

**MICRO AIR**®

**AIR CLEANERS**



**Model MX 6000**

# **OWNER'S MANUAL**

## **CAUTION**

Read complete instructions before operating.  
Please file for future reference.

## MODEL MX 6000 SPECIFICATIONS

Input Volts:	208-230/460 VAC, 60Hz, 3 Phase	
Max. Current:	208-230 VAC	19.8 Amps
	460 VAC	9.9 Amps
Motor:	7½ HP, 3-Phase TEFC Motor, 1740 RPM	
Dimensions:	36" H X 42" W X 86" L (2 Module)	
	36" H X 42" W X 129" L (3 Module)	
Weight:	650 lbs. (2 Module)	
	950 lbs. (3 Module)	

## PACKAGE CONTENTS

- 1 ea. Blower and Filter Module Assembly
- 1 ea. After Filter Module (Optional)
- 1 ea. Owner's Manual

Note: Contents may vary due to CTO configuration ordered.

## UNPACKING INSTRUCTIONS

1. Cut the shipping straps, remove the carton and plastic wrapping from the unit.
2. Remove the MX 6000 from the shipping skid.
3. Inspect the unit for any possible damage that may have been occurred during shipping. File any damage claims with the delivery freight carrier upon receipt of the unit.

## INSTALLATION INSTRUCTIONS

Note: Due to the numerous system configurations available, some of the following installation steps may not be applicable. Follow steps that directly address the specific system configuration being installed.

**CAUTION: Typical installations require that unit be suspended from ceiling structure. Structure must be sufficient to support at least four (4) times the maximum weight of the unit.**

1. Determine the location where the unit will be installed. Be sure to allow sufficient room to access all four vertical sides of the unit for servicing and maintenance.
2. Suspend unit from ceiling by use of solid rod or angle brackets.

**CAUTION: Use solid rod or steel brackets capable of supporting 750 pounds to support the air cleaner. Hang from structural supports.**

3. Support the unit at each end and where modules are coupled together (see Figure 1).

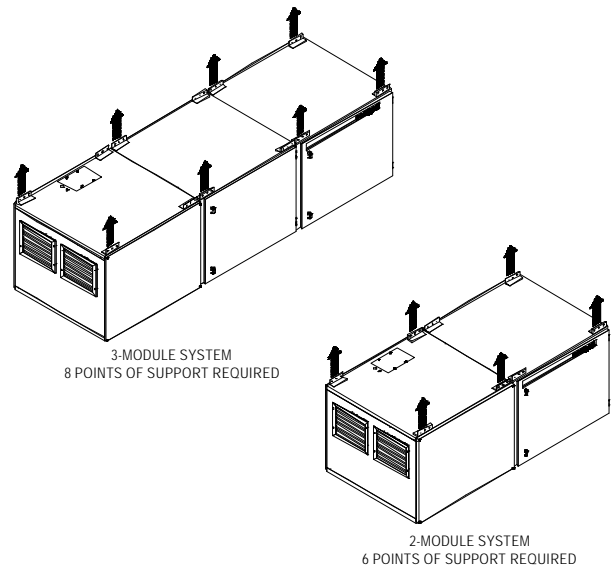


FIGURE 1

4. The MX 6000 is offered with a 16" dia. inlet collar. If applicable, connect appropriate ducting to inlet.
5. The MX 6000 is offered with an optional After Filter Module that allows the use of HEPA and/or refillable charcoal filters. If purchased with HEPA filters only, no pre-installation steps are needed. Units purchased with refillable charcoal filters will require filling before operation of unit. **Failure to fill charcoal filters prior to operation may result in over current operating conditions resulting in motor shutdown.**
6. Refer to section **OPTIONAL AFTER FILTER** for instructions on removing and filling charcoal filters.

