	27.32	27.32	2.25	31.80	31.80	2.36	36.13	36.13	2.51
70 (21.1)	875	9.95	9.15	1.99	12.72	11.70	2.07	15.61	14.33	2.15	18.66	16.92	2.23	22.16	19.42	2.34	26.18	26.18	2.47	30.89	30.89	2.63	36.24	36.24	2.82
	1000	10.10	9.30	2.00	12.88	11.85	2.06	15.78	14.49	2.13	18.85	17.09	2.20	22.42	19.65	2.29	26.52	26.52	2.41	31.49	31.49	2.56	36.36	36.36	2.71
	1125	10.25	9.43	2.01	13.03	11.99	2.06	15.93	14.63	2.12	19.01	17.24	2.19	22.66	19.85	2.27	26.83	26.83	2.37	31.59	31.59	2.49	36.06	36.06	2.64
75 (23.9)	875	9.62	8.85	2.09	12.45	11.46	2.18	15.39	14.12	2.27	18.46	16.75	2.36	21.88	19.17	2.47	25.86	25.86	2.61	30.41	30.41	2.78	35.88	35.88	2.98
	1000	9.78	9.00	2.10	12.62	11.61	2.17	15.56	14.29	2.25	18.64	16.91	2.33	22.13	19.39	2.42	26.18	26.18	2.54	31.01	31.01	2.69	36.05	36.05	2.86
	1125	9.93	9.13	2.11	12.77	11.75	2.18	15.72	14.43	2.24	18.81	17.06	2.31	22.35	19.59	2.40	26.45	26.45	2.50	31.31	31.31	2.63	35.91	35.91	2.79

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHD336 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	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Sens	Total Sys KW
1050 / 0.10	57 (13.9)	34.34	34.34	2.43	32.89	32.89	2.70	31.31	31.31	3.00	29.62	29.62	3.32	27.74	27.74	3.67	25.60	25.60	4.04
	62 (16.7)	35.46	31.44	2.44	33.72	30.48	2.71	31.86	29.41	3.00	29.90	28.20	3.32	27.78	27.78	3.67	25.60	25.60	4.04
	63* (17.2)	35.90	25.45	2.44	34.11	24.56	2.71	32.19	23.62	3.00	30.13	22.58	3.33	27.89	21.47	3.67	25.40	20.22	4.03
	67 (19.4)	38.75	26.48	2.45	36.81	25.59	2.73	34.73	24.61	3.02	32.51	23.58	3.34	30.08	22.45	3.69	27.36	21.16	4.06
	72 (22.2)	42.32	21.50	2.47	40.19	20.65	2.74	37.90	19.72	3.04	35.47	18.74	3.37	32.79	17.67	3.71	29.77	16.45	4.08
1200 / 0.11	57 (13.9)	35.80	35.80	2.49	34.24	34.24	2.76	32.54	32.54	3.06	30.71	30.71	3.38	28.69	28.69	3.73	26.39	26.39	4.10
	62 (16.7)	36.38	33.64	2.49	34.58	32.55	2.76	32.64	32.64	3.06	30.72	30.72	3.38	28.69	28.69	3.73	26.39	26.39	4.10
	63* (17.2)	36.74	27.00	2.50	34.86	26.09	2.77	32.83	25.08	3.06	30.68	24.01	3.38	28.34	22.84	3.73	25.74	21.56	4.09
	67 (19.4)	39.63	28.16	2.51	37.58	27.22	2.78	35.40	26.20	3.08	33.08	25.12	3.40	30.53	23.93	3.75	27.69	22.58	4.11
	72 (22.2)	43.25	22.51	2.53	41.00	21.61	2.80	38.60	20.65	3.10	36.05	19.63	3.42	33.25	18.51	3.77	30.11	17.24	4.14
1350 / 0.12	57 (13.9)	37.03	37.03	2.55	35.36	35.36	2.82	33.56	33.56	3.12	31.61	31.61	3.44	29.46	29.46	3.79	27.01	27.01	4.16
	62 (16.7)	37.21	35.56	2.55	35.38	35.38	2.82	33.56	33.56	3.12	31.61	31.61	3.44	29.46	29.46	3.79	27.01	27.01	4.16
	63* (17.2)	37.39	28.51	2.55	35.42	27.54	2.82	33.32	26.50	3.12	31.09	25.39	3.44	28.67	24.15	3.78	25.98	22.75	4.15
	67 (19.4)	40.30	29.77	2.57	38.17	28.78	2.84	35.89	27.73	3.13	33.48	26.60	3.46	30.85	25.34	3.80	27.92	23.90	4.17
	72 (22.2)	43.95	23.46	2.58	41.61	22.52	2.86	39.12	21.53	3.15	36.47	20.47	3.48	33.57	19.30	3.82	30.33	17.98	4.19

