

# XA34 - XA46



## eXtreme Air Downdraft Table

MicroAir® 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.

## CAUTIONS:

Avoid mixing combustible materials, such as buffing lint, paper, and wood with dust generated from grinding ferrous metals due to the potential fire hazard caused by sparks in the table.

Under no conditions should cigarettes or any other burning object be put into the table.

All users of MicroAir dust collection equipment should comply with all National and Local Fire Codes and/or other appropriate codes when determining the location and operation of dust control equipment.

This table is not suited for applications where explosion potential is present. Consult the Factory to determine if there is a risk.

## SPECIFICATIONS:

### INPUT VOLTAGE:

120V 60Hz 1 Phase  
208/230V 60Hz 3 Phase  
460V 60Hz 3 Phase

### MAXIMUM CURRENT:

2HP	120V: 15Amps
3HP	208V: 7.8 Amps
	230V: 8.6 Amps
	460V: 4.3 Amps
5HP	208V: 13 Amps
	230V: 12 Amps
	460V: 6 Amps

### MOTOR:

2HP 1 Phase 1740 RPM TEFC (XA34 ONLY)  
3HP 3 Phase 1740 RPM TEFC (XA34 ONLY)  
5HP 3Phase 1740 RPM TEFC (XA46 ONLY)

### OVERALL DIMENSIONS:

#### XA34:

Base Table: 37" H x 56" W x 37" D  
With Back Shield: 75" H x 56" W x 37"D

#### XA46

Base Table: 37" H x 73" W x 50" D  
With Back Shield: 75" H x 73" W x 50"D

### DUST TRAY CAPACITY

XA34 - 1600 Cubic Inches  
XA46 - 2800 Cubic Inches

### FILTER AREA:

XA34 - 348 Sq. Feet  
XA46 - 500 Sq. Feet

### AIR REQUIREMENTS:

- ✦ 1.1 SCFM at 80psi per second of cleaning pulse.
- ✦ Minimum air line is 3/4"
- ✦ Air Pressure regulated 80 – 90 psi.
- ✦ Clean, dry, compressed air at the correct pressure is required for the cleaning system to operate correctly. It is recommended that a pressure regulator and coalescing filter be installed between the compressed air source and the inlet to the table.

## **INSTALLATION:**

### **INSPECTION:**

The MicroAir table 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:**

- ✦ Standard wrenches.
- ✦ Screwdriver
- ✦ Forklift
- ✦ Pipe Wrench

### **ASSEMBLY OF UNIT:**

Determine the location where the unit is to be installed. Be sure to allow sufficient room around the unit to service the filters, and allow for exhaust air. When selecting a location consider the floor surface. It needs to be smooth and level.

1. Uncrate the unit. Use caution not to damage the paint while dismantling the crate.
2. Remove any options ordered from the skid.
3. Using a forklift, lift the unit off of the skid. Forklift rails are provided on the bottom of the table to keep it from tipping. The forklift rails must be used, since the weight inside the unit is not evenly distributed.
4. Carefully place the downdraft table into its location.

## **COMPRESSED AIR INSTALLATION**

The compressed air inlet for the Roto-Pulse cleaning system is on the left side on the lower-back corner of the unit. A 3/4" air line is required (at a minimum) with 80 – 90 psi clean dry air, for proper operation of the Roto-Pulse® System.

1. Locate the compressed air connection.
2. Connect your standard air fitting to the provided 3/4" NPT thread.
3. Connect your air line to the fitting.

## **ELECTRICAL INSTALLATION:**

**ALL ELECTRICAL WORK MUST BE DONE BY A QUALIFIED ELECTRICIAN ACCORDING TO LOCAL CODES**

**INSTALLATION CAN CAUSE EXPOSURE TO LIVE COMPONENTS. DISCONNECT ELECTRICAL POWER BEFORE PROCEEDING WITH INSTALLATION. PROPER LOCK OUT/TAG OUT PROCEDURES SHOULD BE USED.**

If the unit is ordered with 120V electrical wiring there is no additional wiring required. Simply plug the unit into any 110/120V electrical plug rated for 15A.