## ELECTRICAL CONNECTIONS

**CAUTION: INSTALLATION CAN CAUSE EXPOSURE TO LIVE ELECTRICAL COMPONENTS. DISCONNECT ELECTRICAL POWER BEFORE PROCEEDING WITH INSTALLATION.**

1. Remove electrical box cover located on top of MX 6000 Blower Module (Figure 2).

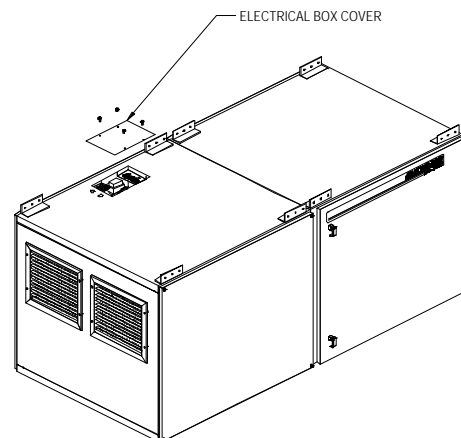
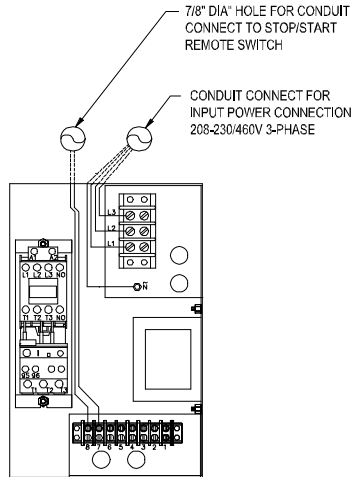


FIGURE 2

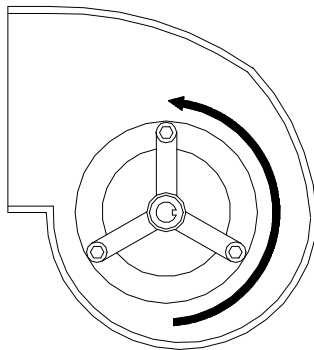
- Make connections from power supply to terminals L1, L2, and L3. Wire size should be suitable for 7½ HP motor load. Make connections from remote start/stop switch to terminals 7 and 8 (**Figure 3**).

NOTE: 7/8" diameter holes are provided for conduit connection of supply power and remote start/stop switch.



**FIGURE 3**

- Before re-assembling the electrical box cover, momentarily turn unit on and off via the remote start/stop switch. Note the rotation of the blower wheel. Proper rotation is shown in **Figure 4**.



**FIGURE 4**

- For all air cleaners purchased with pulleys, it is strongly recommended to measure motor current during initial start up. This procedure will insure that motor is not being overloaded due to inappropriate blower RPM or overestimated static-pressure of the total system.

**IMPORTANT: MEASURE MOTOR CURRENT UPON INSTALLATION OF MX 6000. EXCESSIVE CURRENT WILL CAUSE OVERLOAD PROTECTION TO ENGAGE RESULTING IN SHUTDOWN OF SYSTEM MOTOR.**

- If motor current is higher than rated (refer to unit wiring diagram), blower RPM may need to be reduced. DO NOT continue operation. Contact your Micro Air® representative for correct pulley size.
- Re-assemble electrical box cover onto MX 6000 Blower Module.

## OPERATING INSTRUCTIONS

### UNIT OPERATION:

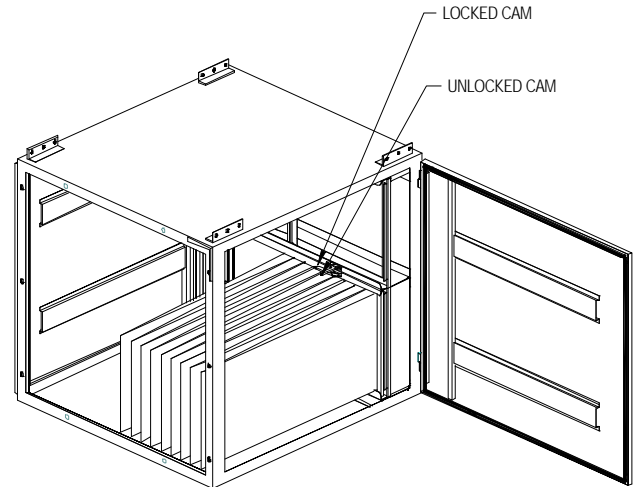
- Turn unit on via remote start/stop switch.
- Adjust exhaust grilles to desired direction of exhaust.