*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	CFM	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW	Capacity MBtuh Total	Capacity MBtuh Integ	Total Sys KW
65 (18.3)	1050	11.73	10.79	2.28	15.19	13.97	2.37	18.75	17.21	2.46	22.49	20.40	2.55	26.57	23.28	2.64	31.32	31.32	2.76	37.01	37.01	2.91	43.24	43.24	3.08
	1200	12.00	11.04	2.32	15.47	14.23	2.40	19.05	17.48	2.47	23.59	21.39	2.27	26.97	23.63	2.63	31.80	31.80	2.73	37.80	37.80	2.86	43.34	43.34	3.00
	1350	12.24	11.26	2.36	15.72	14.46	2.43	19.31	17.72	2.50	23.08	20.93	2.56	27.31	23.93	2.63	32.38	32.38	2.73	37.86	37.86	2.83	42.60	42.60	2.96
70 (21.1)	1050	11.19	10.30	2.38	14.74	13.57	2.48	18.38	16.87	2.58	22.16	20.10	2.67	26.17	22.93	2.77	30.86	30.86	2.90	36.34	36.34	3.05	42.74	42.74	3.23
	1200	11.47	10.55	2.41	15.03	13.83	2.50	18.68	17.14	2.59	22.48	20.38	2.67	26.55	23.26	2.76	31.33	31.33	2.87	37.15	37.15	3.00	42.95	42.95	3.15
	1350	11.71	10.77	2.45	15.29	14.07	2.54	18.94	17.39	2.61	22.76	20.64	2.68	26.89	23.56	2.76	31.74	31.74	2.86	37.56	37.56	2.97	42.55	42.55	3.11
75 (23.9)	1050	10.59	9.75	2.46	14.25	13.11	2.58	17.96	16.49	2.69	21.80	19.77	2.80	25.82	22.62	2.91	30.32	30.32	3.04	35.69	35.69	3.20	42.20	42.20	3.39
	1200	10.87	10.00	2.50	14.55	13.38	2.61	18.27	16.77	2.71	22.12	20.06	2.80	26.17	22.93	2.89	30.87	30.87	3.01	36.51	36.51	3.15	42.50	42.50	3.30
	1350	11.12	10.23	2.54	14.81	13.63	2.64	18.54	17.02	2.73	22.41	20.32	2.81	26.48	23.20	2.89	31.27	31.27	3.00	37.16	37.16	3.11	42.34	42.34	3.26

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHD342 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	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total
CFM / BF	°F (°C)	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW
1225 / 0.11	57 (13.9)	39.94	39.94	2.84	38.16	38.16	3.15	36.22	36.22	3.50	34.10	34.10	3.87	31.73	31.73	4.28	28.99	28.99	4.71
	62 (16.7)	41.11	36.17	2.85	38.98	34.98	3.16	36.71	33.68	3.51	34.30	32.21	3.88	31.74	31.74	4.28	28.99	28.99	4.71
	63* (17.2)	41.60	29.27	2.86	39.42	28.21	3.17	37.08	27.07	3.51	34.57	25.84	3.88	31.82	24.50	4.28	28.71	22.97	4.70
	67 (19.4)	44.73	30.39	2.90	42.36	29.30	3.22	39.80	28.14	3.56	37.07	26.89	3.93	34.05	25.51	4.32	30.64	23.94	4.74
	72 (22.2)	48.66	24.63	2.96	46.04	23.59	3.27	43.23	22.48	3.61	40.21	21.29	3.98	36.88	19.97	4.38	33.11	18.48	4.79
1400 / 0.12	57 (13.9)	41.58	41.58	2.91	39.65	39.65	3.22	37.54	37.54	3.57	35.26	35.26	3.94	32.70	32.70	4.35	29.75	29.75	4.77
	62 (16.7)	42.15	38.67	2.92	39.93	37.33	3.23	37.58	37.58	3.57	35.26	35.26	3.94	32.70	32.70	4.35	29.74	29.74	4.77
	63* (17.2)	42.55	31.08	2.92	40.24	29.96	3.23	37.77	28.76	3.57	35.14	27.47	3.94	32.26	26.06	4.34	29.01	24.43	4.76
	67 (19.4)	45.70	32.32	2.96	43.19	31.18	3.28	40.50	29.95	3.62	37.64	28.64	3.99	34.47	27.19	4.38	30.90	25.51	4.80
	72 (22.2)	49.66	25.79	3.02	46.91	24.70	3.33	43.97	23.54	3.67	40.82	22.30	4.04	37.33	20.92	4.43	33.44	19.38	4.85
1575 / 0.13	57 (13.9)	42.95	42.95	2.97	40.89	40.89	3.29	38.64	38.64	3.63	36.20	36.20	4.01	33.47	33.47	4.41	30.34	30.34	4.84
	62 (16.7)	43.02	43.02	2.97	40.89	40.89	3.29	38.64	38.64	3.63	36.20	36.20	4.01	33.47	33.47	4.41	30.34	30.34	4.84
	63* (17.2)	43.27	32.81	2.98	40.87	31.64	3.29	38.29	30.38	3.63	35.56	29.03	3.99	32.57	27.53	4.39	29.22	25.77	4.81
	67 (19.4)	46.44	34.17	3.02	43.82	32.97	3.33	41.01	31.69	3.67	38.05	30.33	4.04	34.76	28.78	4.44	31.10	26.99	4.85
	72 (22.2)	50.43	26.88	3.08	47.56	25.75	3.39	44.51	24.55	3.73	41.26	23.27	4.10	37.64	21.83	4.49	33.62	20.21	4.90

*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.

