

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.



WARRANTY

- This product carries a 5-year all parts warranty. When installed with a matched outdoor unit, the air handler will carry the outdoor system warranty. See current warranty document or visit our consumer web site for warranty details.

FEATURES and BENEFITS

- **Durable, Attractive Cabinet:** Designed using galvanized steel. The door is also galvanized steel, with a polyester urethane finish. The 950 hour salt spray finish resists corrosion 50% better than comparable units. 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.

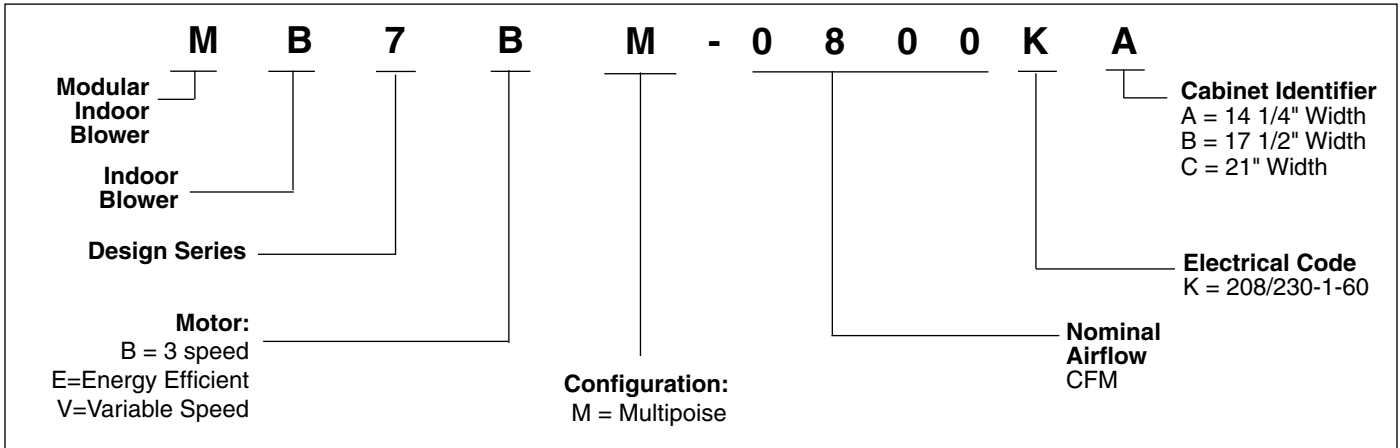
Additional MB7EM Features:

- **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



ELECTRICAL DATA

Model	Cabinet	Capacity	Model Number H6HK-	Voltage 240								Voltage 208							
				Min. Circuit Amp.				Maximum Over-current Rating				Min. Circuit Amp.				Maximum 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
			015H-XX	51.6	25.0	-	76.6	60.0	30.0	-	80.0	45.0	21.7	-	66.6	45.0	25.0	-	70.0
	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
			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
	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
	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
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	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	25.0	-	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	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	-	-	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
	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
	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

ACCESSORIES

Accessory Kit Description	Cabinet Size			Order Number
	A	B	C	
Single circuit adaptor for 2 circuit breakers	X	X	X	913874