If the unit is ordered with the 208/230-460V electrical wiring follow the steps outlined below:

1. Cut the outer insulation and strip back the wires on the provided power cable.
2. Install the correct plug for your facility. Use caution to match the plug style to the voltage ordered.

**LAMP:** If the unit is ordered with a florescent lamp (optional) that lamp may or may not be wired into the start/stop switch. This is chosen when the unit is ordered. If the lamp is wired into the start/stop it will automatically turn on and off with the unit. If the table is ordered with the lamp unwired, the lamp will need to be wired into some other switch (not provided). Also bulbs are not provided with the unit, they must be supplied by the end user. The fixtures have special dust proof enclosures and require specialty bulbs.

### **UNIT OPERATION:**

1. To start the unit, turn the switch located on the front of the unit to the on position. To stop the unit, turn the switch to the off position.
2. On some units (depending on how the table was ordered) the light may be wired directly into the on/off switch. If this is the case, the light will turn on with the motor. (Bulbs are not supplied with the unit and must be purchased separately.)

## CARTRIDGE CLEANING OPERATION:

The Micro-Air® eXtreme Air Downdraft Table is designed with the Roto-Pulse® Cleaning System to clean the cartridge filters. This system provides superior cleaning performance using a rotating tube with pre-drilled holes. As the diaphragm valve opens, the Roto-Pulse® tube rotates while air exits the holes, thus providing the cleaning of the cartridge.

- For proper cleaning, the compressed air pressure should be regulated at 80 - 90 psi maximum.
- During normal operation the Roto-Pulse® cleaning system is factory set to clean two (2) cartridge filters for a period of 2 seconds every 45 seconds.
- Once the unit is turned off, the cleaning cycle will continue for a period of five minutes. Do not service the filters until cleaning is complete.
- The Roto-Pulse® cleaning operation dislodges particles from the cartridges. Particles then fall down into the collector.

NOTE: When servicing the collection system, be sure to turn the unit off.

## TIMER ADJUSTMENTS:

The table is provided with a manual pulse option as the standard for all units. The filters can be pulse cleaned by depressing the brass pulse button (located on the front of the electrical box) and holding it down for approximately 2 seconds. If the unit does not have "Auto-Pulse" the filters should be pulse cleaned regularly throughout the day. In addition they should be pulsed several times after the blower has been shut off.

If the table is equipped with the "Auto-Pulse" feature, the table will automatically pulse every 45 seconds during operation. Pulsing will stop when the unit is shut off. Additional pulsing can be performed manually, by depressing the pulse button, if required.

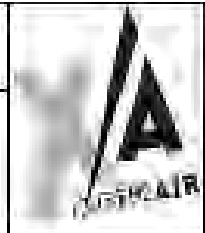
## ROTO-PULSE CLEANING TIMER ADJUSTMENTS

1. Turn unit off via the stop switch and disconnect power.
2. Remove the electrical box cover.
3. The timer control is preset at the factory to clean two (2) cartridge filters every 45 seconds. This time can be adjusted from 8 seconds to 180 seconds by rotating the dial on the timer marked "OFF TIME".
4. The timer control is preset at the factory to have a cleaning pulse duration of 2-seconds. This can be adjusted from 0.5 second to 5 seconds by rotating the dial on the timer marked "ON TIME"
5. Once adjustments have been made replace the electrical box cover and reconnect the power.
6. Start the unit and observe the new pulse settings and determine if additional adjustments are necessary.