### MAGNEHELIC GAUGE OPERATION:

- As the filters collect airborne pollutants, they will eventually begin to become "loaded", which will cause an increase in static pressure and a decrease in airflow.
- The magnehelic gauge on the control panel indicates static pressure. Note the reading at the initial start-up. As the unit is operated, the static pressure will gradually increase as the filters become loaded. This will indicate the need to clean or change the filters.

## CHANGING FILTERS

- Turn off the unit.
- Open filter access door. (If additional access is required, the back filter access panel may be removed. However, this is not necessary.)
- Remove only the prefilter from the unit.
  - Baffle Impinger and Mesh Prefilters:**  
Wash these prefilters in a detergent solution to remove dirt and oil residue. Rinse them thoroughly with water, shake dry and replace them in the unit with the airflow direction pointing to the blower.
  - Pleated Prefilters:**  
Replace with new filters with the airflow direction pointing to the blower.
- Close the access door and reinstall back panel, if removed.
- Turn the unit on. If magnehelic gauge is still indicating high static pressure, then the bag filter needs to be replaced.
- Remove the bag filters from the unit by disconnecting the filter rods from the unit and disengaging the positive sealing system (**Figure 5**).

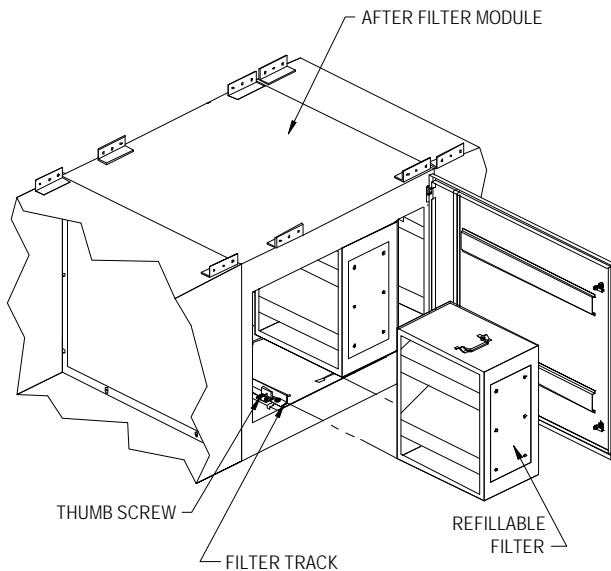


**FIGURE 5**

- To install new bag filters, slide two filters in back to back on one side of the unit. Run the filter rods through the loops on both bags. Install the rods in the appropriate location at the front and back of the unit. Lock the positive sealing cams into position. Repeat this process with the other two filters.
- Close the door and turn the unit on.

## UNITS WITH OPTIONAL AFTER FILTER MODULE

1. The MX 6000's optional after filter module can hold up to four (4) 20" x 24" x 12" filters. The After Filter Module is preassembled to the MX 6000, between the Filter Module and Blower Module (see **Figure 1**).
2. The filters are held, and positively sealed, to a filter stop panel via adjustable filter tracks. These filter tracks are held tightly against the filters by way of thumb screws.
3. To remove filters from the After Filter Module, open the filter access door, thereby gaining access to filters. Loosen the eight (8) thumb screws that hold filter tracks securely against filters. Pull back the filter tracks allowing the filters to slide freely, and pull filters out of Filter Module.
4. Refillable charcoal filters are shipped with charcoal separate. To fill charcoal filter, remove the charcoal filter cover (retained with six (6) screws) thereby exposing the filter slots. Carefully pour charcoal (or activated alumina) into the filter slots and reassemble charcoal filter cover to the charcoal filter (**Figure 6**).



**FIGURE 6**

## GENERAL MAINTENANCE

1. Occasionally check the condition of the drive belt for tightness and wear.
2. Check the blower bearings for unusual wear and the blower wheel for debris and dirt. Clean when necessary.
3. Periodically, inspect hardware for loose nuts and bolts on access doors and internal components. Tighten, if needed.
4. Periodically, inspect all wiring for loose connections and cracked insulation. Replace as needed.

