

TECHNICAL SPECIFICATIONS

MB7(B,E,V)M Series

Modular Indoor Blower 13+ SEER Residential System

18,000 - 60,000 Btuh
(Heat Pump & Air Conditioner)

The MB7 Series Modular Indoor Blower offers exceptional flexibility for space restricted applications. Match the MB7 with our C7 cased coils to create upflow, downflow, and horizontal two-piece air handlers.



FEATURES and BENEFITS

- **Durable, Attractive Cabinet:** Designed using galvanized steel. The door is also galvanized steel, with a polyester urethane finish. The finish will endure 950 hours of salt spray per ASTM Std. B117. The plastic drain pan is corrosion-resistant.
- **Multi-poised:** Can be used in horizontal, upflow, downflow and vertical applications.
- **Multi-speed:** Gives flexibility of installation.
- **Ease-of-Service:** Plug-in wire connections and modularity make the air handler easy to service.
- **Plug-in Heater Kits:** Available in 5kw - 20kw
- **Circuit Board:** Incorporating blower time delay relay, low voltage terminal strip, and heat-strip sequencing.
- **Air Handler Control Board:** Controls time-sequencing of heat stages with field-selectable sequence timing.
- **Breaker Accessibility:** Breaker accessible from front of unit when heater is applied.
- **No Fasteners on Sides:** Smooth surfaces for ease of installation.
- **Cabinet Insulation:** 1/2" insulation contributes to quiet operation and prevents cabinet sweating in difficult applications.
- **Cabinet Air Leakage:** Less than 2% when tested in accordance with the ASHRAE 193 standard.

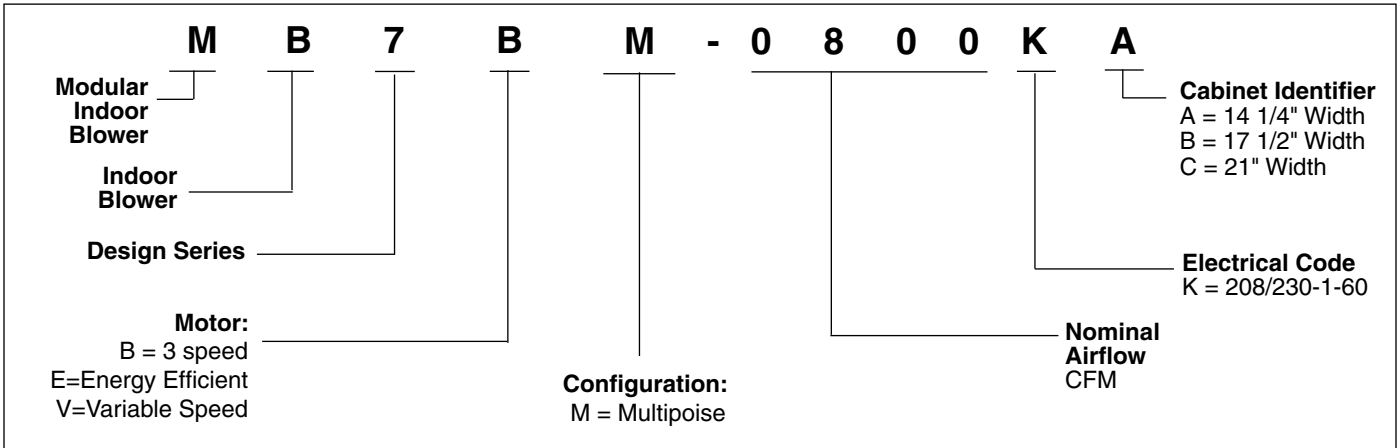
Additional MB7EM Features:

- **Increased Efficiencies:** Air conditioning and heat pump efficiencies up to 16 SEER and 9.0 HSPF.
- **Energy Efficient Fixed Speed ECM Motor:** Provides 16 field-selectable cooling airflows and 16 field-selectable heating airflows to match any application.
- **Quiet Blower Operation:** Extra quiet and smooth blower on and off cycles.