**NOTE: While this time can be adjusted we recommend that you leave the "ON TIME" at the factory setting. If less cleaning is needed you should increase the time between pulses as means of reducing the amount of cleaning. If more cleaning is needed you should decrease the amount of time between pulses. Beware, as the time between pulses is decreased for additional cleaning, this will increase your compressed air consumption and create an additional load on your compressed air system.**

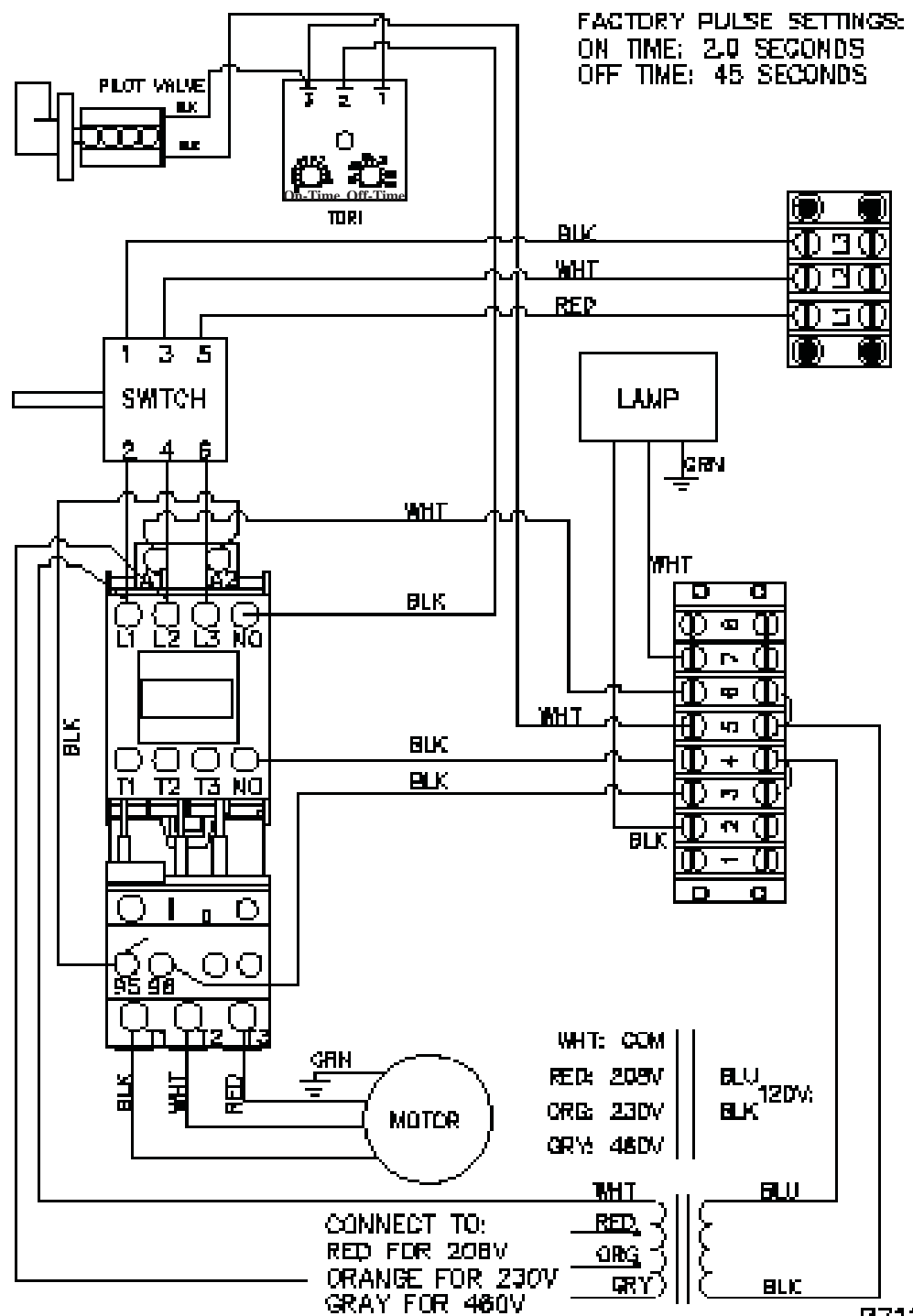
**NOTE: Cleaning of the filters too often will decrease your level of performance. A certain level of dust cake on the filters will improve the efficiency of the filter cartridges. You should try to maintain a minimum of 1 in w.c. of pressure differential across the filters. If you can not maintain this minimum level of differential across the filters the time between cleaning pulses should be increased until this can be achieved.**