## MX 6000 WIRING DIAGRAM

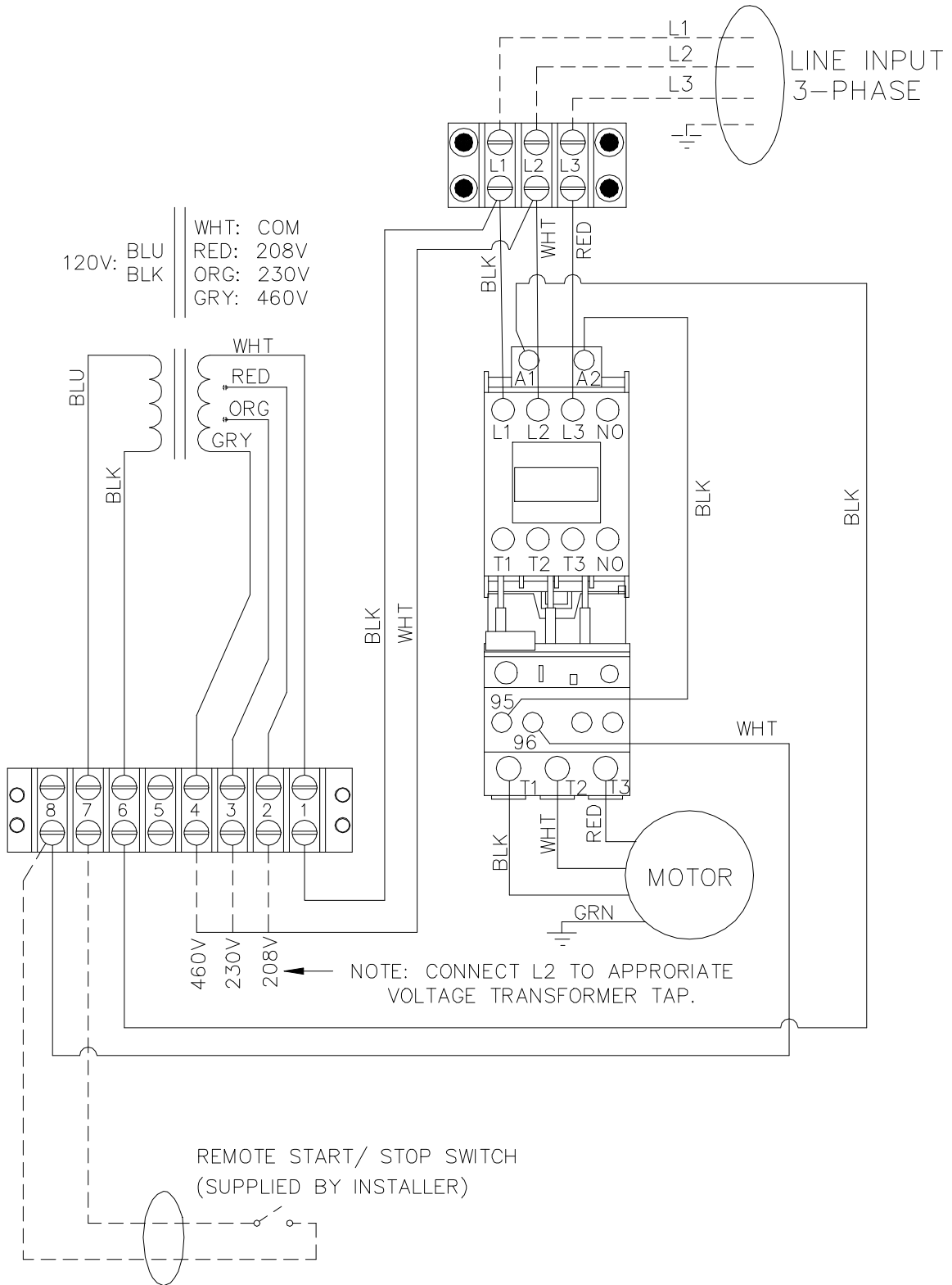


FIGURE 7

## MODEL MX 6000 PARTS LIST - FILTER MODULE

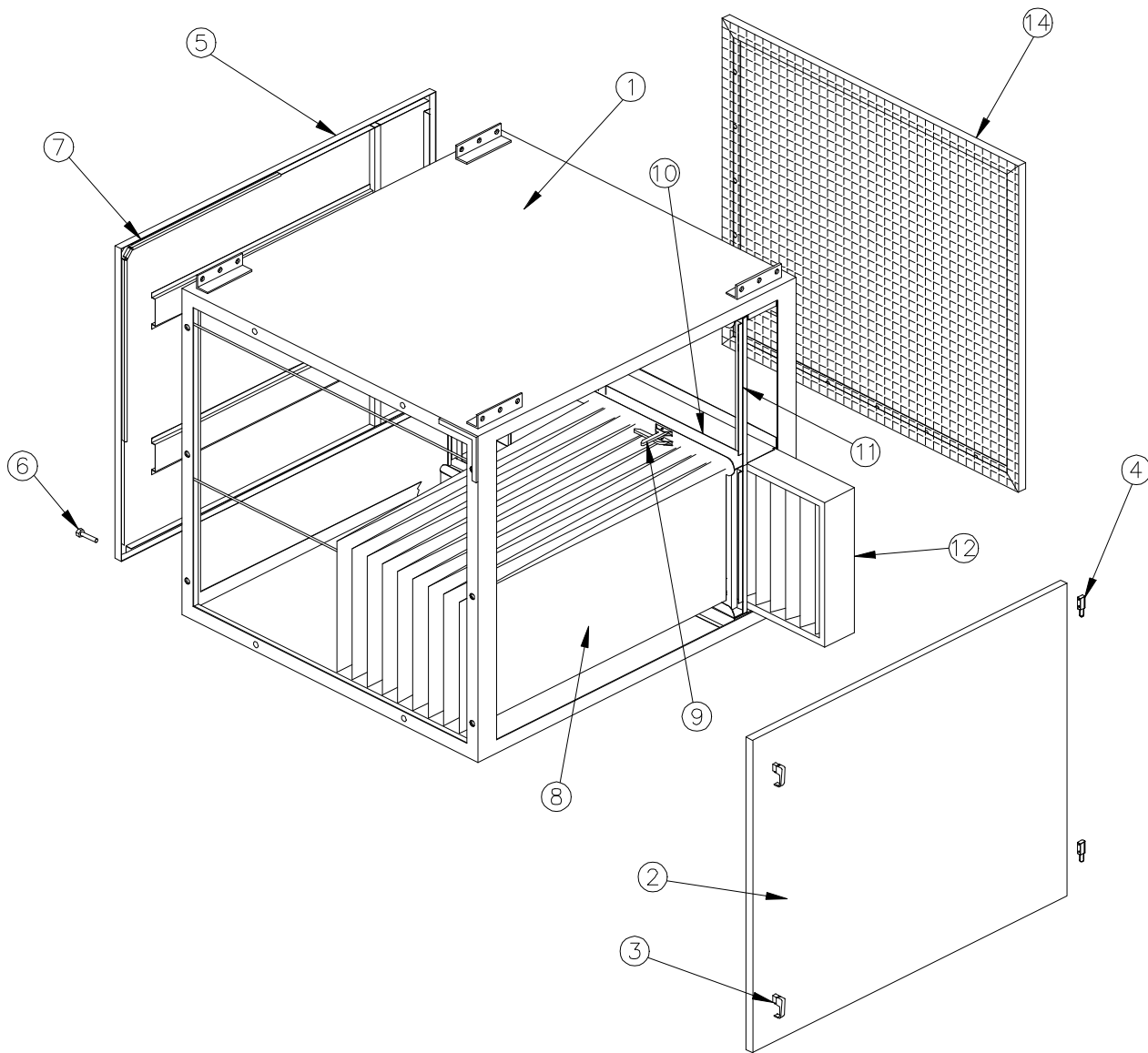


FIGURE 8

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	36748-01	Cabinet Weldment	9.	33881-01	Cam
2.	36856-01	Filter Access Door Weldment	*10.	P3214	U-Channel Gasket
3.	P1372	Door Latch	*11.	P3215	Gasket with Lip
4.	P2835	Door Hinge	12.	P3459	2" Aluminum Mesh Prefilter (2 required)
5.	36747-01	Back Access Panel Weldment		P3460	2" Baffle Impinger (4 required)
6.	P3236	#12 x 2" Screw		P3461	2" Pleated Prefilter (4 required)
*7.	P1367	Foam		P3462	4" Pleated Prefilter (4 required)
8.	P3463	95% Bag Filter	13.	36776-01	Filter Rods
	P3464	55% Bag Filter	14.	OPTIONAL	Optional Wrap Around Prefilter
	P3465	95% Oil Mist Bag			