PHD3042 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)	1225	13.51	12.43	2.46	17.40	16.01	2.58	21.46	19.70	2.69	25.77	23.37	2.82	30.59	26.80	2.96	36.13	36.13	3.14	42.42	42.42	3.35	49.90	49.90	3.61
	1400	13.76	12.66	2.49	17.66	16.25	2.59	21.74	19.95	2.69	26.08	23.66	2.81	30.99	27.16	2.93	36.61	36.61	3.09	43.03	43.03	3.29	50.17	50.17	3.51
	1575	13.98	12.86	2.52	17.89	16.46	2.61	21.98	20.17	2.71	26.36	23.91	2.81	31.34	27.46	2.92	37.00	37.00	3.07	43.64	43.64	3.25	50.02	50.02	3.46
70 (21.1)	1225	12.97	11.93	2.58	16.94	15.58	2.70	21.06	19.33	2.83	25.39	23.02	2.97	30.16	26.42	3.12	35.61	35.61	3.30	41.80	41.80	3.52	49.25	49.25	3.79
	1400	13.21	12.16	2.61	17.21	15.83	2.72	21.34	19.59	2.83	25.71	23.32	2.95	30.53	26.75	3.09	36.09	36.09	3.25	42.39	42.39	3.45	49.66	49.66	3.69
	1575	13.44	12.37	2.64	17.44	16.05	2.74	21.59	19.82	2.84	25.98	23.57	2.95	30.86	27.04	3.07	36.48	36.48	3.23	42.89	42.89	3.42	49.65	49.65	3.63
75 (23.9)	1225	12.37	11.38	2.70	16.44	15.13	2.84	20.62	18.93	2.97	24.99	22.67	3.12	29.75	26.06	3.28	34.97	34.97	3.46	41.20	41.20	3.70	48.49	48.49	3.99
	1400	12.62	11.61	2.73	16.71	15.37	2.85	20.91	19.19	2.98	25.30	22.94	3.10	30.11	26.38	3.25	35.45	35.45	3.41	41.78	41.78	3.62	49.11	49.11	3.87
	1575	12.85	11.82	2.76	16.95	15.60	2.87	21.17	19.43	2.99	25.59	23.21	3.10	30.43	26.67	3.23	35.97	35.97	3.39	42.25	42.25	3.58	49.22	49.22	3.80

PERFORMANCE DATA–STANDARD X-13 INDOOR MOTOR

PHD348 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 / 0.08	57 (13.9)	47.01	47.01	3.24	44.84	44.84	3.63	42.49	42.49	4.06	39.97	39.97	4.51	37.16	37.16	4.99	33.94	33.94	5.49
	62 (16.7)	48.48	41.71	3.24	45.86	40.29	3.64	43.09	38.75	4.06	40.20	37.02	4.51	37.17	37.17	4.99	33.93	33.93	5.49
	63* (17.2)	49.15	33.85	3.25	46.45	32.57	3.64	43.59	31.22	4.06	40.57	29.80	4.51	37.30	28.25	4.99	33.63	26.50	5.49
	67 (19.4)	52.83	35.11	3.25	49.88	33.81	3.65	46.73	32.41	4.07	43.45	30.97	4.53	39.85	29.37	5.01	35.81	27.57	5.51
	72 (22.2)	57.57	28.49	3.25	54.28	27.22	3.66	50.79	25.87	4.09	47.12	24.46	4.54	43.10	22.92	5.02	38.58	21.19	5.52
1600 / 0.10	57 (13.9)	48.95	48.95	3.30	46.57	46.57	3.69	44.01	44.01	4.12	41.28	41.28	4.57	38.25	38.25	5.05	34.77	34.77	5.55
	62 (16.7)	49.68	44.61	3.30	46.94	42.97	3.69	44.06	44.06	4.12	41.28	41.28	4.57	38.25	38.25	5.05	34.77	34.77	5.55
	63* (17.2)	50.24	35.94	3.30	47.38	34.60	3.70	44.36	33.17	4.12	41.19	31.68	4.57	37.76	30.04	5.05	33.94	28.18	5.55
	67 (19.4)	53.94	37.35	3.30	50.82	35.97	3.70	47.50	34.50	4.13	44.07	32.99	4.59	40.28	31.29	5.06	36.08	29.37	5.56
	72 (22.2)	58.71	29.82	3.31	55.23	28.49	3.71	51.56	27.08	4.14	47.71	25.61	4.60	43.51	24.00	5.08	38.73	22.16	5.57
1800 / 0.11	57 (13.9)	50.56	50.56	3.35	48.01	48.01	3.75	45.26	45.26	4.18	42.34	42.34	4.63	39.11	39.11	5.11	35.42	35.42	5.61
	62 (16.7)	50.66	50.66	3.35	48.01	48.01	3.75	45.26	45.26	4.18	42.34	42.34	4.63	39.11	39.11	5.11	35.42	35.42	5.61
	63* (17.2)	51.06	37.95	3.36	48.08	36.54	3.75	44.92	35.04	4.18	41.64	33.47	4.63	38.08	31.71	5.11	34.14	29.69	5.60
	67 (19.4)	54.78	39.49	3.36	51.51	38.05	3.76	48.05	36.51	4.19	44.48	34.91	4.64	40.56	33.10	5.12	36.20	31.01	5.62
	72 (22.2)	59.55	31.07	3.36	55.92	29.69	3.77	52.13	28.24	4.20	48.12	26.70	4.65	43.77	25.02	5.13	39.37	23.33	5.64