Additional MB7VM Features:

- **Increased Efficiencies:** Air conditioning and heat pump efficiencies up to 16 SEER and 9.0 HSPF.
- **Energy Efficient Variable Speed ECM Motor:** Advanced technology provides 16 field-selectable cooling airflows and automatically sets heating airflows based on the amount of installed heat.
- **Quiet Blower Operation:** Extra quiet and smooth blower on and off cycles.
- **Constant Airflow:** Motor automatically adjusts to different static loads.
- **Field selectable delay profiles:** Increase efficiency and comfort.
- **Reduced air stratification:** This results in improved air quality by optimizing humidity removal and filtration capabilities.

MODEL IDENTIFICATION CODE



ACCESSORIES

Accessory Kit Description	Cabinet Size			Order Number
	A	B	C	
Single circuit adaptor for 3 circuit breakers	X	X	X	913874

240V Single-Phase Heater Kit Application

Nominal KW	Matched Units					Order Number	
	*800-A	*1200-A	*1200/1600-B	*1600-C	*2000-C	With Circuit Breakers	Without Circuit Breakers
5	X	X	X	X	X	904407	904406
8	X	X	X	X	X	904409	904408
10	X	X	X	X	X	904412	904411
15	n/a	X	X	X	X	904414	n/a
20	n/a	n/a	X	X	X	904416	n/a