# X/A 3x4



- | VOLTAGE                       | FREQUENCY                       | MAX CURRENT |
|-------------------------------|---------------------------------|-------------|
| <input type="checkbox"/> 208V | <input type="checkbox"/> 50 HZ. | _____ AMPS  |
| <input type="checkbox"/> 230V | <input type="checkbox"/> 60 HZ. |             |
| <input type="checkbox"/> 480V |                                 |             |

**CAUTION: DISCONNECT POWER TO UNIT PRIOR TO SERVICING OR INSTALLATION OF PARTS**



P7126

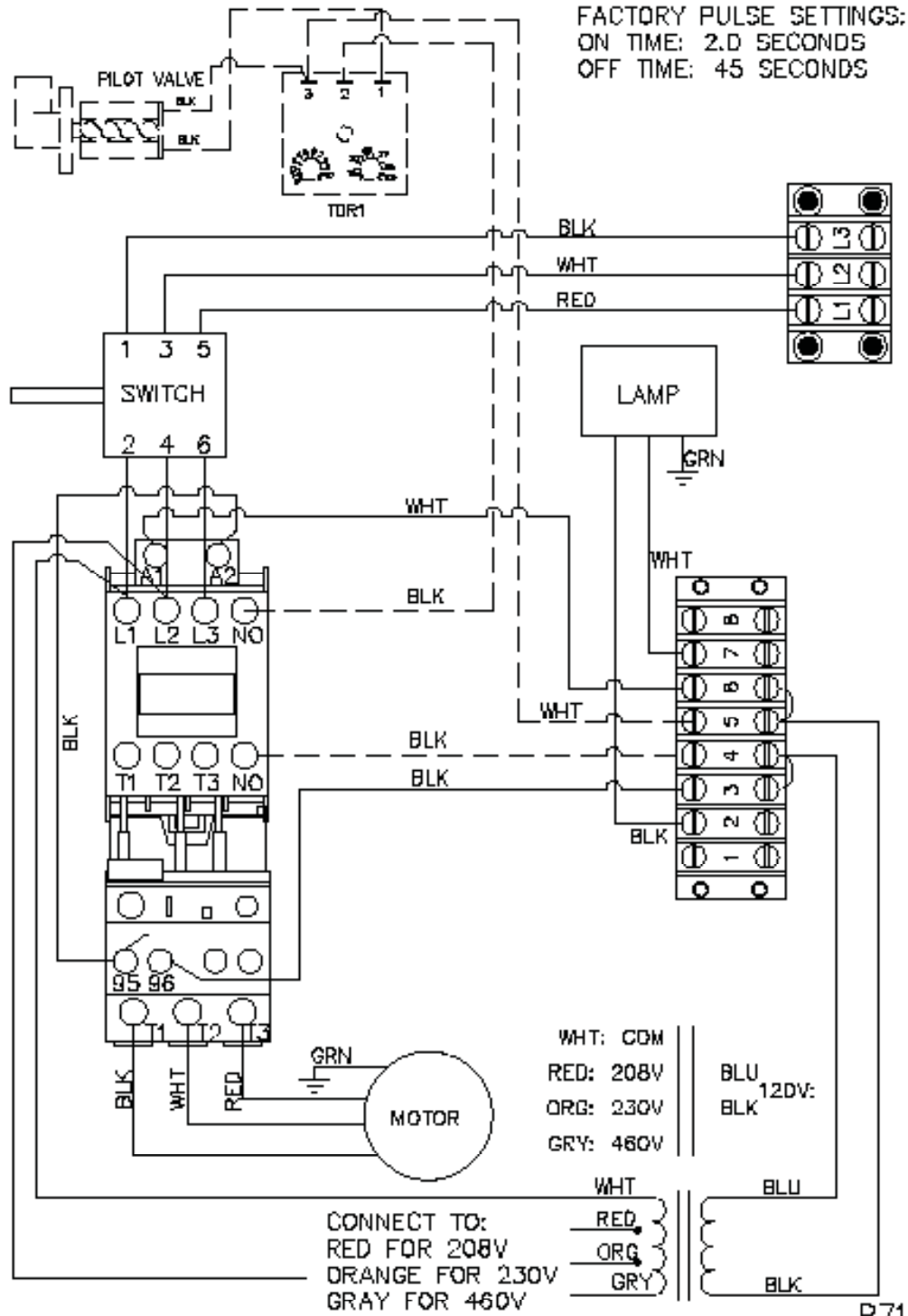
230/460Volt Wiring Diagram

# X/A 4X6



VOLTAGE	FREQUENCY	MAX CURRENT
<input type="checkbox"/> 208V	<input type="checkbox"/> 50 HZ.	----- AMPS
<input type="checkbox"/> 230V	<input type="checkbox"/> 60 HZ.	
<input type="checkbox"/> 460V		

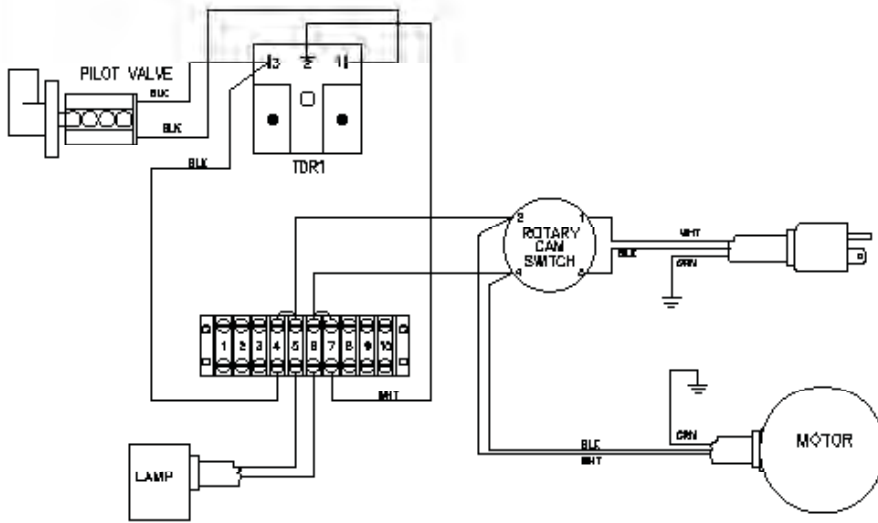
**CAUTION: DISCONNECT POWER TO UNIT PRIOR TO SERVICING OR INSTALLATION OF PARTS**



P7127

**230/460Volt Wiring Diagram**

P7125



FLORESCENT LAMP (OPTIONAL)  
 AUTO-PULSE CIRCUIT (OPTIONAL)