*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	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	16.44	15.13	3.02	20.84	19.18	3.12	25.52	23.43	3.22	30.51	27.67	3.33	35.89	31.45	3.45	41.90	41.90	3.59	49.06	49.06	3.77	56.77	56.77	3.95
	1600	16.73	15.39	3.05	21.15	19.46	3.14	25.88	23.75	3.23	30.86	27.99	3.32	36.29	31.80	3.42	42.54	42.54	3.54	49.82	49.82	3.67	56.93	56.93	3.82
	1800	17.00	15.64	3.09	21.43	19.72	3.17	26.19	24.04	3.24	31.18	28.28	3.32	36.64	32.10	3.41	43.01	43.01	3.51	49.98	49.98	3.62	56.73	56.73	3.75
70 (21.1)	1400	15.87	14.60	3.15	20.34	18.72	3.27	25.03	22.97	3.38	30.09	27.29	3.50	35.46	31.07	3.63	41.32	41.32	3.78	48.38	48.38	3.97	56.17	56.17	4.16
	1600	16.16	14.87	3.18	20.66	19.01	3.29	25.39	23.30	3.39	30.46	27.62	3.49	35.87	31.43	3.60	41.85	41.85	3.72	49.21	49.21	3.87	56.40	56.40	4.03
	1800	16.43	15.11	3.22	20.94	19.26	3.31	25.71	23.59	3.40	30.79	27.92	3.49	36.22	31.74	3.59	42.32	42.32	3.69	49.53	49.53	3.81	56.34	56.34	3.96
75 (23.9)	1400	15.25	14.03	3.29	19.81	18.22	3.42	24.56	22.54	3.54	29.64	26.88	3.68	35.01	30.67	3.82	40.77	40.77	3.97	47.74	47.74	4.17	55.56	55.56	4.38
	1600	15.54	14.30	3.32	20.13	18.52	3.44	24.90	22.85	3.55	30.02	27.23	3.66	35.43	31.04	3.78	41.27	41.27	3.91	48.40	48.40	4.08	55.88	55.88	4.25
	1800	15.81	14.55	3.36	20.41	18.78	3.46	25.20	23.13	3.56	30.35	27.52	3.66	35.79	31.36	3.77	41.72	41.72	3.88	49.03	49.03	4.02	55.89	55.89	4.17

PERFORMANCE DATA-STANDARD X-13 INDOOR MOTOR

PHD360 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	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total	Capacity MBtuh		Total
CFM / BF	°F (°C)	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW	Total	Sens	Sys KW
1750 / 0.12	57 (13.9)	58.60	58.60	3.94	55.29	55.29	4.41	51.87	51.87	4.94	48.29	48.29	5.52	44.45	44.45	6.15	40.24	40.24	6.83
	62 (16.7)	60.21	52.15	3.96	56.43	50.47	4.43	52.55	48.65	4.95	48.58	46.60	5.52	44.47	44.47	6.15	40.24	40.24	6.83
	63* (17.2)	60.88	42.10	3.96	57.01	40.67	4.43	52.99	39.04	4.95	48.87	37.41	5.52	44.50	35.56	6.15	39.78	33.46	6.82
	67 (19.4)	65.54	43.78	4.01	61.34	42.27	4.48	57.00	40.67	5.00	52.51	39.00	5.57	47.74	37.10	6.20	42.58	34.92	6.87
	72 (22.2)	71.35	35.37	4.07	66.70	33.93	4.54	61.92	32.40	5.06	56.94	30.75	5.63	51.67	28.95	6.25	45.97	26.86	6.92
2000 / 0.13	57 (13.9)	60.94	60.94	4.05	57.41	57.41	4.52	53.74	53.74	5.04	49.91	49.91	5.62	45.81	45.81	6.25	41.30	41.30	6.93
	62 (16.7)	61.69	55.65	4.05	57.79	53.77	4.52	53.82	53.82	5.05	49.91	49.91	5.62	45.81	45.81	6.25	41.30	41.30	6.93
	63* (17.2)	62.19	44.67	4.06	58.13	43.14	4.53	53.95	41.45	5.05	49.64	39.68	5.62	45.10	37.77	6.24	40.21	35.53	6.92
	67 (19.4)	66.90	46.52	4.11	62.50	44.94	4.58	57.96	43.26	5.10	53.27	41.44	5.67	48.31	39.48	6.29	42.96	37.11	6.96
	72 (22.2)	72.75	37.00	4.17	67.90	35.50	4.64	62.92	33.90	5.16	57.74	32.17	5.73	52.26	30.26	6.35	46.35	28.12	7.01
2250 / 0.14	57 (13.9)	62.90	62.90	4.15	59.16	59.16	4.62	55.27	55.27	5.15	51.22	51.22	5.73	46.87	46.87	6.36	42.10	42.10	7.03
	62 (16.7)	63.01	63.01	4.15	59.16	59.16	4.62	55.28	55.28	5.15	51.22	51.22	5.73	46.87	46.87	6.36	42.10	42.10	7.03
	63* (17.2)	63.19	47.09	4.15	58.98	45.48	4.62	54.66	43.80	5.14	50.21	41.90	5.71	45.53	39.80	6.34	40.51	37.46	7.01
	67 (19.4)	67.92	49.16	4.20	63.36	47.50	4.67	58.67	45.74	5.19	53.81	43.83	5.76	48.70	41.68	6.38	43.20	39.27	7.05
	72 (22.2)	73.82	38.53	4.26	68.80	36.97	4.73	63.65	35.31	5.25	58.30	33.51	5.82	52.67	31.54	6.44	46.59	29.30	7.10