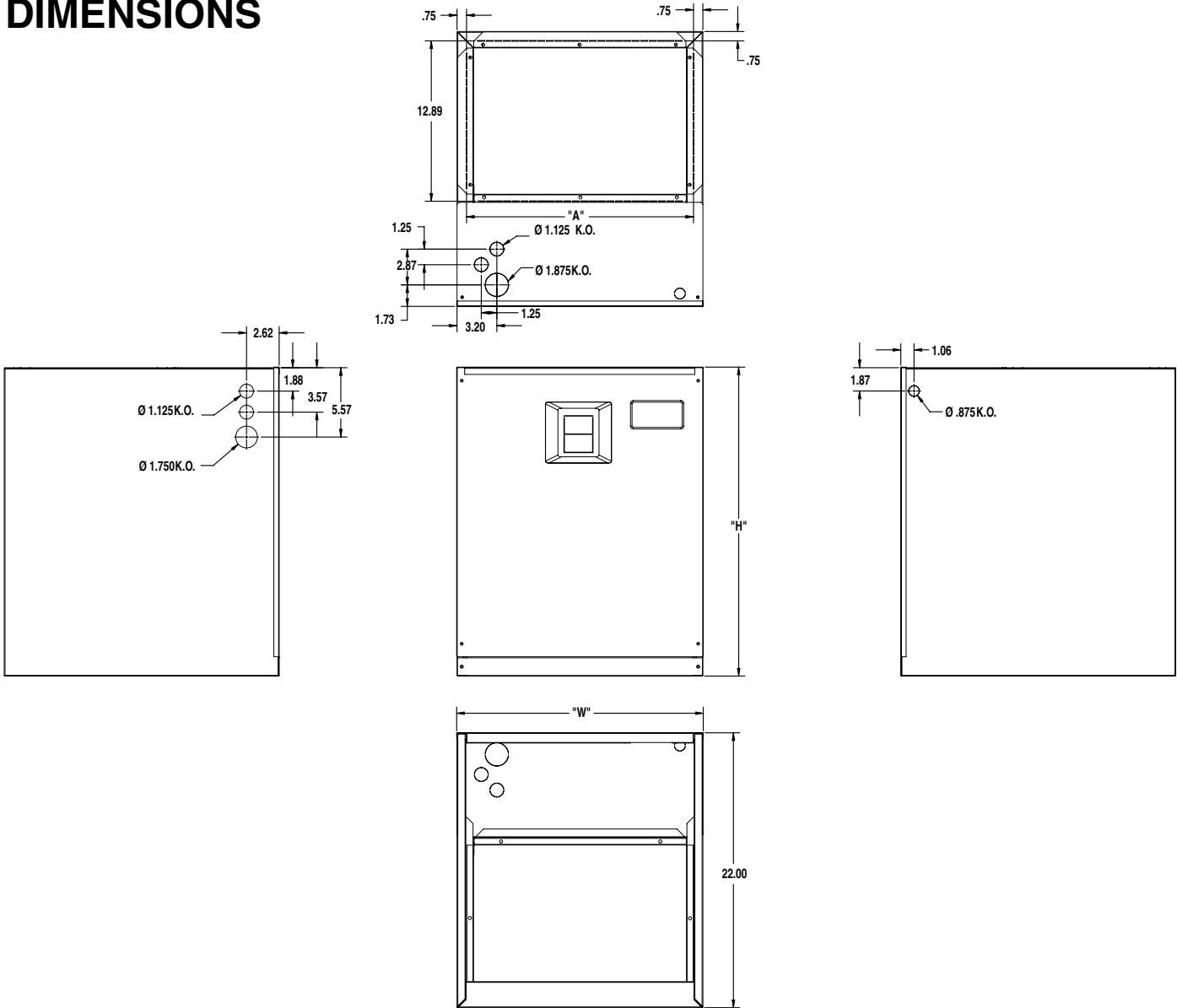
240V Three-Phase Heater Kit Application

Nominal KW	Matched Units					Order Number	
	*800-A	*1200-A	*1200/1600-B	*1600-C	*2000-C	With Circuit Breakers	Without Circuit Breakers
9	X	X	X	X	X	904410	n/a
15	n/a	X	X	X	X	904415	n/a

