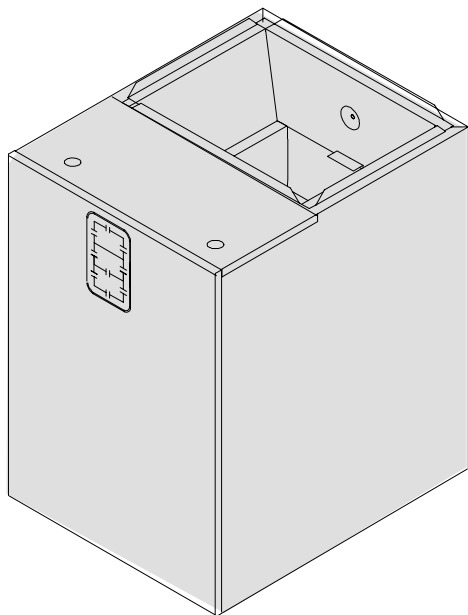


INSTALLATION INSTRUCTIONS



115 Volt Modular Blower

Models

MB08B1500A2
MB12F1900A2
MB16J2200A2
MB20N2600A2

Contents

General Information / Installation	2
Installations	3
Horizontal Installations	3
Ductwork Connections	3
Filter Installation	4
Electrical Connections	4
Motor speeds and Airflow	5
Blower Performance	5
Airflow Check	5
Wiring Diagram	6
Replacement Parts	7

Safety Labeling and Signal Words

Danger, Warning and Caution

The signal words **DANGER**, **WARNING** and **CAUTION** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING** and **CAUTION** will be used on product labels and throughout this manual and other manuals that may apply to the product.

DANGER - Immediate hazards which **WILL** result in severe personal injury or death.

WARNING - Hazards or unsafe practices which **COULD** result in severe personal injury or death.

CAUTION - Hazards or unsafe practices which **COULD** result in minor personal injury or product or property damage.

Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:

WARNING

The signal word **CAUTION** is used throughout this manual in the following manner:

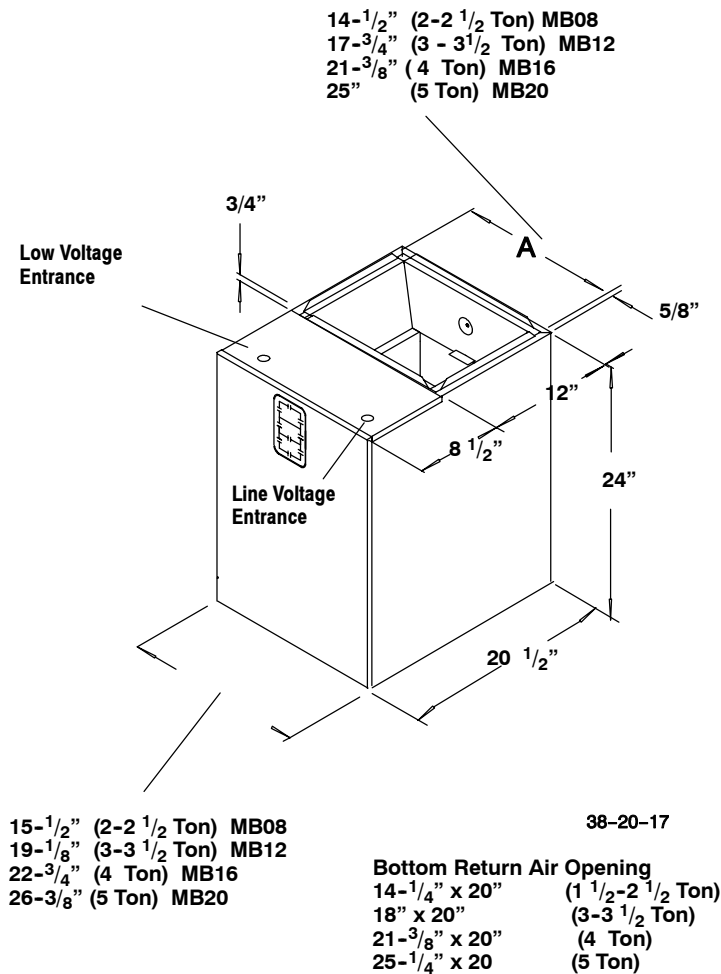
CAUTION

Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

Figure 1

Dimensions and Clearances



General Information

WARNING

Installation or repairs made by unqualified persons can result in hazards to you and others. Installation **MUST** conform with local building codes and with the National Electrical Code NFPA70 current edition.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