*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

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)	1750	20.22	18.60	3.60	25.38	23.35	3.71	30.81	28.28	3.83	36.70	33.28	3.96	43.20	37.86	4.12	50.69	50.69	4.31	59.27	59.27	4.53	68.07	68.07	4.79
	2000	20.60	18.95	3.65	25.77	23.72	3.75	31.22	28.66	3.85	37.17	33.71	3.97	43.77	38.35	4.10	51.37	51.37	4.27	59.59	59.59	4.44	67.77	67.77	4.66
	2250	20.94	19.27	3.71	26.13	24.05	3.80	31.64	29.04	3.89	37.60	34.10	3.99	44.27	38.79	4.11	52.14	52.14	4.25	59.32	59.32	4.41	65.91	65.91	4.57
70 (21.1)	1750	19.58	18.02	3.78	24.85	22.86	3.90	30.34	27.85	4.03	36.22	32.85	4.17	42.74	37.45	4.33	50.07	50.07	4.53	58.54	58.54	4.76	67.38	67.38	5.03
	2000	19.97	18.37	3.83	25.25	23.23	3.94	30.76	28.23	4.05	36.71	33.29	4.17	43.27	37.91	4.31	50.72	50.72	4.48	59.05	59.05	4.67	67.36	67.36	4.90
	2250	20.31	18.69	3.89	25.61	23.57	3.98	31.14	28.58	4.08	37.14	33.68	4.19	43.73	38.32	4.31	51.37	51.37	4.47	59.01	59.01	4.63	66.12	66.12	4.81
75 (23.9)	1750	18.88	17.37	3.95	24.26	22.32	4.09	29.84	27.39	4.23	35.72	32.40	4.38	42.24	37.01	4.55	49.27	49.27	4.75	57.69	57.69	5.01	66.69	66.69	5.28
	2000	19.27	17.73	4.01	24.67	22.70	4.13	30.27	27.78	4.25	36.21	32.84	4.38	42.78	37.48	4.53	49.95	49.95	4.70	58.48	58.48	4.90	66.85	66.85	5.14
	2250	19.62	18.05	4.07	25.04	23.04	4.17	30.65	28.13	4.28	36.65	33.24	4.40	43.25	37.89	4.53	50.66	50.66	4.69	58.60	58.60	4.86	66.06	66.06	5.06

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:

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

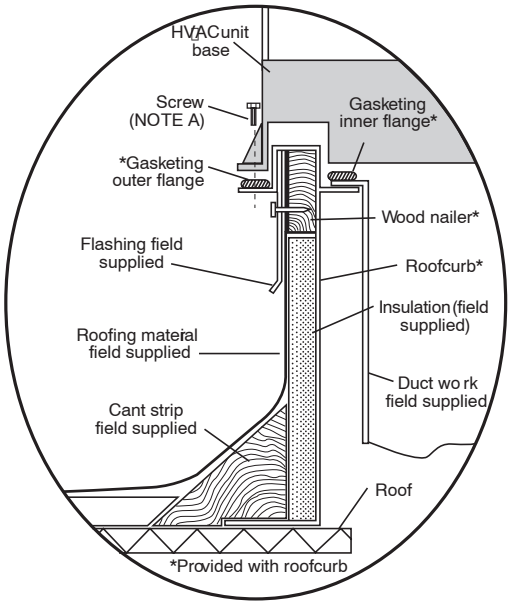
$$^{t}lwb = \begin{array}{l}\text{Wet–bulb temperature corresponding to enthalpy}\\ \text{air leaving evaporator coil } (^{h}lwb)\end{array} \qquad ^{h}lwb = {}^{h}ewb - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

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).