ELECTRICAL DATA

Model	Cabinet	Capacity	Model Number H8HK-	Voltage 240								Voltage 208							
				Min. Circuit Amp.				Max. Over-current Rating				Min. Circuit Amp.				Max. Over-Current Rating			
				Circuit A	Circuit B	Circuit C	Single Circuit	Circuit A	Circuit B	Circuit C	Single Circuit	Circuit A	Circuit B	Circuit C	Single Circuit	Circuit A	Circuit B	Circuit C	Single Circuit
MB7BM	A	800CFM	None	1.6	-	-	1.6	15.0	-	-	15.0	1.6	-	-	1.6	15.0	-	-	15.0
			005H-XX	26.6	-	-	26.6	30.0	-	-	30.0	23.3	-	-	23.3	25.0	-	-	25.0
			008H-XX	41.2	-	-	41.2	45.0	-	-	45.0	35.9	-	-	35.9	40.0	-	-	40.0
			010H-XX	51.6	-	-	51.6	60.0	-	-	60.0	45.0	-	-	45.0	45.0	-	-	45.0
	B	1200CFM	None	2.6	-	-	2.6	15.0	-	-	15.0	2.6	-	-	2.6	15.0	-	-	15.0
			005H-XX	27.6	-	-	27.6	30.0	-	-	30.0	24.3	-	-	24.3	25.0	-	-	25.0
			008H-XX	42.2	-	-	42.2	45.0	-	-	45.0	36.9	-	-	36.9	40.0	-	-	40.0
			010H-XX	52.6	-	-	52.6	60.0	-	-	60.0	46.0	-	-	46.0	50.0	50.0	-	45.0
			015H-XX	52.6	25.0	-	64.7	60.0	30.0	-	80.0	46.0	21.7	-	67.6	50.0	25.0	-	70.0
			020H-XX	52.6	50.0	-	102.6	60.0	60.0	-	110.0	46.0	43.3	-	89.3	50.0	45.0	-	90.0
	C	1600CFM	None	3.1	-	-	3.1	15.0	-	-	15.0	3.1	-	-	3.1	15.0	-	-	15.0
			005H-XX	28.1	-	-	28.1	30.0	-	-	30.0	24.8	-	-	24.8	25.0	-	-	25.0
			008H-XX	42.7	-	-	42.7	45.0	-	-	45.0	37.4	-	-	37.4	40.0	-	-	40.0
			010H-XX	53.1	-	-	53.1	60.0	-	-	60.0	46.5	-	-	46.5	50.0	-	-	50.0
			015H-XX	53.1	-	-	65.6	60.0	-	-	80.0	46.5	21.7	-	68.1	50.0	25.0	-	70.0
			020H-XX	53.1	-	-	103.1	60.0	-	-	110.0	46.5	43.3	-	89.8	50.0	45.0	-	90.0
	C	2000CFM	None	5.0	-	-	5.0	15.0	-	-	15.0	5.0	-	-	5.0	15.0	-	-	15.0
			005H-XX	30.0	-	-	30.0	35.0	-	-	35.0	26.7	-	-	26.7	30.0	-	-	30.0
			008H-XX	44.6	-	-	44.6	45.0	-	-	45.0	39.3	-	-	39.3	40.0	-	-	40.0
			010H-XX	55.0	-	-	55.0	60.0	-	-	60.0	48.3	-	-	48.3	50.0	-	-	50.0
			015H-XX	55.0	25.0	-	80.0	60.0	30.0	-	80.0	48.3	21.7	-	70.0	50.0	25.0	-	70.0
020H-XX			55.0	50.0	-	105.0	60.0	60.0	-	110.0	48.3	43.3	-	91.7	50.0	45.0	-	100.0	
MB7(E,V)M	A	1200CFM	None	4.5	-	-	4.5	15.0	-	-	15.0	4.8	-	-	4.8	15.0	-	-	15.0
			005H-XX	29.5	-	-	29.5	30.0	-	-	30.0	26.4	-	26.4	24.8	30.0	-	-	30.0
			008H-XX	44.1	-	-	44.1	45.0	-	-	45.0	39.1	-	-	39.1	40.0	-	-	40.0
			010H-XX	54.5	-	-	54.5	60.0	-	-	60.0	48.1	-	-	48.1	50.0	-	-	50.0
			015H-XX	54.5	50.0	-	68.1	60.0	30.0	-	80.0	48.1	21.7	-	69.8	50.0	25.0	-	70.0
	B	1600CFM	None	4.5	-	4.5	5.4	15.0	-	-	15.0	4.8	-	-	4.8	15.0	-	-	15.0
			005H-XX	29.5	-	-	29.5	30.0	-	-	30.0	26.4	-	-	26.4	30.0	-	-	30.0
			008H-XX	44.1	-	-	44.1	45.0	-	-	45.0	39.1	-	-	39.1	40.0	-	-	40.0
			010H-XX	54.5	50.0	50.0	54.5	60.0	-	-	60.0	48.1	-	-	48.1	50.0	-	-	50.0
			015H-XX	54.5	-	-	68.1	60.0	-	-	80.0	48.1	-	-	69.8	50.0	-	-	70.0
			020H-XX	54.5	50.0	-	104.5	60.0	60.0	-	110.0	48.1	43.3	-	91.4	50.0	45.0	-	100.0
	C	2000CFM	None	6.3	-	-	6.3	15.0	-	-	15.0	6.8	-	-	6.8	15.0	-	-	15.0
			005H-XX	31.3	-	-	31.3	35.0	-	-	35.0	28.4	-	-	28.4	30.0	-	-	30.0
			008H-XX	45.8	-	-	45.8	50.0	-	-	50.0	41.1	-	-	41.1	45.0	-	-	45.0
			010H-XX	56.3	-	-	56.3	60.0	-	-	60.0	50.1	-	-	50.1	60.0	-	-	60.0
			015H-XX	56.3	-	-	81.3	60.0	-	-	90.0	50.1	-	-	71.8	60.0	-	-	80.0
			020H-XX	56.3	-	-	106.3	60.0	-	-	110.0	50.1	-	-	93.4	60.0	-	-	100.0

