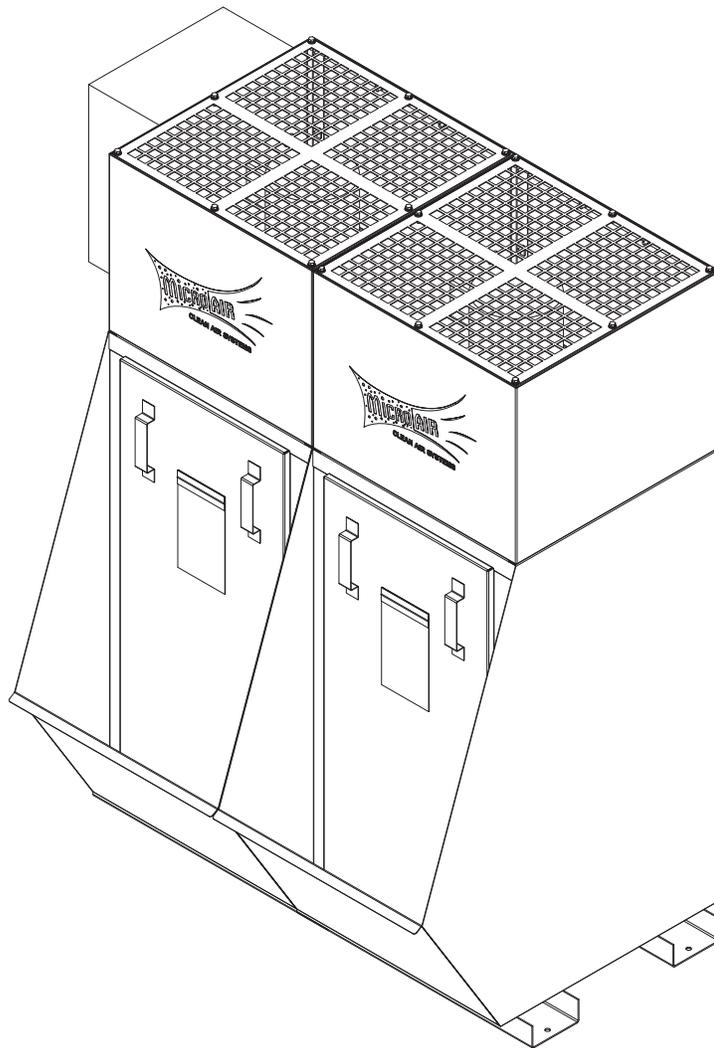




# MODEL WC5000

## Installation and Operation Manual



### **Important:**

This manual contains specific cautionary statements relative to worker safety. Read this manual thoroughly and follow as directed. It is impossible to list all the hazards of dust control equipment. All persons involved with the equipment or systems should be instructed how to operate in a safe manner.

## MODEL WC5000 SPECIFICATIONS

### INPUT VOLTAGE:

208-230V / 460V 60Hz 3 Phase

### MAXIMUM CURRENT:

Dual 5HP      208V: 27.2 Amps  
                  230V: 24.8 Amps  
                  460V: 12.4 Amps

### SUMP OPERATING LEVELS:

Low: 11.0" (motor off)

High: 12.0" (motor off)

Note: Sump low level alarm interlock is set for 10.0" (motor off) and can't be adjusted.

### MOTOR:

5HP 3 Phase 3500 RPM TEFC, Washdown rated

### OVERALL DIMENSIONS:

Base Unit: 73" H x 36" W x 49" D

### PACKAGE CONTENTS:

1 Ea. WC5000  
1 Ea. Owners Manual  
1 Ea. Sludge Removal Tool

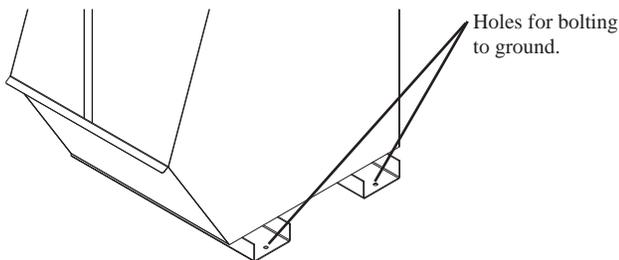


Fig. 1

## INSPECTION:

The Micro Air unit is shipped on one skid. This skid should be inspected for any visible damage that may have occurred during shipment. Note any damage on the packing slip.