The blower cabinet may be used for cooling or heat pump operation. The cabinet can be installed in an upflow, downflow or horizontal position (**Figure 3, 4**).

Location

Select the best position which suits the installation site conditions. The location should provide adequate structural support, space in the front of the unit for service access, clearance for return air and supply duct connections, space for refrigerant piping connections and condensate drain line connections. **THESE BLOWERS ARE NOT TO BE USED WITH ELECTRIC HEAT.**

If the unit is located in an area of high humidity, nuisance sweating of casing may occur. On these installations a wrap of 2" fiberglass insulation with a vapor barrier should be used.

Installations

The unit is ready to install in any position without modifications.

Refer to the coil instructions for information on drain pan configurations etc. Make sure coil is set up properly for desired position of blower cabinet.

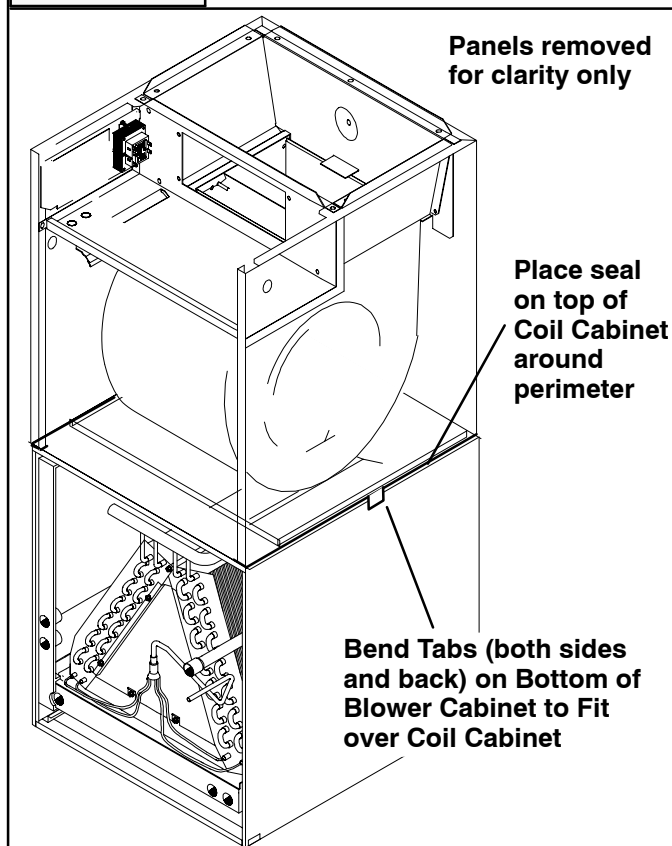
Coil must be secured to blower cabinet with the three tabs that are part of the blower cabinet base. Bend the tabs out from the bottom so they fit over the coil cabinet.

Position coil cabinet in relation to the blower so they will be correct for desired application.

For upflow and horizontal applications apply foam seal strip around top of coil cabinet. For downflow application apply foam seal strip around bottom of coil cabinet. Set blower on top of coil cabinet so they are flush. Secure cabinets together using the three tabs on the bottom of the cabinet. Bend the tab out from the bottom so it fits over the coil cabinet. If no pilot holes are present, drill a hole as required for a screw.