DIMENSIONS



SPECIFICATIONS

Model Number MB7-	BM-0800-A	BM-1200-A	BM-1200-B	BM-1600-C	BM-2000-C	EM-1200-A	EM-1600-B	EM-2000-C	VM-1200-A	VM-1600-B	VM-2000-C
Nominal cooling capacity - BTUh ¹	24000	36000	36000	48000	60000	36000	48000	60000	36000	48000	60000
Maximum Available Auxiliary Heat	10	15	20	20	20	15	20	20	15	20	20
Nominal Blower Size (Dia. x Width)	10 x 6	10 x 6	10 x 8	10 x 10	11 x 10	10 x 6	11 x 8	11 x 10	10 x 6	11 x 8	11 x 10
Motor Hp-speeds-type	1/5-3-PSC	1/2-3-PSC	1/3-3-PSC	1/2-3-PSC	3/4-3-PSC	1/2-16-FS	1/2-16-FS	3/4-16-FS	1/2-VS	1/2-VS	3/4-VS
Approximate Shipping Weight, lbs	50	50	60	73	73	50	60	73	50	60	73
Height, "H", in.	24-3/4	24-3/4	24-3/4	27-1/2	27-1/2	24-3/4	24-3/4	27-1/2	24-3/4	24-3/4	27-1/2
Width, "W", in.	14-1/4	14-1/4	17-1/2	21	21	14-1/4	17-1/2	21	14-1/4	17-1/2	21
Supply Air Outlet Dimension, in.	12-7/8 x 12-3/4	12-7/8 x 12-3/4	12-7/8 x 12-3/4	12-7/8 x 18-1/4	12-7/8 x 18-1/4	12-7/8 x 12-3/4	12-7/8 x 12-3/4	12-7/8 x 18-1/4	12-7/8 x 12-3/4	12-7/8 x 12-3/4	12-7/8 x 18-1/4

¹ See current AHRI Directory for certified combinations and ratings.

MB7BM BLOWER PERFORMANCE DATA

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
0800 A-Cabinet	Low	685	645	605	565	515	465	405	345	
	<i>Corrected ESP¹</i>		0.07	0.19	0.30	0.42	0.53	0.65	0.76	
	Med	860	825	780	735	680	625	565	500	
	<i>Corrected ESP¹</i>			0.11	0.23	0.36	0.48	0.60	0.72	
	High	1070	1025	975	920	860	800	730	660	
	<i>Corrected ESP¹</i>				0.14	0.27	0.40	0.53	0.67	

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
1200 A-Cabinet	Low	850	825	795	755	705	645	580	510	
	<i>Corrected ESP¹</i>		0.04	0.15	0.27	0.38	0.50	0.62	0.74	
	Med	1120	1085	1045	995	940	875	800	715	
	<i>Corrected ESP¹</i>			0.04	0.17	0.29	0.42	0.55	0.68	
	High	1275	1235	1185	1130	1070	1005	935	860	
	<i>Corrected ESP¹</i>				0.10	0.23	0.36	0.49	0.63	

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
1200 B-Cabinet	Low	995	955	910	845	780	705	610	530	
	<i>Corrected ESP¹</i>		0.08	0.19	0.31	0.42	0.54	0.65	0.76	
	Med	1335	1290	1235	1175	1100	1015	925	805	
	<i>Corrected ESP¹</i>			0.10	0.22	0.34	0.46	0.59	0.71	
	High	1470	1425	1360	1300	1225	1135	1050	920	
	<i>Corrected ESP¹</i>				0.08	0.22	0.37	0.51	0.65	

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
1600 C-Cabinet	Low	1035	1005	970	925	875	825	770	710	
	<i>Corrected ESP¹</i>		0.11	0.22	0.33	0.44	0.54	0.65	0.76	
	Med	1635	1595	1525	1475	1405	1305	1210	1060	
	<i>Corrected ESP¹</i>			0.08	0.20	0.32	0.44	0.57	0.69	
	High	1910	1840	1760	1685	1595	1495	1395	1250	
	<i>Corrected ESP¹</i>				0.14	0.26	0.39	0.52	0.65	

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
2000 C-Cabinet	Low	1520	1510	1500	1485	1465	1440	1415	1385	
	<i>Corrected ESP¹</i>		0.11	0.21	0.31	0.42	0.52	0.62	0.72	
	Med	1900	1885	1860	1830	1790	1740	1680	1620	
	<i>Corrected ESP¹</i>		0.06	0.16	0.27	0.37	0.48	0.59	0.70	
	High	2245	2195	2135	2080	2015	1950	1885	1800	
	<i>Corrected ESP¹</i>			0.12	0.23	0.34	0.45	0.56	0.67	

¹ ESP estimate with wet coil and filter

Notes:

- 1) Airflow is shown in CFM, +/- 5%.
- 2) External static pressure (ESP) is shown in inches w.c.
- 3) See unit nameplate or installation instructions for maximum recommended external static pressure.