## EQUIPMENT/TOOLS REQUIRED:

- Forklift
- Screwdrivers
- Drill & 1/2" Drill Bit
- Concrete Anchors
- Pipe Wrench

## ASSEMBLY OF UNIT:

Determine the location where the air cleaner is to be installed. Be sure to allow sufficient room around the unit to service the sludge collection bin, allow for inlet and offgas ducting. When selecting a location consider the floor surface; it needs to be smooth and level.

1. Uncrate the air cleaner. Use caution not to damage the paint while dismantling the crate.
2. Using a forklift, lift the air cleaner off the skid.
3. Carefully place the air cleaner into its location.
4. Bolt the air cleaner to the floor in its final location using the provided holes in the skid rails (Fig 1).
5. Connect the fill control valve to water source.
6. Connect the offgas vent pipe to offgas vent ducting as required by local/state/national codes.
7. Make electrical connections as shown in the wiring diagram.
8. Check the blower for proper rotation direction. If the blower rotates backwards, interchange two of the motor supply connections (L1 and L2)

## ASSEMBLY OF UNIT:

1. Close the flow adjustment knob (Fig 2).
2. With the motor off manually fill the sump to 11" in depth.
3. Start the Wet Collector.
4. Observe the Digihelic reading and record the average pressure.
5. Stop the Wet Collector.
6. Manually fill the sump to 12" in depth.
7. Start the Wet Collector.
8. Observe the Digihelic reading and record the average pressure.
9. Stop the Wet Collector.
10. Compare the Values:
  - a. If the value in step 4 is more than 10% different from 4.75, use the value from step 4 as the SP1L setting (see sump level control pg 3).
  - b. If the value in step 8 is more than 10% different from 5.75, use the value from step 8 as the SP1H setting (see sump level control pg3).
11. Open the flow adjustment knob (Fig 2).

**⚠ All electrical work must be done by a qualified electrician according to local, state and national codes.**

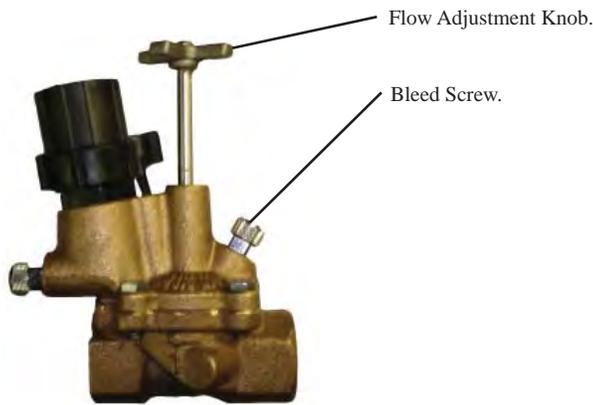


Fig. 2

## OPERATION:

### Starting and Stopping:

1. To start the unit press the button labeled START.
2. To stop the unit press the button labeled STOP.

### Sump Level Control:

The level of the sump is controlled by measuring the static pressure across the water in the “Digi-Helic” controller. Factory settings for the static pressure are 4.75 In. W.C. for SP1L and 5.75 In. W.C. for SP1H. These static settings will set the sump level to operate in the 11.0” to 12.0” depth range (measured when the unit is off). The static pressure settings signal the fill valve when to open and close. By adjusting the SP1L and SP1H the level of the sump can be controlled.

1. Lowering the value of SP1L will cause the sump level to reach a lower level before refilling.
2. Raising the value of SP1H will cause the sump level to reach a higher level before stopping filling.

To adjust the values for SP1L or SP1H:

1. Press “SP/AL” button until “X.XX SP1L” is displayed.
2. Press “E” button.
3. Press arrow keys to adjust “X.XX” to the desired value.
4. Press “E” button.
5. Press “Menu” button.

### Fill Valve Operation:

The fill valve is normally closed and only active when signaled from the “Digi-Helic” to be in the open position. In the event of a loss of power the fill valve is designed to remain in the closed position.

Bleed Screw: At unit start (empty sump) or at loss of water

pressure the fill valve will need to be bled of any entrapped air pockets. To bleed the fill valve open the bleed screw on the control valve (Fig 2) until all air is bled from the system.