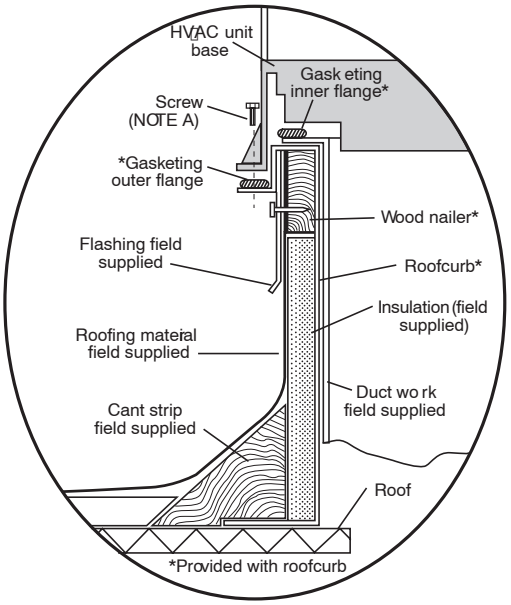
5. Integrated capacity is maximum (instantaneous) capacity less the effect of frost on the outdoor coil and the heat required to defrost it.

ROOF CURBS



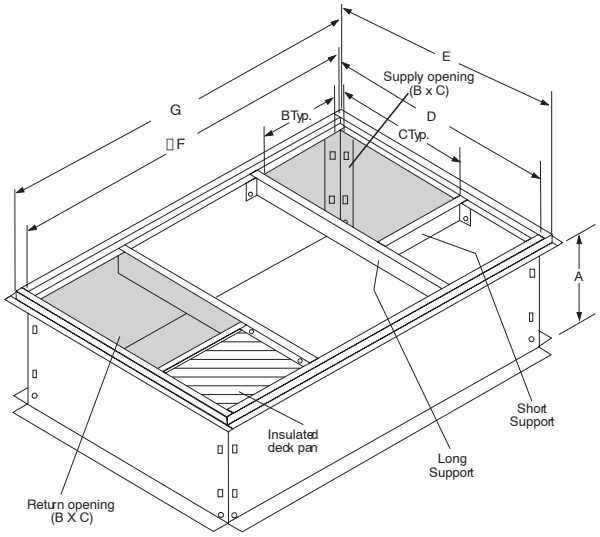
Roof Curb for Small Cabinet

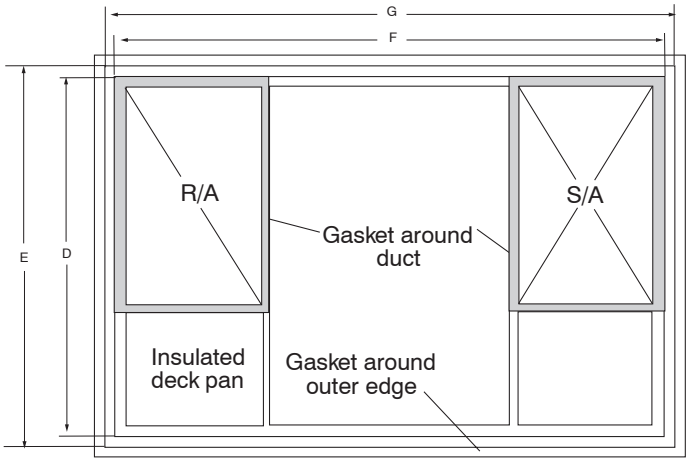
Note A: When unit mounting screw is used, retainer bracket must also be used.



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, 36	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]
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 (continued)

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 DIFFUSER – Fits 2' x 4' Drop Ceiling Grid