MB7EM BLOWER PERFORMANCE DATA

	Switch Settings				Cooling or Heating Airflow (CFM)							
					Dry Coil ESP							
	1/5	2/6	3/7	4/8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
MB7EM A-cabinet	0	0	0	0	585	550	520	460	420	405		
	1	0	0	0	710	670	650	610	560	530	475	440
	0	1	0	0	845	790	765	715	680	655	625	580
	1	1	0	0	890	865	840	785	760	710	680	655
	0	0	1	0	955	925	900	850	825	790	770	720
	1	0	1	0	1030	995	975	940	910	870	840	815
	0	1	1	0	1115	1085	1060	1020	995	965	925	905
	1	1	1	0	1155	1130	1095	1070	1040	1010	985	950
	0	0	0	1	1200	1175	1145	1110	1085	1060	1025	1000
	1	0	0	1	1240	1215	1195	1170	1140	1110	1080	1060
	0	1	0	1	1320	1290	1265	1240	1215	1185	1160	1130
	1	1	0	1	1355	1330	1305	1280	1255	1220	1200	1175
	0	0	1	1	1405	1375	1345	1325	1295	1275	1250	1210
	1	0	1	1	1440	1415	1385	1355	1325	1290	1255	1215
	0	1	1	1	1465	1425	1390	1355	1320	1290	1260	1215
	1	1	1	1	1465	1425	1390	1355	1320	1290	1260	1215
MB7EM B-cabinet	Switch Setting				Cooling or Heating Airflow (CFM)							
					Dry Coil ESP							
	1/5	2/6	3/7	4/8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	0	0	0	0	600	550	430	390				
	1	0	0	0	660	610	540	460	425			
	0	1	0	0	830	750	695	640	580	520		
	1	1	0	0	860	825	765	690	630	600	525	485
	0	0	1	0	935	895	835	790	710	655	620	585
	1	0	1	0	1045	975	920	875	830	795	720	685
	0	1	1	0	1095	1040	995	950	900	850	805	750
	1	1	1	0	1155	1105	1060	1010	965	920	870	825
	0	0	0	1	1230	1185	1140	1090	1045	1010	965	920
	1	0	0	1	1285	1260	1210	1165	1125	1080	1040	1010
	0	1	0	1	1330	1290	1245	1205	1170	1125	1085	1045
	1	1	0	1	1395	1365	1315	1275	1235	1205	1160	1130
	0	0	1	1	1450	1405	1375	1335	1295	1260	1220	1180
1	0	1	1	1490	1450	1410	1385	1340	1300	1270	1230	
0	1	1	1	1530	1485	1460	1425	1380	1350	1310	1280	
1	1	1	1	1530	1490	1465	1425	1390	1350	1310	1285	
MB7EM C-cabinet	Switch Setting				Cooling or Heating Airflow (CFM)							
					Dry Coil ESP							
	1/5	2/6	3/7	4/8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	0	0	0	0	710	580	395					
	1	0	0	0	830	690	675	530	505			
	0	1	0	0	930	875	710	665	560	530		
	1	1	0	0	1065	1015	900	840	800	705	665	635
	0	0	1	0	1185	1115	1010	960	925	875	830	745
	1	0	1	0	1275	1220	1175	1120	1060	970	930	890
	0	1	1	0	1365	1350	1255	1200	1150	1105	1060	1025
	1	1	1	0	1480	1430	1370	1325	1265	1225	1185	1140
	0	0	0	1	1560	1535	1485	1430	1375	1335	1285	1240
	1	0	0	1	1650	1600	1545	1500	1450	1405	1360	1305
	0	1	0	1	1730	1685	1660	1610	1570	1520	1470	1420
	1	1	0	1	1785	1740	1695	1645	1615	1545	1510	1470
	0	0	1	1	1865	1820	1785	1750	1695	1655	1605	1560
1	0	1	1	1920	1890	1850	1805	1765	1715	1675	1640	
0	1	1	1	2010	1965	1960	1900	1850	1810	1775	1730	
1	1	1	1	2065	2020	1985	1955	1915	1880	1840	1810	