Figure 2

Attach Coil to Blower Cabinet



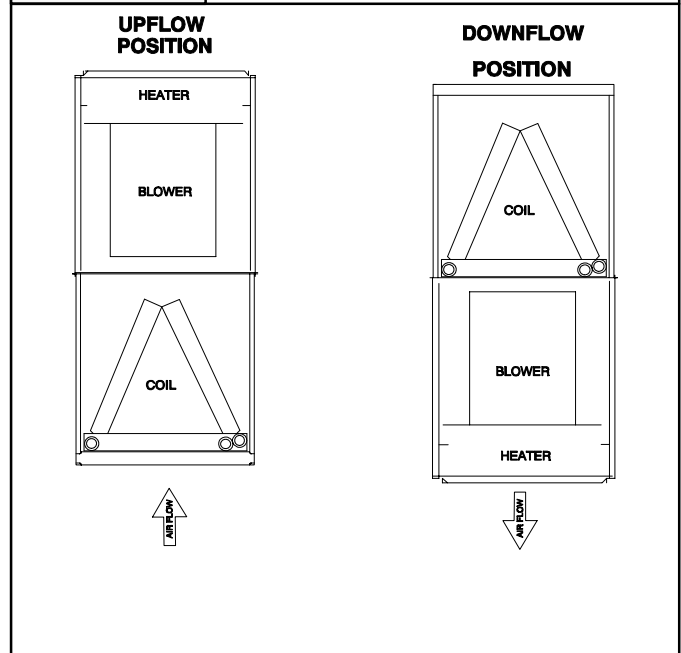
Non-Ducted Return Air Closet Installation

The cabinet can be installed in a closet with a false bottom to form a return air plenum, or mounted on an open platform inside the closet. Platform should be high enough to provide a free (open) area for adequate return airflow into the bottom of the cabinet. The open area can be on the front side or a combination of front and sides, providing there is clearance on the sides between cabinet and closet. **Refer to ACCA Manual D for sizing and free area recommendations.**

NOTE: Local codes may limit application of systems without a ducted return to single story dwellings.

Figure 3

Airflow Positions



Horizontal Left and Right Installations

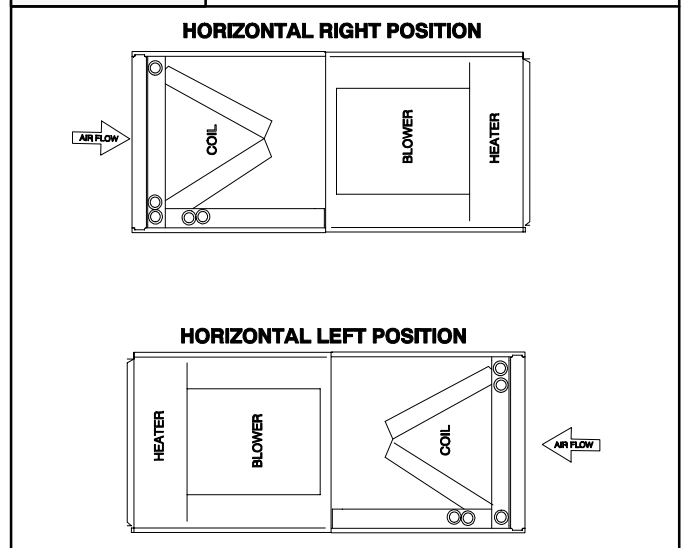
Coil cabinets that are shipped with the horizontal drain pan installed are set up for horizontal left hand airflow. They must have the drain pan repositioned for right hand airflow. Refer to coil installation manual.

CAUTION

A field fabricated auxiliary drain pan, with a separate drain is **REQUIRED** for all installations over a finished living space or in any area that may be damaged by overflow from the main drain pan. In some localities, local codes require an auxiliary drain pan for **ANY** horizontal installation.