\* Specify Length Required

## MODEL MX 6000 PARTS LIST - BLOWER MODULE

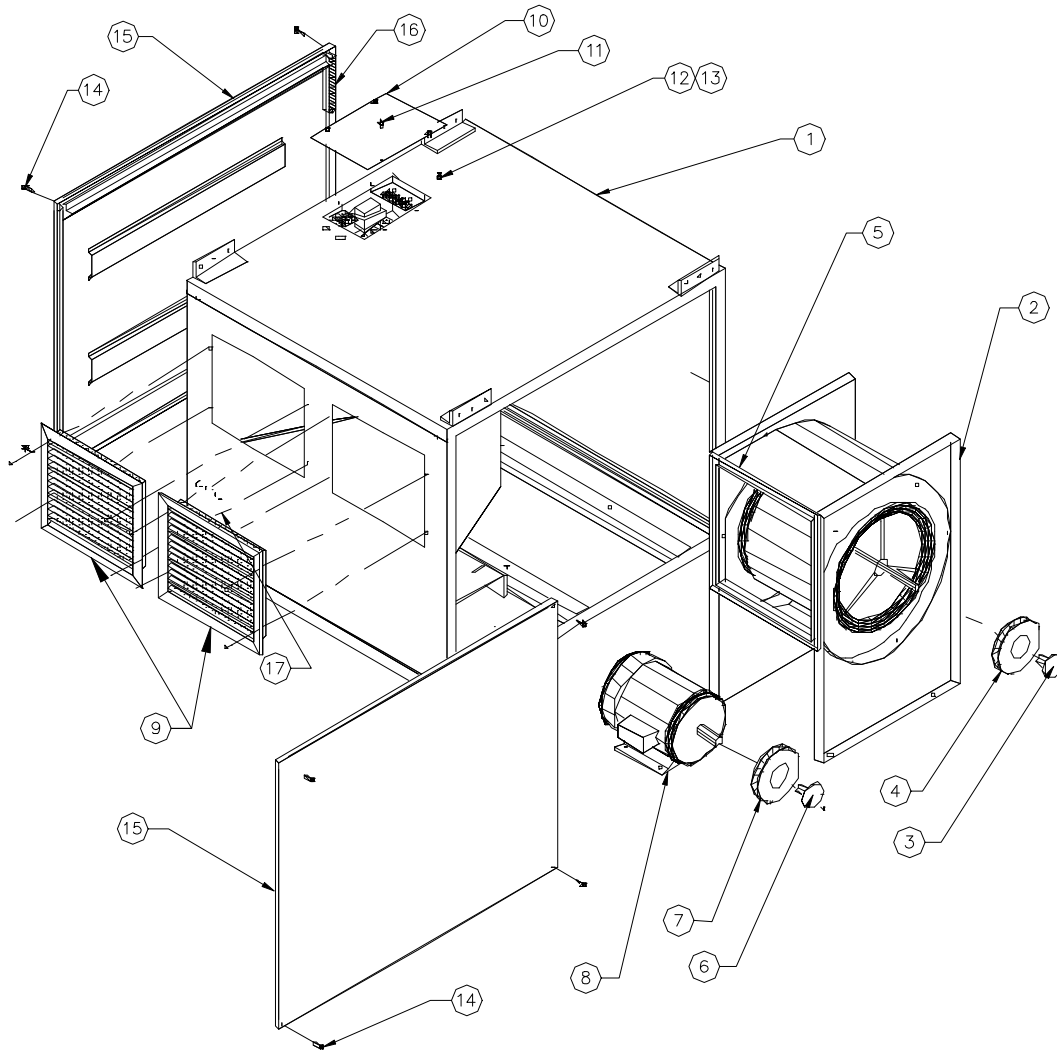


FIGURE 9

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	36827-02	Cabinet Weldment	8.	P3395	7-1/2 HP Motor
2.	36845-02	15-11 Blower Assembly	9.	P1977	Exhaust Grille
3.	P3272	1-1/8" Bushing	10.	36911-01	Electrical Box Cover
4.	P1368	6.75" Pulley (1675 RPM)	11.	P3245	#12 X 1" Screw
	P3269	8.25" Pulley (1800, 1530, 1375 RPM)	12.	P3236	#12 X 2" Screw
*5.	P1366	3/4" Foam Gasket	13.	36839-01	Access Panel
6.	P3456	1 3/8" Bushing	*14.	P1367	1" Foam Gasket
7.	P3267	6.45" Motor Pulley (1675, 1375 RPM)	15.	P2250	Magehelic Gauge
	P3450	7.25" Motor Pulley (1530 RPM)			
	P3451	8.75" Motor Pulley (1800 RPM)			