NOTE: 0 = OFF, 1 = ON

HEATING AIRFLOW SELECTION FOR VARIABLE SPEED MODELS

Heating Airflow		
HEAT Switch Setting A/B	Heater Kit Installed (KW)	Airflow (CFM)
0	0	600
0	5	800
0	8	900
0	10	1000
0	15	1300

Heating Airflow		
HEAT Switch Setting A/B	Heater Kit Installed (KW)	Airflow (CFM)
1	0	700
1	5	900
1	8	1000
1	10	1100
1	15	1300
1	20	1500

Heating Airflow		
HEAT Switch Setting A/B	Heater Kit Installed (KW)	Airflow (CFM)
*	0	800
*	5	1000
*	8	1100
*	10	1200
*	15	1400
*	20	1600

NOTES:

Airflow values listed are for 240V operation. For 208V operation, multiply A & B cabinet values by .95; for C-cabinet values multiply by .90

* = either 0 or 1

0 = OFF, 1 = ON

AIRFLOW SETTINGS

Minimum Heating Airflow Settings

Cabinet	Nominal Electric Heat KW				
	5	8	10	15	20
A	800	900	1000	N/A	N/A
B	900	1000	1100	1300	1500
C	1000	1100	1200	1400	1600

AIRFLOW SETTINGS (Continued)

Cooling Airflow Settings

A-CABINET							
CFM	A/B Switch Setting 0 = OFF, 1 = ON	SWITCH SETTINGS 0 = OFF, 1 = ON				NOMINAL CAPACITY	
		1	2	3	4		
525	0	0	0	0	0	1.5 TON	
560	0	0	0	0	1		
600	0	0	0	1	0		
625	0	0	0	1	1		
700	0	0	1	0	0		2 TON
750	0	0	1	0	1		
800	0	0	1	1	0		2.5 TON
850	0	0	1	1	1		
875	0	1	0	0	0		
890	0	1	0	0	1		
930	0	1	0	1	0		
950	0	1	0	1	1		
1000	0	1	1	0	0	3 TON	
1050	0	1	1	0	1		
1125	0	1	1	1	0		
1200	0	1	1	1	1		

B-CABINET							
CFM	A/B Switch Setting 0 = OFF, 1 = ON	SWITCH SETTINGS 0 = OFF, 1 = ON				NOMINAL CAPACITY	
		1	2	3	4		
525	1	0	0	0	0	1.5 TON	
560	1	0	0	0	1		
600	1	0	0	1	0		
650	1	0	0	1	1		
700	1	0	1	0	0		2 TON
750	1	0	1	0	1		
800	1	0	1	1	0		2.5 TON
850	1	0	1	1	1		
875	1	1	0	0	0		
950	1	1	0	0	1		
1050	1	1	0	1	0		
1150	1	1	0	1	1		
1250	1	1	1	0	0	3 TON	
1350	1	1	1	0	1		
1400	1	1	1	1	0		
1600	1	1	1	1	1		

C-CABINET							
CFM	A/B Switch Setting 0 = OFF, 1 = ON	SWITCH SETTINGS 0 = OFF, 1 = ON				NOMINAL CAPACITY	
		1	2	3	4		
1100	*	0	0	0	0	3 TON	
1200	*	0	0	0	1		
1250	*	0	0	1	0		
1300	*	0	0	1	1		
1350	*	0	1	0	0		3.5 TON
1400	*	0	1	0	1		
1450	*	0	1	1	0		4 TON
1500	*	0	1	1	1		
1550	*	1	0	0	0		
1600	*	1	0	0	1		
1650	*	1	0	1	0	5 TON	
1700	*	1	0	1	1		
1750	*	1	1	0	0		
1800	*	1	1	0	1		
1900	*	1	1	1	0		
2000	*	1	1	1	1		



GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (11/2017)