Figure 4

Airflow Positions



Suspended Cabinet Installation

1. The cabinet may be supported on a frame or shelf, or it may be suspended.
2. Use metal strapping or threaded rod with angle iron supports under the auxiliary drain pan to suspend cabinet. These supports **MUST** run parallel with the length of the cabinet (**Figure 5**).
3. Ensure that there is adequate room to remove service and access panels after installing supporting brackets.
4. Place Styrofoam blocks in auxiliary drain pan to support cabinet.

Duct Connections

Supply Duct

Supply duct must be attached to the outside of flange on outlet end of unit. Flexible connectors may be used if desired.

Return Duct

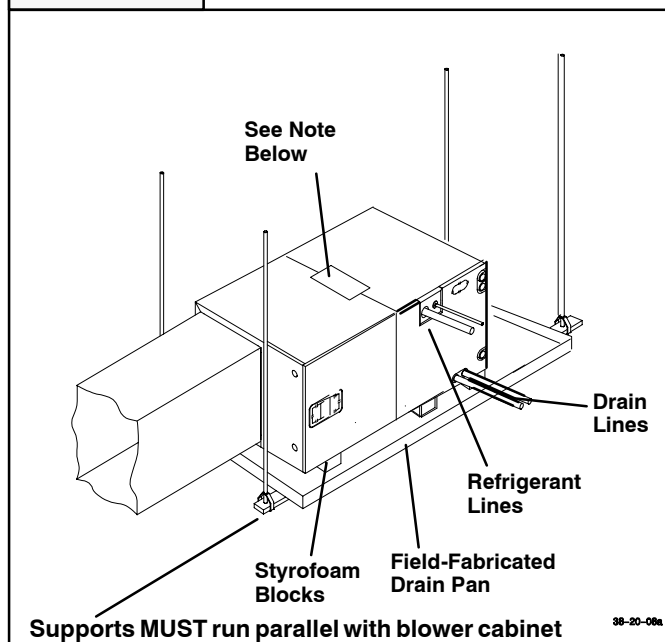
Return duct should be attached to bottom of unit using sheet metal screws or other fasteners.

Filter Installation

Filters must be field supplied. A remote filter grille or other means must be provided. Refer to ACCA Manual D for remote filter sizing.

Figure 5

Horizontal Installation



NOTE

If increased structural strength is needed in the horizontal position, use the two connecting plates that are shipped with the Multipoise Coil Cabinet in place of the tabs on the bottom of the blower.

Electrical Connections

WARNING

Electrical shock hazard.

Turn OFF electric power at fuse box or service panel before making any electrical connections and ensure a proper ground connection is made before connecting line voltage.

Failure to do so can result in property damage, personal injury and/or death.

All electrical work **MUST** conform with the requirements of local codes and ordinances and the National Electrical Code NFPA 70 current edition.

The low voltage transformer and the fan relay are standard on all models and are prewired at the factory. Line voltage connections are made to the wire pigtails in the unit.

Overcurrent Protection

The power supply wiring to the unit **MUST** be provided with overcurrent protection. Governing codes may require this to be fuses **ONLY** or circuit breakers.

For blower cabinets, a 15 amp circuit may be used.

Line Voltage Connections

Line voltage wiring may be brought into the unit through the top right-hand corner. A hole for a 1/2" or 3/4" conduit fitting is provided.

Connect field wiring to the wire pigtails. All line voltage connections must be made with copper wire.

Line Voltage Connection

1. Provide line voltage power supply (115V) from a separate circuit.
2. Connect (115V) Hot to Black wire and Neutral to White wire.

Grounding Connection

Use a copper conductor(s) from the ground lug to a grounded connection in the electric service panel or a properly installed grounding rod.

Supply Circuit			Supply Circuit No.	Maximum Motor AMPS.	Max. Total AMPS.	Branch Circuit Ampacity	Maximum Overcurrent Protective Device (AMPS.)	Recommended				
								Supply Wire 75 ° C. Copper			Ground Wire	
Volts	Phase	Hertz						No.	Size	Max. Length (Ft)	No.	Size
115	1	60	Single	9.7	9.7	7.5	15	2	12	NEC	1	14

Low Voltage Control Connections

The 24 volt power supply is provided by an internally wired low voltage transformer which is standard on all models.