\* Specify Length Required

## MODEL MX 6000 PARTS LIST - AFTER FILTER MODULE

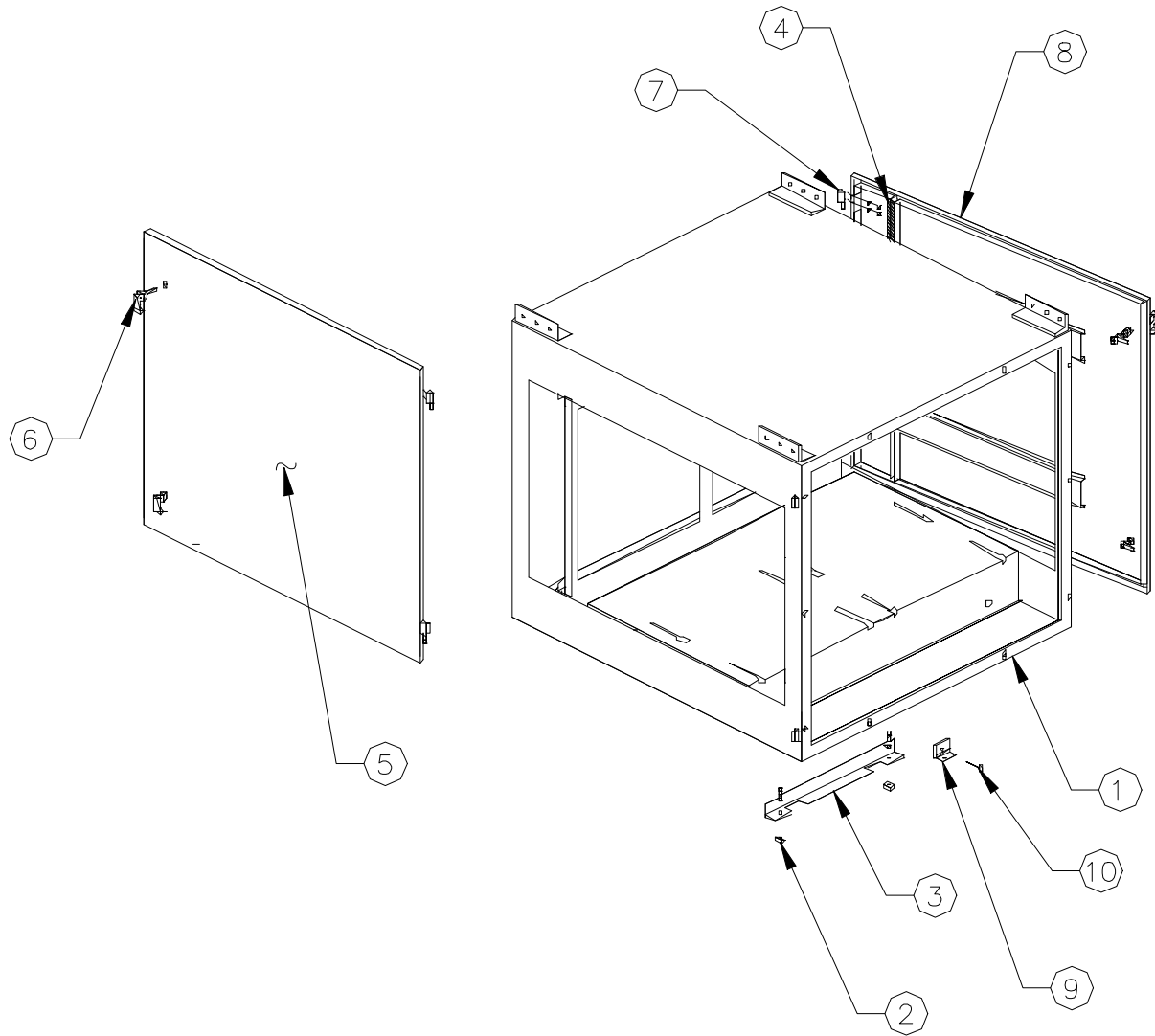


FIGURE 10

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	36850-01	Cabinet Weldment	9.	36858-01	Screw Bracket
2.	P3251	T-Slot Nut	10.	P3274	Thumb Screw
3.	36859-01	Slide bracket	NOT SHOWN	P3275	95% HEPA 24"X20"X12"
*4.	P1367	1" Foam Gasket	NOT SHOWN	P3276	99.97% HEPA 24"X20"X12"
5.	36856-02	Left Filter Access Door	NOT SHOWN	P1488	After Filter 24"X20"X1"
6.	P1372	Door Latch	NOT SHOWN	33767-00	Refillable Charcoal Module (RCM)
7.	2835	Door Hinge	NOT SHOWN	P1823	Activated Charcoal (20 lbs.)
8.	36856-01	Right Filter Access Door	NOT SHOWN	P1450	Purasorb (Specify Weight)

\* Specify Length Required



## MODEL MX 6000 PARTS LIST - ELECTRICAL BOX ASSEMBLY

ITEM	PART NO.	DESCRIPTION
1.	P3912	Motor Starter Relay (7-1/2 HP)
2.	P3915	Overload Protector (460V)
	P3916	Overload Protector (208/230V)
3.	P3252	8-Conductor Terminal
4.	P1754	120V Transformer
5.	P445	Terminal Block

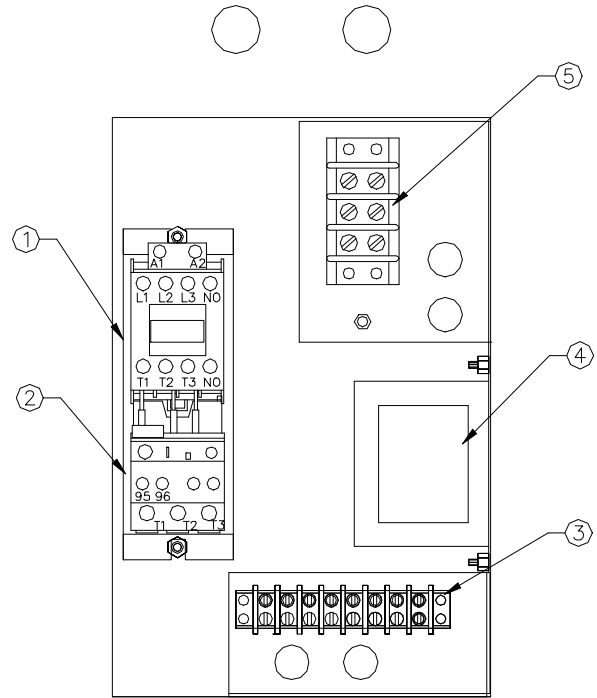


FIGURE 11

## TROUBLESHOOTING CHART

**CAUTION: BEFORE DISASSEMBLING THE UNIT OR DOING ANY INSPECTING OF THE PARTS, MAKE CERTAIN THAT THE POWER HAS BEEN CUT OFF AND THE BLOWER HAS COME TO A COMPLETE STOP. DISCONNECT AIR SUPPLY TO UNIT WHEN SERVICING. NEVER RUN THE UNIT WITH THE ACCESS DOORS OPEN OR REMOVED.**

PROBLEM	POSSIBLE CAUSE	REMEDY
Unit fails to start	Dead power line Remote switch not wired correctly Blown fuse or breaker Overload protector engaged Burned out motor	Check circuit and switch Check wiring diagram Check fuse or breaker Reset overload protector Replace motor
Unit runs slowly or inadequate capture velocity	Wired for wrong voltage or improper rotation  Dirty filters	Check input voltage Switch L1 & L2 to reverse rotation, check wiring diagram Clean or replace filters
Vibration	Loose motor mount bolts Foreign objects in blower Dirty disposable filters	Tighten bolts Remove debris from blower Clean or replace filters

**NOTES:**

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