METAL-FAB INC. WICHITA, KANSAS USA

### 120V Wiring Diagram

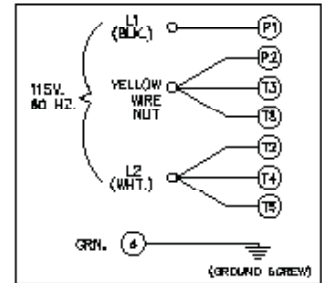
# X/A

## 3 x 4

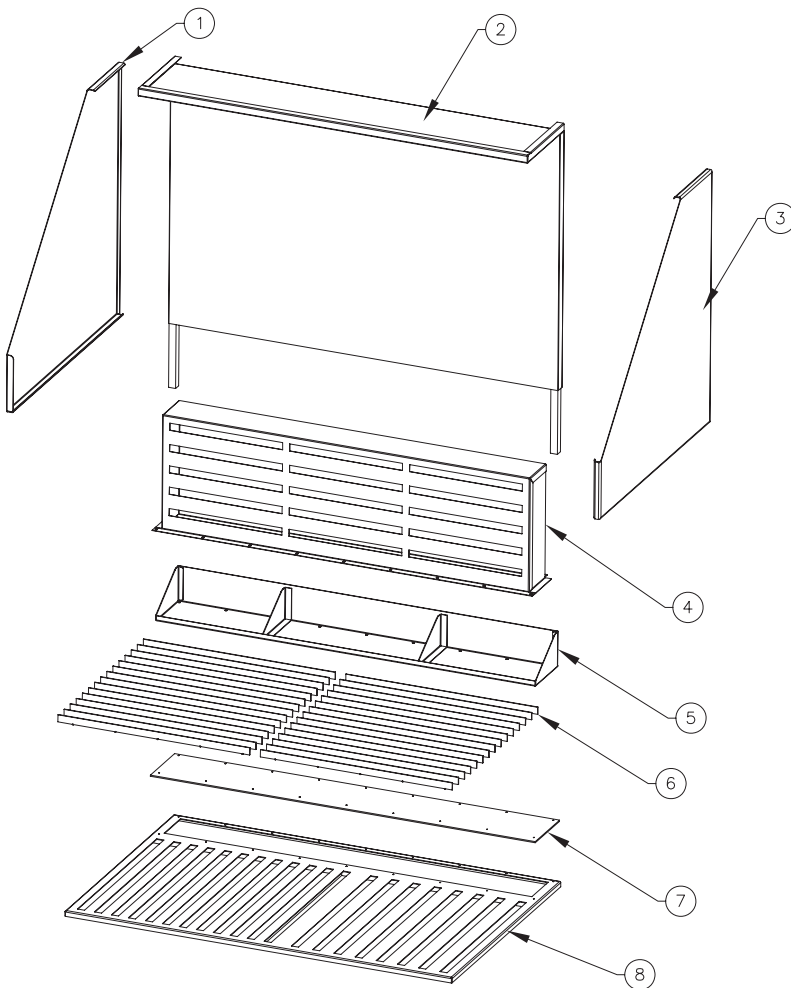


### INPUT VOLTAGE (1 PH.)

**120 VAC 60HZ**  
**18.2 AMPS**  
**MOTOR RATING- 2HP**  
**LAMP-120V @ .48 AMPS**

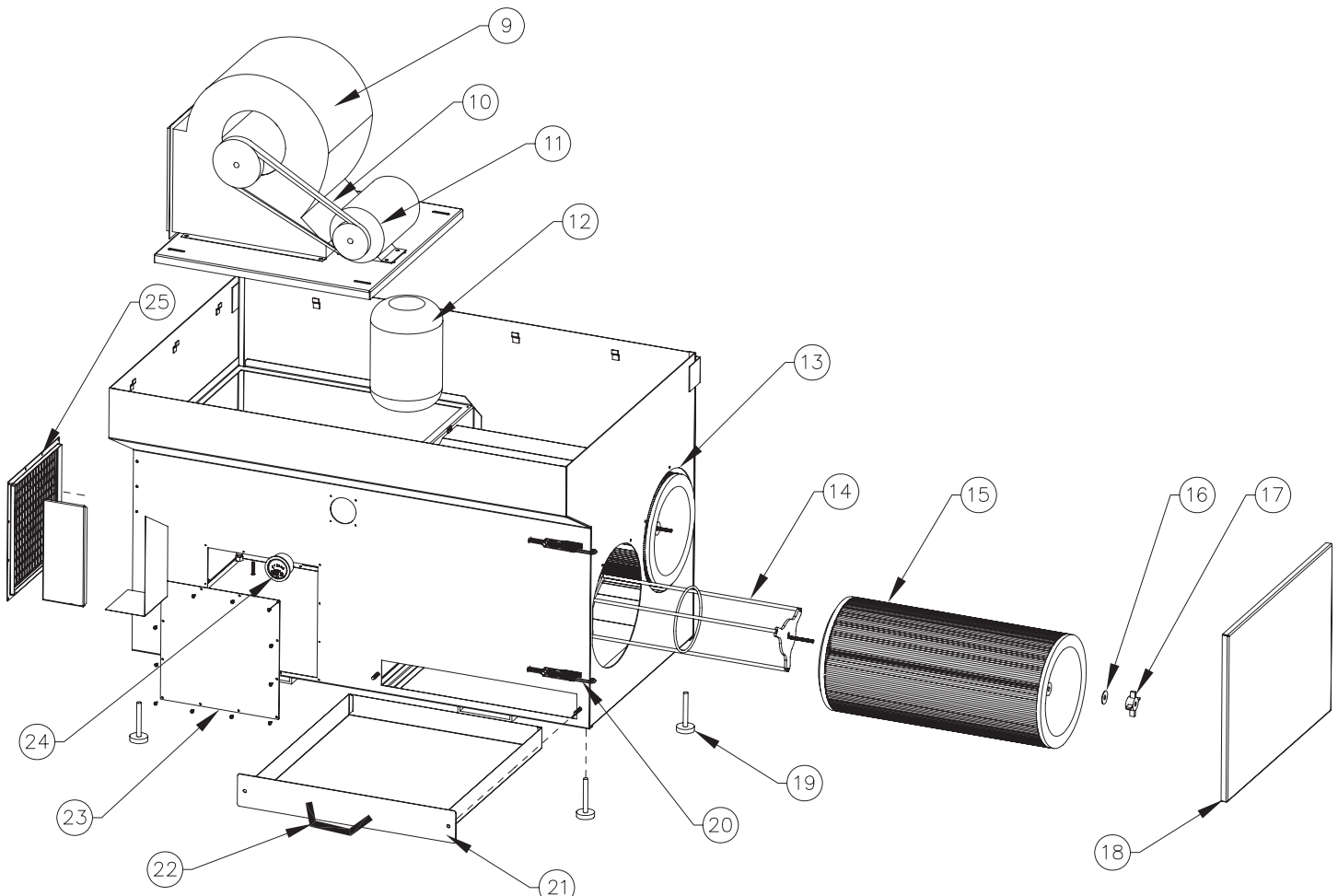


**MOTOR CONNECTION**



### XA34 Parts List

ITEM	PART NO.	DESCRIPTION
1	38633-01 / -03	Left Side Shield
2	38630-01/ -02	Back Shield
3	38633-02 / -04	Right Side Shield
4	38627-01 -02	Back Draft Hood
5	38624-01 / -02	Tool Tray
6	P7103	Grill - Steel Painted Full Size
	38660-01 / -02	Grill - Steel Painted (Short)
	38661-02 / -03	Grill - Steel Coated Full Size
	38661-01 / -04	Grill - Steel Coated (Short)
	P7104	Grill - Fiberglass Full Size
	38662-01 / -02	Grill - Fiberglass (Short)
7	38648-01 / -03	Cover Plate
	38648-02 / -04	Cover Plate Slotted
8	38617-01 / -02	Slotted Grill Plate



### XA34 Parts List

ITEM	PART NO.	DESCRIPTION	NOT SHOWN