### Flow Adjustment Knob:

Monitor the rate of fill, if the sump is overflowing beyond the 12” set point the fill adjustment knob (Fig 2) will need to be closed one to two turns to minimize the overshoot.

### Interlocks:

Low level and motor running N.O. interlocks are provided in the control box of the unit to interface with the controller of the dust producing equipment. When the wet collector is operating properly under normal conditions the interlocks are in the closed position.

## GENERAL MAINTENANCE:

1. No lubrication is required for the motor because it is a permanent pre-lube design. Excessive dirt should be periodically removed.
2. The sludge collection sump should be raked with the provided tool as required.
3. When cleaning out the collection sump examine the air intake and baffles for material buildup.
4. Use of biodegradable additives will help in containing any odor that may be caused from the water being inactive over long periods of time.

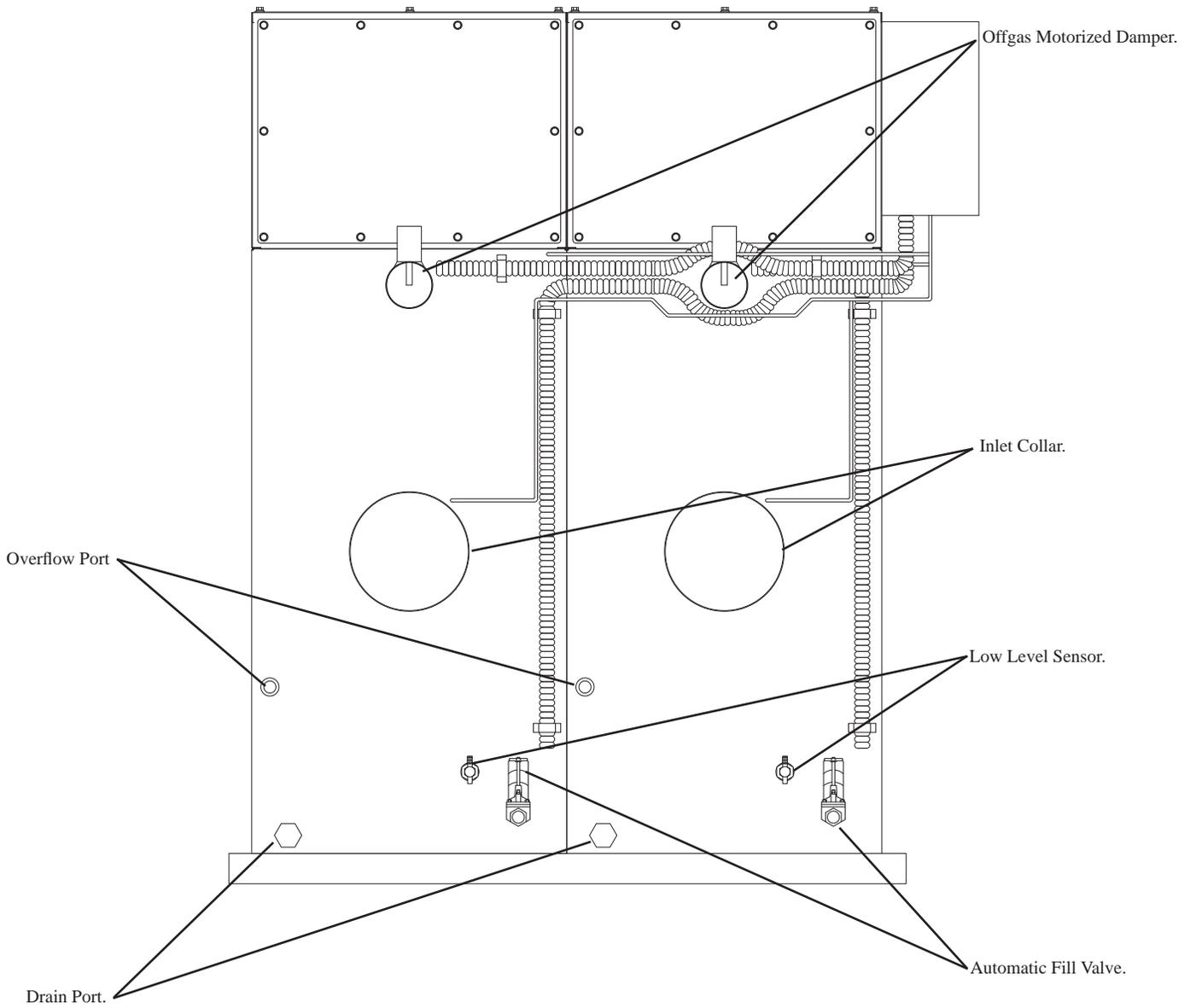
## CHANGING FILTERS:

**⚠ CAUTION: Always make sure that the unit is turned off before changing filters or servicing the unit.**

1. Remove the door from the front of the unit.
2. Remove the filter from the filter track.
3. Rinse the mist eliminator filter thoroughly with water, shake dry and replace in the unit.
4. Start the unit.

## OPTIONAL HEPA AFTER FILTER:

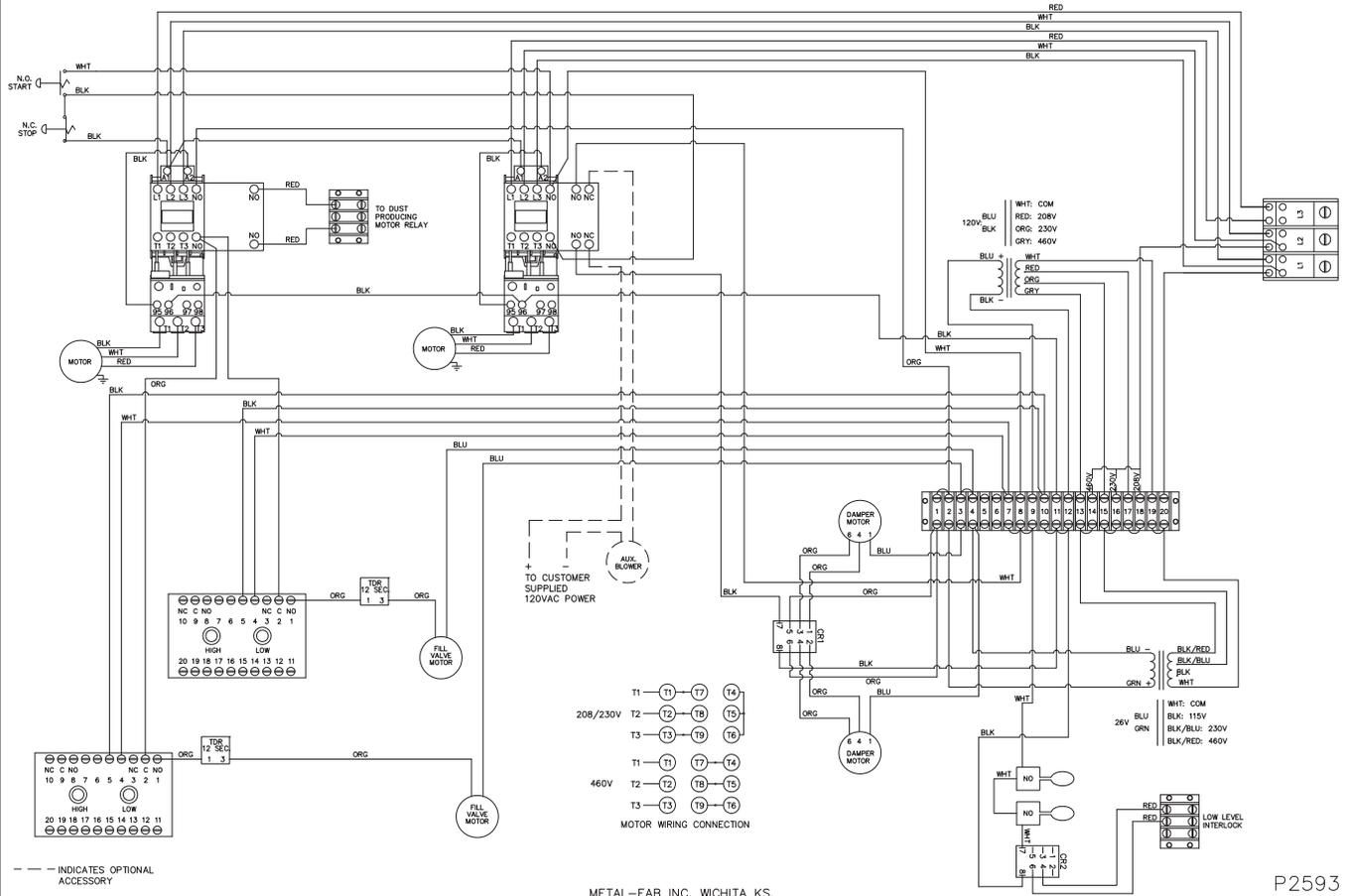
1. Remove the bolts and washers from the exhaust grille.
2. Remove the exhaust grille.
3. Place Hepa filter support, Hepa filter and Hepa filter enclosure on top of the exhaust grille.
4. Align the holes of the Hepa filter enclosure with those on the blower cabinet.
5. Insert bolts and washers and tighten until secure.