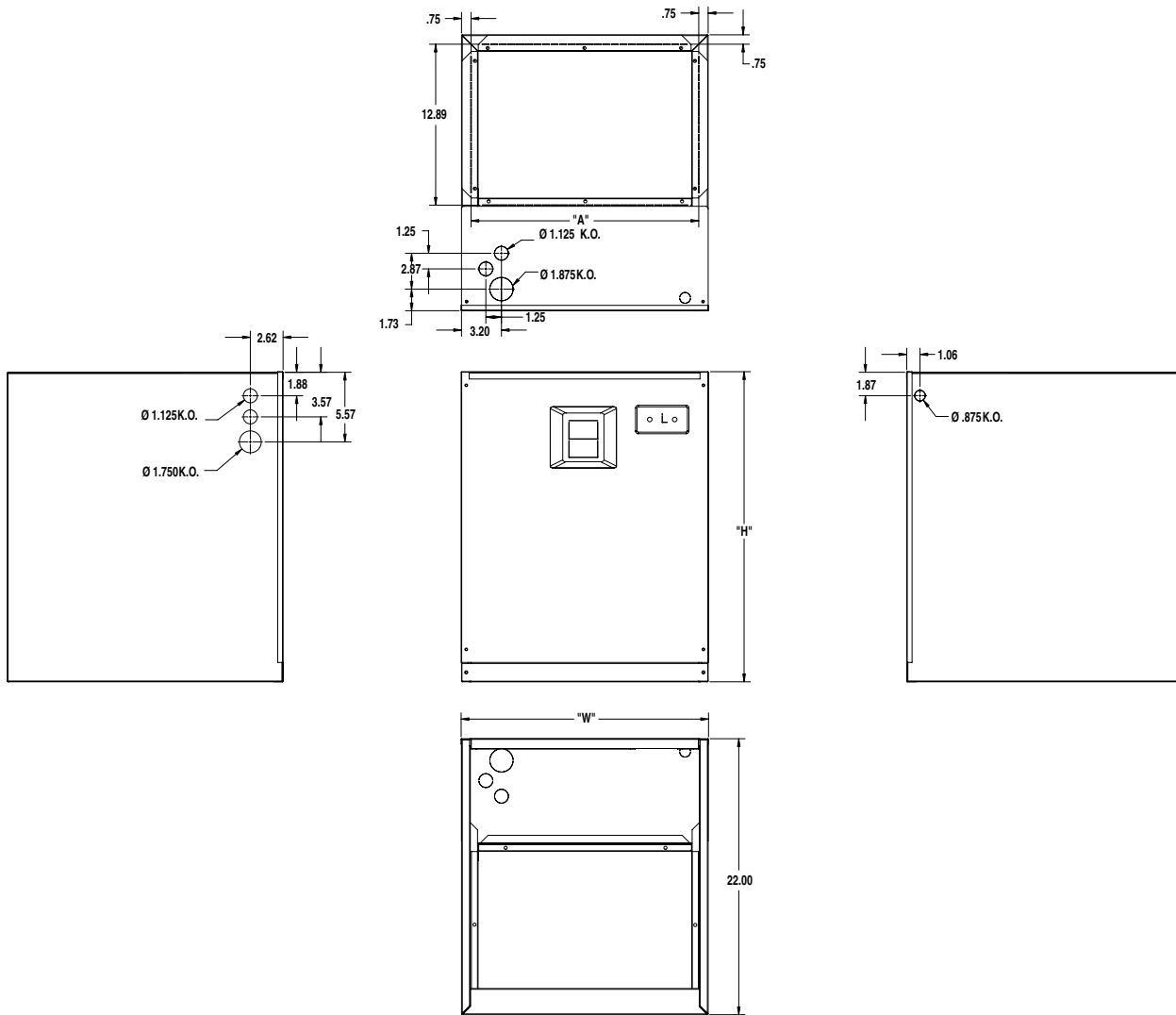
240V Single-Phase Heater Kit Application

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

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.	12-7/8x12-3/4	12-7/8x12-3/4	12-7/8x12-3/4	12-7/8x18-1/4	12-7/ x18-1/4	12-7/ x12-3/4	12-7/8x12-3/4	12-7/8x18-1/4	12-7/8x12-3/4	12-7/8x12-3/4	12-7/8x18-1/4

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
	Corrected ESP ¹		0.07	0.19	0.30	0.42	0.53	0.65	0.76
	Med	860	825	780	735	680	625	565	500
	Corrected ESP ¹			0.11	0.23	0.36	0.48	0.60	0.72
	High	1070	1025	975	920	860	800	730	660
	Corrected ESP ¹				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
	Corrected ESP ¹		0.04	0.15	0.27	0.38	0.50	0.62	0.74
	Med	1120	1085	1045	995	940	875	800	715
	Corrected ESP ¹			0.04	0.17	0.29	0.42	0.55	0.68
	High	1275	1235	1185	1130	1070	1005	935	860
	Corrected ESP ¹				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
	Corrected ESP ¹		0.08	0.19	0.31	0.42	0.54	0.65	0.76
	Med	1335	1290	1235	1175	1100	1015	925	805
	Corrected ESP ¹			0.10	0.22	0.34	0.46	0.59	0.71
	High	1470	1425	1360	1300	1225	1135	1050	920
	Corrected ESP ¹				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
	Corrected ESP ¹		0.11	0.22	0.33	0.44	0.54	0.65	0.76
	Med	1635	1595	1525	1475	1405	1305	1210	1060
	Corrected ESP ¹			0.08	0.20	0.32	0.44	0.57	0.69
	High	1910	1840	1760	1685	1595	1495	1395	1250
	Corrected ESP ¹				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
	Corrected ESP ¹		0.11	0.21	0.31	0.42	0.52	0.62	0.72
	Med	1900	1885	1860	1830	1790	1740	1680	1620
	Corrected ESP ¹		0.06	0.16	0.27	0.37	0.48	0.59	0.70
	High	2245	2195	2135	2080	2015	1950	1885	1800
	Corrected ESP ¹			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