Field supplied low voltage wiring can enter the unit on the top left hand corner.

Install the strain relief bushing (supplied with unit) in the selected hole.

Connect the field wiring to the Blue (24V Fan On) and Yellow (24V Hot) and Green (24V Common) pigtails.

Keep the low voltage wiring as short as possible inside the control box.

Complete connections between indoor blower, outdoor section, indoor thermostat according to instruction provided with the Condenser Installation Instructions and refer to **Wiring Diagram**.

Motor Speeds and Airflow

The motor speed can be set to one of three speeds. To change the blower speed unplug the connection at the blower and move to desired speed tap.

Airflow is blower only, Deduct Coil static based on coil chart.

MB08		SP IN. WG.						
SPEED	VOLTS	0.1	0.2	0.3	0.4	0.5	0.6	0.7
LOW	115V	572	591	603	599	590	595	594
MED	115V	727	755	765	779	760	723	721
HIGH	115V	976	1011	1026	1018	983	915	822

MB12		SP IN. WG.						
SPEED	VOLTS	0.1	0.2	0.3	0.4	0.5	0.6	0.7
LOW	115V	903	905	898	884	871	843	813
MED	115V	1108	1115	1104	1097	1084	1061	1014
HIGH	115V	1453	1439	1429	1417	1383	1334	1297

Air Flow Check

For proper system operation, the air flow through the indoor coil should be between 350 and 450 cfm per ton of cooling capacity. The air flow through the unit can be determined by measuring the external static pressure to the unit and selecting the motor speed tap that will most closely provide the required air flow.

1. Set up to measure external static pressure at the supply and return duct connections (**Figure 6**).
2. Drill holes in the ducts for pressure taps, pitot tubes, or other accurate pressure sensing devices.

Maintenance

Filters

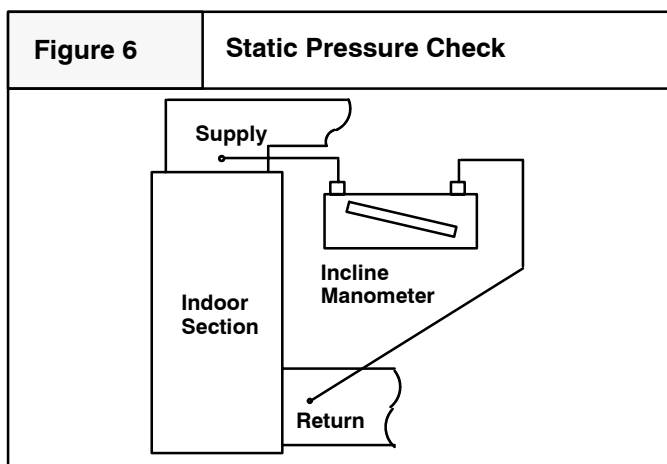
Filters must be cleaned when they become dirty. Inspect at least once per month. The frequency of cleaning depends upon the hours of operation and the local atmospheric conditions. Clean filters keep unit efficiency high.

Lubrication

The bearings of the blower motor are permanently lubricated.

MB16		SP IN. WG.						
SPEED	VOLTS	0.1	0.2	0.3	0.4	0.5	0.6	0.7
LOW	115V	1009	1046	1063	1054	1025	946	905
MED	115V	1326	1342	1345	1361	1339	1280	1158
HIGH	115V	1744	1801	1773	1744	1703	1648	1558

MB20		SP IN. WG.						
SPEED	VOLTS	0.1	0.2	0.3	0.4	0.5	0.6	0.7
LOW	115V	1549	1564	1571	1565	1554	1541	1506
MED	115V	1907	1920	1930	1906	1849	1751	1660
HIGH	115V	2473	2456	2405	2348	2280	2193	2105