**WC5000 CONNECTION DETAIL**

# WC5000

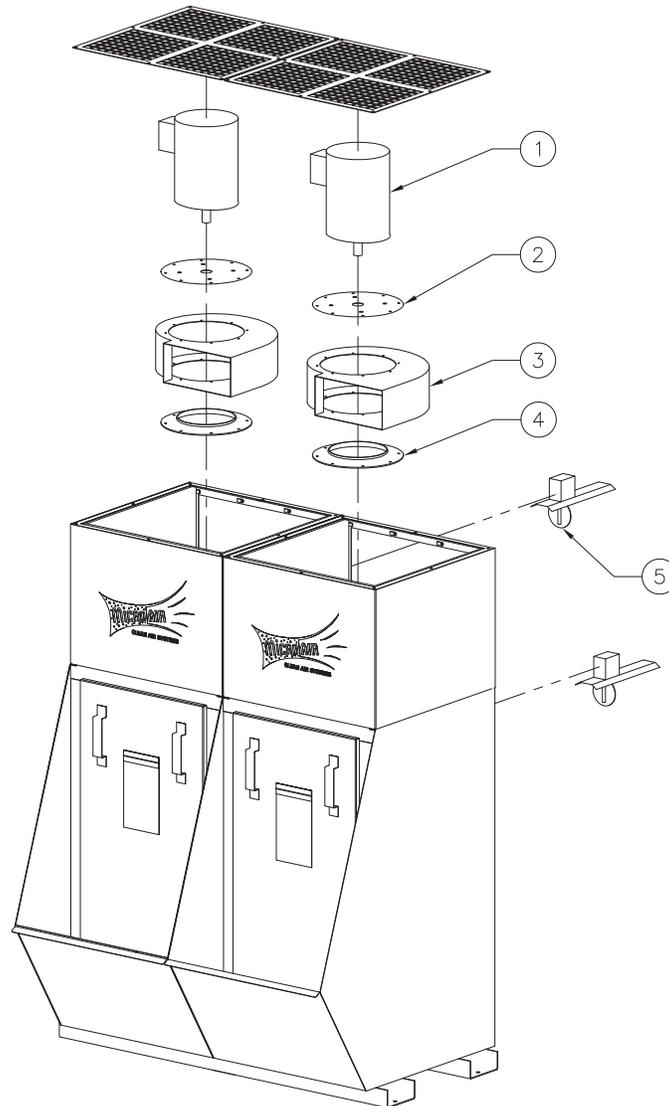
INPUT VOLTAGE (3 PH)      FREQUENCY      MAXIMUM CURRENT  
 □ 208-230 VAC.      □ 460 VAC.      □ 60 HZ.      \_\_\_\_\_ AMPS



METAL-FAB INC, WICHITA KS.

P2593

**208/230/460 Volt Wiring Diagram**



**WC5000 PARTS LIST**  
**DESCRIPTION**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
①	P2564	5 HP Motor
②	34530-01	Motor Mounting Plate
③	P2566	Blower Housing
④	P2567	Blower Inlet Plate
⑤	P2574	Offgas Damper
N/S	P2565	Low Static Blower Wheel (0-4" W.C.)
N/S	P2548	Medium Static Blower Wheel (4"-8" W.C.)
N/S	P2592	Mesh Filter
N/S	P2573	Fill Valve
N/S	P2571	Low Level Float Switch
N/S	34532-01	Sludge Scoop
N/S	P2569	Digihelic Controller
N/S	P2101	Hepa After Filter