AIRFLOW SELECTION FOR VARIABLE SPEED MODELS

	Cooling Airflow					
	HEAT Switch Setting A/B	COOL Switch Setting				Airflow (CFM)
		1	2	3	4	
MB7VM A-cabinet	0	0	0	0	0	525
	0	0	0	0	1	560
	0	0	0	1	0	600
	0	0	0	1	1	625
	0	0	1	0	0	700
	0	0	1	0	1	750
	0	0	1	1	0	800
	0	0	1	1	1	850
	0	1	0	0	0	875
	0	1	0	0	1	890
	0	1	0	1	0	930
	0	1	0	1	1	950
	0	1	1	0	0	1000
	0	1	1	0	1	1050
	0	1	1	1	0	1125
	0	1	1	1	1	1200

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
0	20	n/a
0	25	n/a
0	30	n/a

	Cooling Airflow					
	HEAT Switch Setting A/B	COOL Switch Setting				Airflow (CFM)
		1	2	3	4	
MB7VM B-cabinet	1	0	0	0	0	525
	1	0	0	0	1	560
	1	0	0	1	0	600
	1	0	0	1	1	650
	1	0	1	0	0	700
	1	0	1	0	1	750
	1	0	1	1	0	800
	1	0	1	1	1	850
	1	1	0	0	0	875
	1	1	0	0	1	950
	1	1	0	1	0	1050
	1	1	0	1	1	1150
	1	1	1	0	0	1250
	1	1	1	0	1	1350
	1	1	1	1	0	1400
	1	1	1	1	1	1600

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
1	25	n/a
1	30	n/a

	Cooling Airflow					
	HEAT Switch Setting A/B	COOL Switch Setting				Airflow (CFM)
		1	2	3	4	
MB7VM C-cabinet	*	0	0	0	0	1100
	*	0	0	0	1	1200
	*	0	0	1	0	1250
	*	0	0	1	1	1300
	*	0	1	0	0	1350
	*	0	1	0	1	1400
	*	0	1	1	0	1450
	*	0	1	1	1	1500
	*	1	0	0	0	1550
	*	1	0	0	1	1600
	*	1	0	1	0	1650
	*	1	0	1	1	1700
	*	1	1	0	0	1750
	*	1	1	0	1	1800
	*	1	1	1	0	1900
	*	1	1	1	1	2000

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
*	25	1800
*	30	2000

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	25	30
A	800	900	1000	1300	N/A	N/A	N/A
B	900	1000	1100	1300	1500	N/A	N/A
C	1000	1100	1200	1400	1600	N/A	N/A

Cooling Airflow Settings

A-CABINET						
CFM	SWITCH SET-TINGS (1 = ON, 0 = OFF)				NOMINAL CAPACITY	
	1	2	3	4		
525	0	0	0	0	1.5 TON	
560	0	0	0	1		
600	0	0	1	0		
625	0	0	1	1		
700	0	1	0	0		
750	0	1	0	1		
800	0	1	1	0		
850	0	1	1	1		
875	1	0	0	0		
890	1	0	0	1		
930	1	0	1	0	2 TON	
950	1	0	1	1		
1000	1	1	0	0		
1050	1	1	0	1		
1125	1	1	1	0		
1200	1	1	1	1		
						2.5 TON
					3 TON	

B-CABINET						
CFM	SWITCH SET-TINGS (1 = ON, 0 = OFF)				NOMINAL CAPACITY	
	1	2	3	4		
525	0	0	0	0	1.5 TON	
560	0	0	0	1		
600	0	0	1	0		
650	0	0	1	1		
700	0	1	0	0		
750	0	1	0	1		
800	0	1	1	0		
850	0	1	1	1		
875	1	0	0	0		
950	1	0	0	1		
1050	1	0	1	0	2 TON	
1150	1	0	1	1		
1250	1	1	0	0		
1350	1	1	0	1		
1400	1	1	1	0		
1600	1	1	1	1		
						2.5 TON
					3 TON	
					3.5 TON	
					4 TON	

C-CABINET						
CFM	SWITCH SET-TINGS (1 = ON, 0 = OFF)				NOMICAL 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		
1400	0	1	0	1		
1450	0	1	1	0		
1500	0	1	1	1		
1550	1	0	0	0		
1600	1	0	0	1		
1650	1	0	1	0	3.5 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		
						4 TON
					5 TON	