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

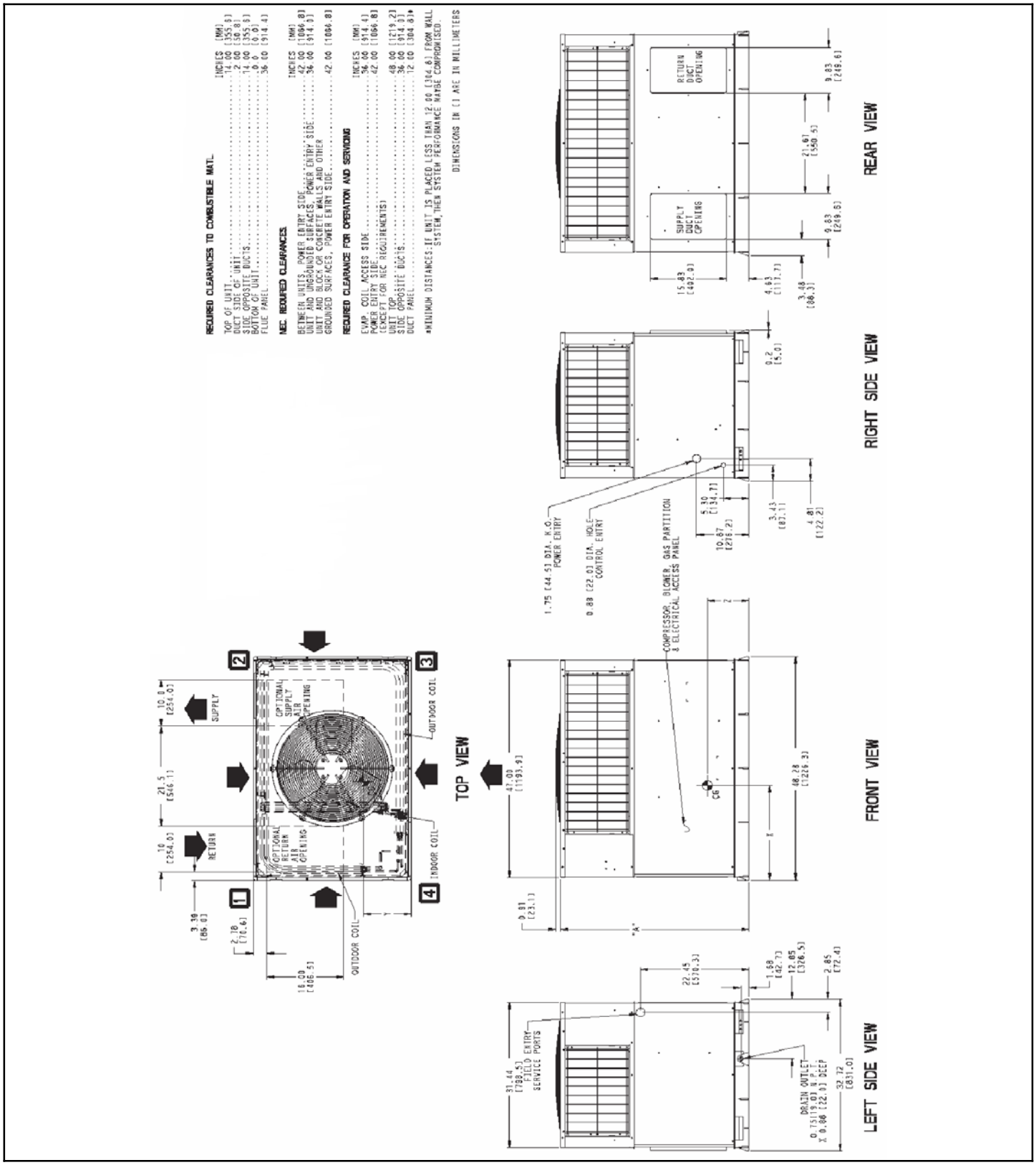
SQUARE to ROUND TRANSITION (Set of 2) – Use With Curb

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

LIFTING / RIGGING KIT

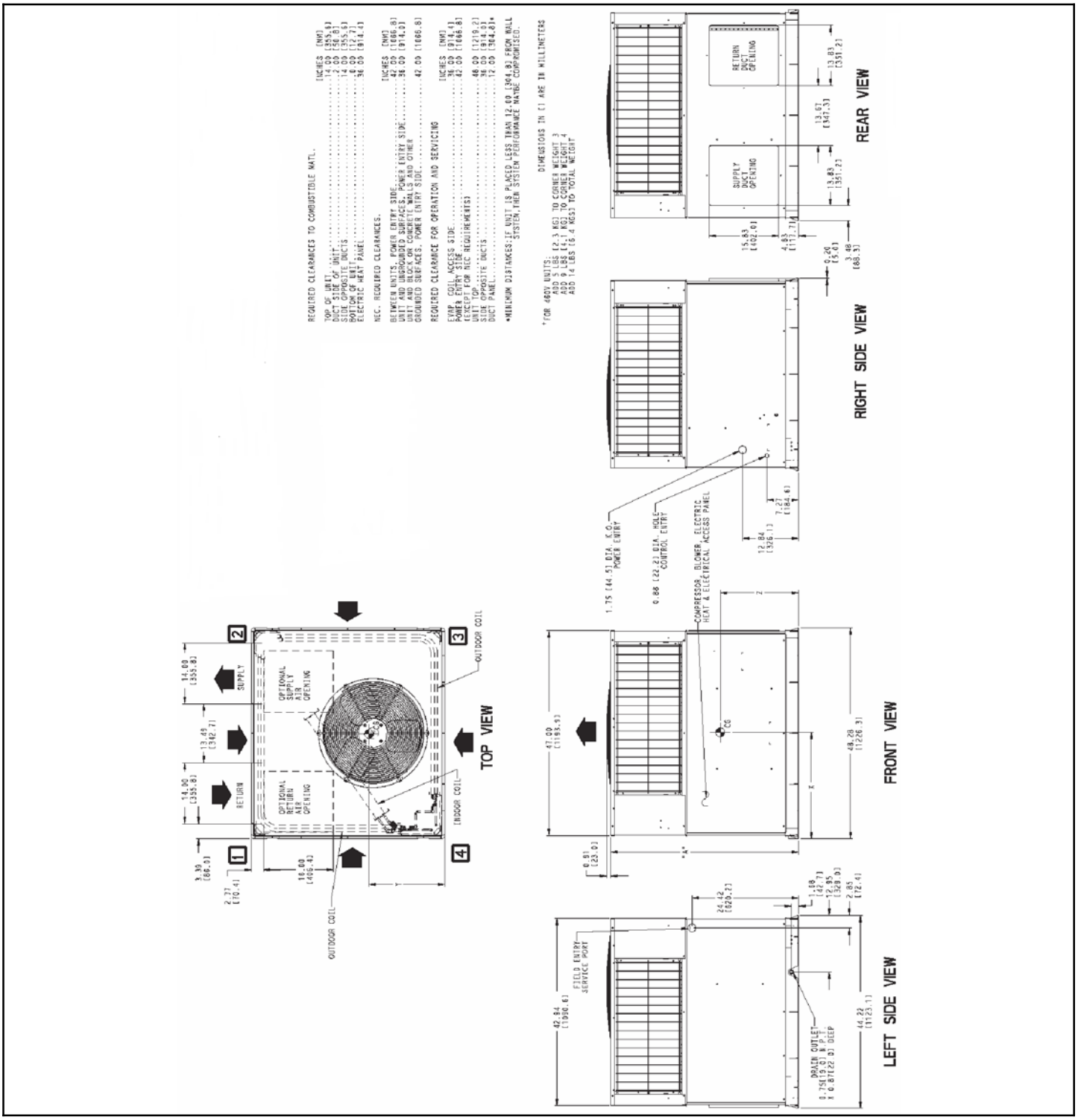
Model Number	Description	Use With Model Size
NPLIFTBK003A10	Lifting / Rigging Kit (Set of 10)	ALL