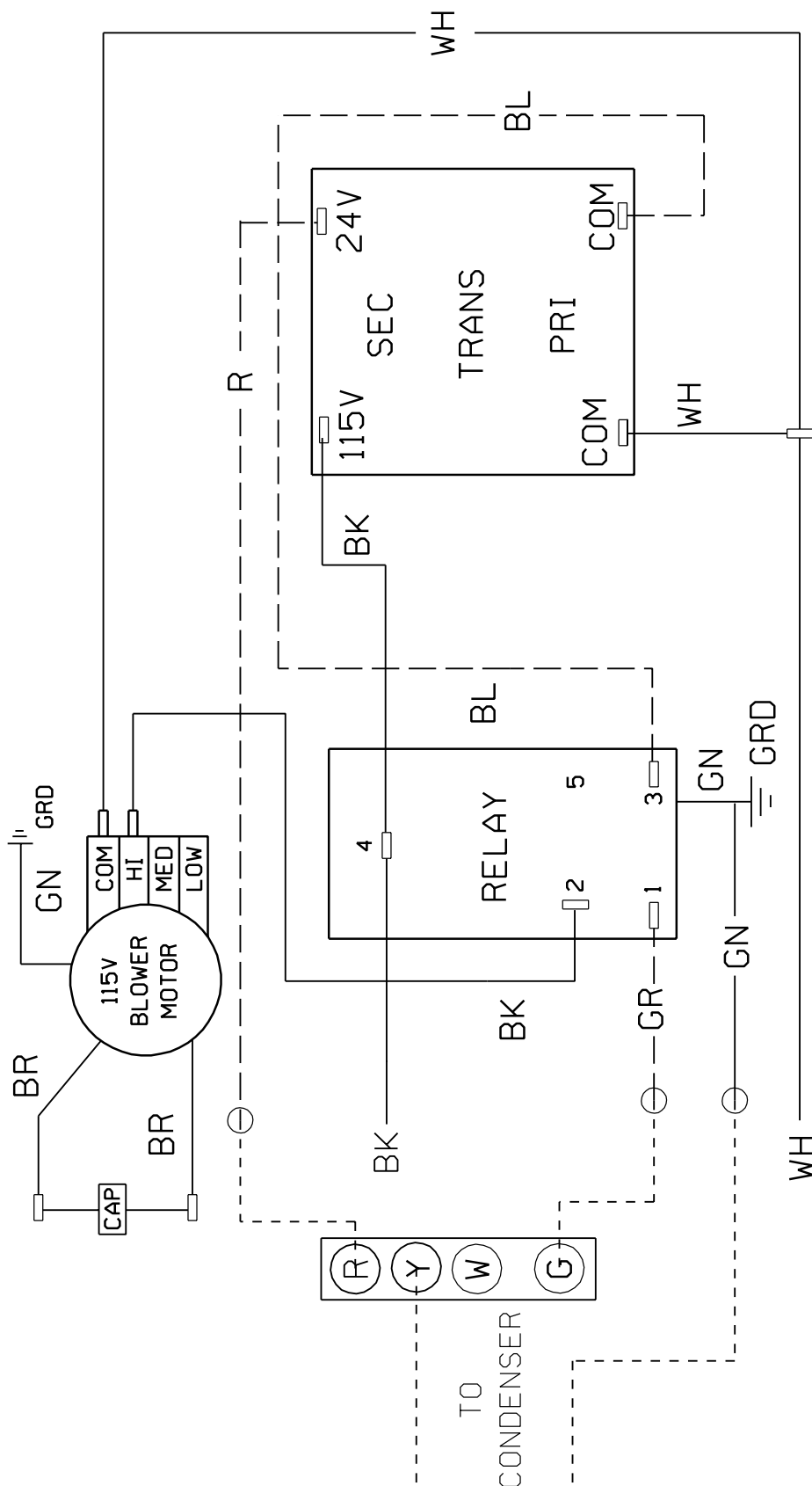


3. Connect these taps to a level inclined manometer or draft gauge.
4. Ensure the coil and filter are clean, and all the registers are open.
5. Determine the external static pressure with the blower operating.
6. Refer to the Air Flow Data tables, to find the speed tap that will most closely provide the required air flow for the system.
7. Refer to Motor Speeds and Airflow in these instructions if the speed tap is to be changed.
8. Recheck the external static pressure with the new speed tap, and confirm speed tap selection.

