



**11975 Portland Ave. S. Suite 104
Burnsville, MN 55337**

Phone: 952-894-6637

Fax: 952-894-0750

Email: info@ventaire.com

Website: www.ventaire.com



PRODUCT GUIDE FOR

PORT700CF – Portable Fume Collector

TABLE OF CONTENTS

MACHINE WARNING SIGNS	3
TECHNICAL SPECIFICATIONS	4
 <u>INSTALLATION</u>	
SAFETY PRECAUTIONS	5
ELECTRICAL INSTALLATION	5
ELECTRICAL CIRCUIT DIAGRAM	6
ELECTRICAL VOLTAGE CHANGE	8
 <u>OPERATION</u>	
SAFETY INSTRUCTIONS	9
OPERATION INSTRUCTIONS	9
 <u>MAINTENANCE</u>	
AUTOCAD DRAWING	Error! Bookmark not defined.
FILTER IDENTIFICATION & ASSEMBLY	10
Filters	10
Filter Assembly	10
Magnetic Switch Replacement	13
 <u>PARTS LIST</u>	
Repair Parts Illustration	17
Repair Parts List	18
Warranty	Error! Bookmark not defined.

General Safety Information

MACHINE WARNING SIGNS



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Used without the safety alert symbol (⚠) indicates potentially hazardous situation which, if not avoided, may result in property damage.



Warning of electric shock



Do not expose the equipment to rain or use in damp locations.



Do not use the equipment around flammable products, if not avoided, sparks can ignite vapors from flammable products. Read and understand all warnings and operating instructions before using this equipment. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury or property damage.



TECHNICAL SPECIFICATIONS

Motor Specs:	1.5 HP
Electrical Specs:	120V / 60Hz / 1Ph
Air Volume:	900CFM @ Base
Inlet Size:	6" Dia.
Packing Size: (L x W x H)	42.5" x 35.8" x 70.1"
N.W. (machine):	398 lbs

<u>Filter Media</u>	107.6 ft2
Carbon Filter	Part# PS-150-61
Aluminum Mesh	Part# PS-150-77
Cartridge Filter	Part# PS-150-81

INSTALLATION

SAFETY PRECAUTIONS

Read this Manual carefully before installing and operating the product and maintain a copy on site for reference.

⚠ WARNING

ELECTRIC SHOCK can kill.

- ***Have a qualified electrician install and service this equipment.***
- ***Do not touch electrically live parts such as internal wiring.***
- ***Insure all source power is turned off and locked out before electrical installation.***

1. Check that the voltage, phase count and grounding wire match the machine requirements.
2. Check that the electrical specifications of this machine meet safety requirements, and that maintenance is carried out by a certified electrician.
3. Confirm that the parts/accessories have been fully assembled to insure safe and reliable machine operation.
4. Due to the weight of the unit, great care must be taken when moving to avoid injury. Use lifting and transport equipment as necessary.

ELECTRICAL INSTALLATION

⚠ WARNING

ELECTRIC SHOCK CAN KILL.

- ***Have a qualified electrician install and service this equipment.***
- ***Do not touch electrically live parts such as internal wiring.***

⚠ WARNING

- ***Do not disconnect the wiring jack before turning off power!***

Electrical installation should be performed within the following conditions:

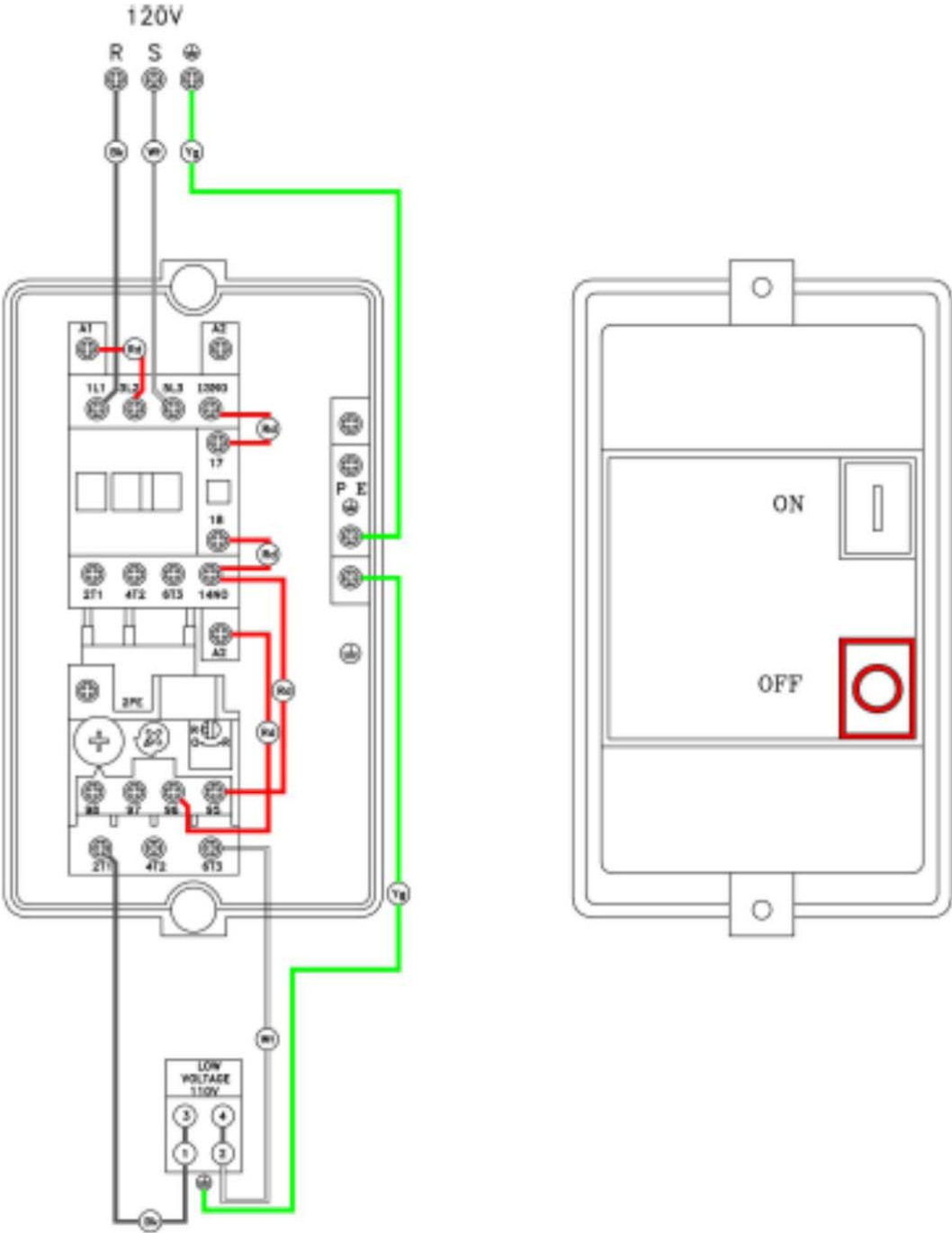
- Ambient temperature: Between 41°F and 131°F. If the time is over 24 hours, then the ambient average temperature shall not be over 122°F.
- Humidity: Between 30% and 95%
- Altitude: 3,280 feet
- Moving and Storing: -13°F to 131°F. For short-time storage (less than 24 hours), the storage temperature can be up to 158°F.

POWER CONNECTION

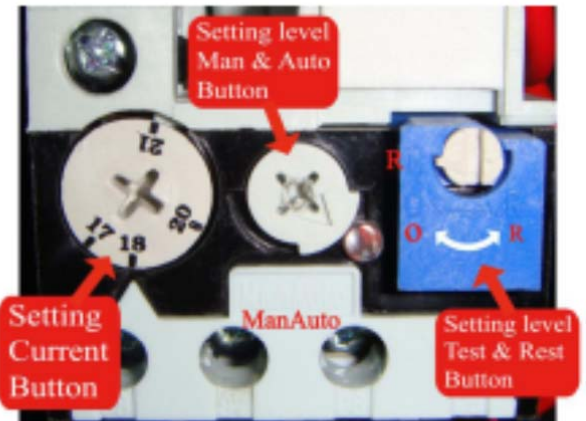
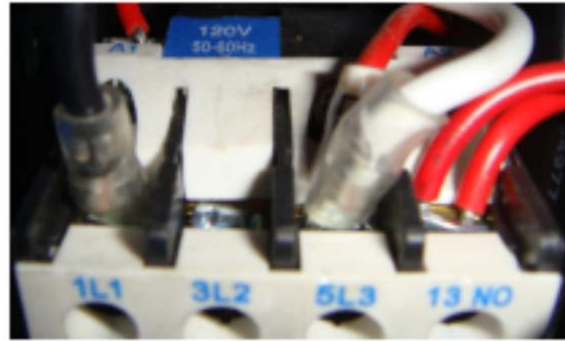
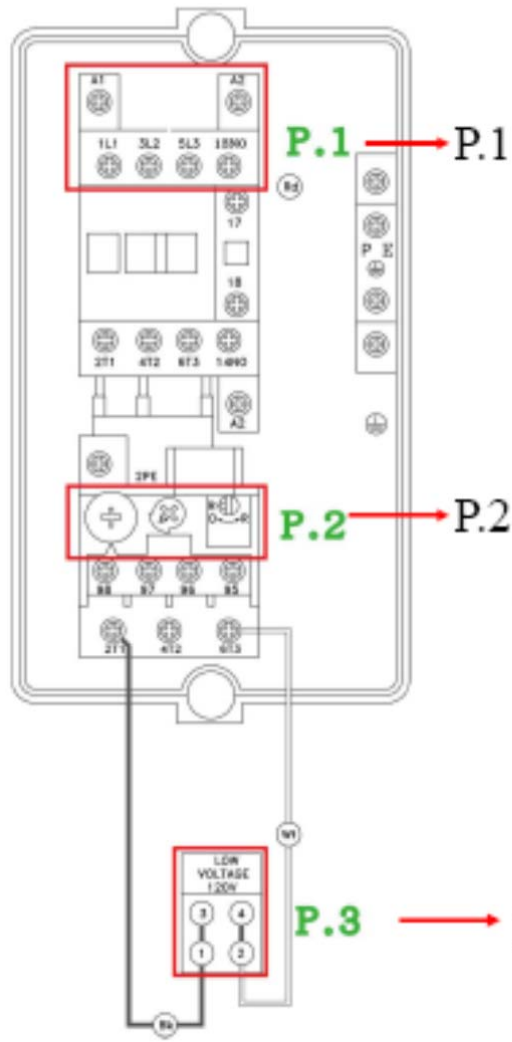
1. All electrical connections must be performed by a qualified electrician.
2. Confirm that the available power supply is equal to the motor and control panel voltage and amperage requirements (see installation-technical specifications)
3. Insure that all power supplies are turned off and locked out prior to any connection to the unit.
4. Refer to the electrical diagram (next page) for proper connection.