9	P3498	Blower	PART NO. DESCRIPTION
10	P7135	Belt	P2059 Black Screws
11	P7101	2HP 120V Motor	P3413 Brass Barbs
	P3495	3HP 230/460V Motor	P1363 Electrical Cord (120V)
12	36712-01	Accumulator Tank	P1818 Electrical Cord (230/460V)
13	P1719	Edge Guard	P3403 Flexible Air Line
14	36720-10	Roto-Pulse Assembly	P7112 Lamp
15	P7401RM	80/20 RedMAX Filter	P7110 On/Off Switch (120V)
	P7410RM	Poly RedMAX Filter	P7111 On/Off Switch (230/460V)
16	P3559	Rubber Seal Washer	P3735 Presto Locks
17	P3649	4-Prong Knob	P2766 Pulse Push Button
18	38635-01 / -02	Door Panel	P3734 1/4" Air Hose
19	P7102	Adjustable Leg	P2922 Pulse Timer
	P2334	350# Swivel Caster (Not Shown)	P3411 Worm Gear Clamps
20	P7106	Latch	
	P7107	Latch Clasp	
21	38620-01 / -02	Drawer Assembly	
22	P7108	Drawer/Door Handle	
23	38639-01 / -02	Exhaust Cover	
24	P2221	Mini Magnahelic Guage	
	34465-01	Magnahelic Cover Plate	
25	38639-02 / -04	Exhaust Grill	