Condensate Drains

During the cooling season check the condensate drain lines to be sure that condensate is flowing from the primary drain but not from the secondary drain. If condensate ever flows from the secondary drain the unit should be promptly shut off and the condensate pan and drains cleaned to insure a free flowing primary drain.

POWER SUPPLY: 115-1-6Ø USE COPPER CONDUCTORS ONLY



ALL ELECTRICAL WORK MUST BE DONE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA NO. 7Ø) AND IN CONFORMANCE WITH LOCAL CODES & AUTHORITIES HAVING JURISDICTION.

COLOR CODE	WH	WHITE
BK	GN	GREEN
BL	GR	GRAY
BR		
Y		

—	LINE VOLTAGE FACTORY
- - -	LOW VOLTAGE FACTORY
- - -	LOW VOLT FIELD

1Ø86Ø87

KEY NO.	DESCRIPTION	PART NUMBER	MB08B1500A2	MB12F1900A2	MB16J2200A2	MB20N2600A2
10	Transformer	1086089	1	1	1	1
11	Motor, Blower	1085585	1			
11		1085586	-	1		
11		1085587	-	-	1	
11		1085588	-	-	-	1
12	Mount, Blower Motor	1050254	1			
12		1002801	-	1	1	
12		609227	-	-	-	1
13	Wheel, Blower	600585	1			
13		600587	-	1		
13		96839	-	-	1	1
14	Capacitor, 5MFD, 370V	1094954	1			
14	10MFD, 370V	1094956	-	1	1	
14	15MFD, 370V	1094959	-	-	-	1
17	Relay, SPST	1053004	1	1	1	1
F1	Panel, Side (Right)	1087742	1	1	1	1
F2	Panel, Rear	1087734	1			
F2		1087735	-	1		
F2		1087736	-	-	1	
F2		1087737	-	-	-	1
F3	Panel, Side (Left)	1087743	1	1	1	1
G	Brace, Bottom	1069603	1			
G		1069604	-	1		
G		1069605	-	-	1	
G		1069606	-	-	-	1
O	Panel, Rear Blower Deck	1082604	1			
O		1082844	-	1		
O		1082845	-	-	1	
O		1082846	-	-	-	1

KEY NO.	DESCRIPTION	PART NUMBER	MB08B1500A2	MB12F1900A2	MB16J2200A2	MB20N2600A2
P	Panel, Front Blower Deck	1086694	1			
P		1085372	-	1		
P		1085373	-	-	1	
P		1085374	-	-	-	1
Q	Panel, Side Blower Deck	1082622	2			
Q		1082847	-	2		
Q		1082848	-	-	2	
Q		1082849	-	-	-	2
R	Bracket, Control Fan	1085371	1	1	1	1
V	Panel, Top	1087714	1			
V		1087715	-	1		
V		1087716	-	-	1	
V		1087717	-	-	-	1
W	Housing, Blower	1087343	1			
W		1087193	-	1		
W		1087194	-	-	1	1
X	Panel, Blower Cutoff	1082607	1			
X		1082616	-	1		
X		1082949	-	-	1	1
Y	Clamp, Capacitor	1095020	1	1	1	1
Z1	Rail, Blower R.H.	1085504	1	1	1	1
Z2	Rail, Blower L.H.	1085521	1	1	1	1
BB	Door, Blower Access	1087738	1			
BB		1087739	-	1		
BB		1087740	-	-	1	
BB		1087741	-	-	-	1
HH	Plate, Heater Closure	1084926	1			
HH		1084927	-	1		
HH		1084928	-	-	1	1
Y	Manual, Installation	44201240300	1	1	1	1