UNIT DIMENSIONS, model sizes 30, 36



Model Size	UNIT HEIGHT inches [mm]	CENTER OF GRAVITY inches [mm]		
	A	X	Y	Z
30	39.02 [991]	20 [508]	19 [489]	18.0 [447]
36	41.02 [1042]	20 [508]	14 [356]	13 [330]

UNIT DIMENSIONS, model sizes 42, 48, 60



Model Size	UNIT HEIGHT inches [mm]	CENTER OF GRAVITY inches [mm]		
	A	X	Y	Z
42	43 [1092]	21 [533]	21. [533]	17 [422]
48	43 [1092]	21 [533]	21 [533]	17 [422]
60	47 [1193]	21 [533]	20 [508]	18 [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 40° 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.

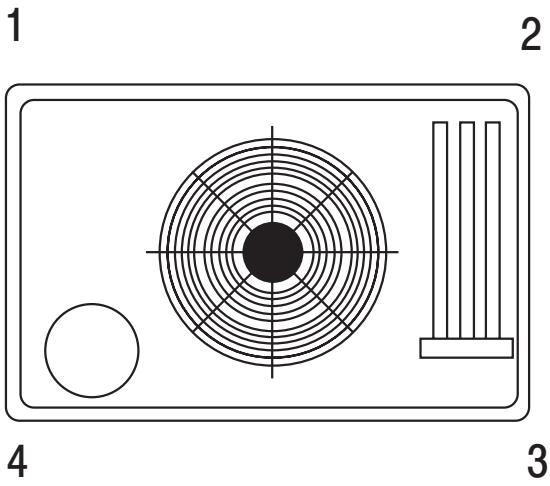
CONDENSER FAN

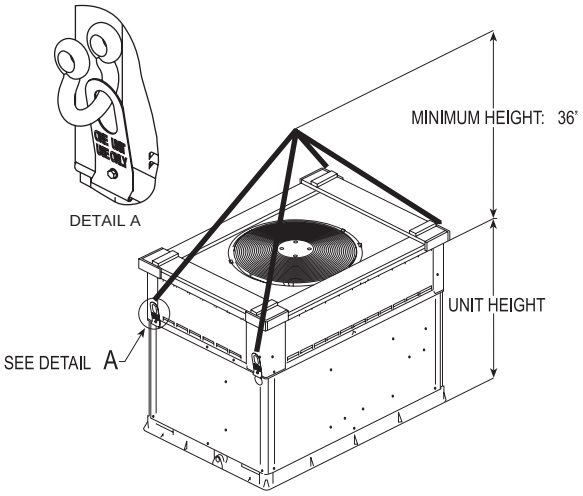
The unit has a single direct-drive propeller-fan / motor assembly. The assembly is mounted directly to a vertical-discharge grille that is easily removed for service. Motors are 825 to 1100 RPM with sleeve or ball bearings and internal overload protection.

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)				
Model Size	30		36	
	lb	kg	lb	kg
Operating Weight	307	139	324	147
Corner Weight 1	61	28	65	29
Corner Weight 2	49	22	52	24
Corner Weight 3	74	33	78	35
Corner Weight 4	123	56	129	59

CORNER WEIGHTS (LARGE CABINET)						
Model Size	42		48		60	
	lb	kg	lb	kg	lb	kg
Operating Weight	382	173	415	188	434	197
Corner Weight 1	76	35	83	38	87	39
Corner Weight 2	61	28	66	30	69	32
Corner Weight 3	92	42	100	45	104	47
Corner Weight 4	153	69	166	75	174	79

MODEL NOMENCLATURE

MODEL SERIES	P	H	D	3	36	000	H	00	A	1
P = Package										
H = Heat Pump										
D = R-410A										
3 = 13 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										
60 = 60,000 BTUH = 5 Tons										
NOMINAL 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										