INSTALLATION
ELECTRICAL CIRCUIT DIAGRAM

1.5HP/120V/60HZ/1PH



1.5HP/120V/60HZ/1PH



INSTALLATION

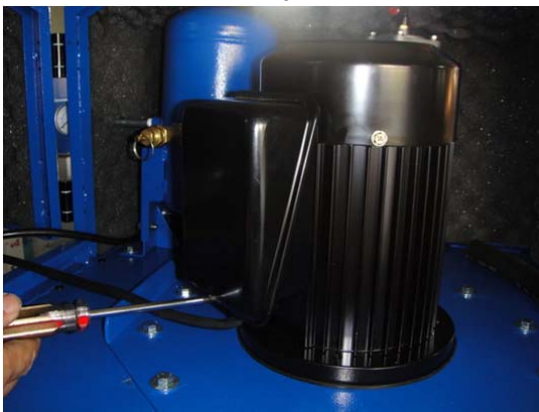
ELECTRICAL VOLTAGE CHANGE



1. Open the top maintenance door.

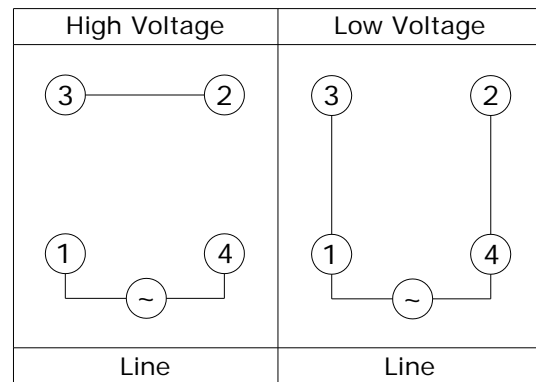


2. Look for the motor junction box.

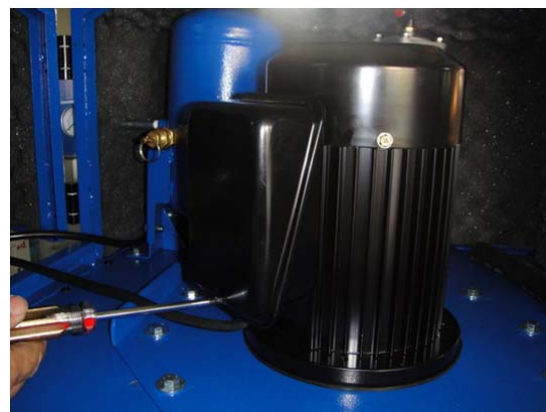


3. Unscrew the motor junction box.

4. Voltage Change Diagram:



- (1) This unit is prewired at the factory for 120 volt, 60Hz, 1-phase operation. (See above wiring diagram.)
- (2) It can be wired for 220 volt, 60Hz, 1-phase operation. (See above wiring diagram.) For high voltage operation, the 120V control box must be exchanged for a higher volt control box and installed on unit.
- (3) Have a qualified electrician install properly and connect wiring to control box in accordance with local and national codes.
- (4) Test the unit to be sure motor fan rotates in direction of rotation arrow. Switch any two leads (not Ground) to reverse rotation if needed.



5. Secure the motor junction box with screws.



6. Close the top maintenance door.
Assembly completed.

OPERATION

SAFETY INSTRUCTIONS

The Welding Fume Extractor can be dangerous if it is operated incorrectly. Therefore, the product must be used with caution to avoid risk of injury and avoidable hazard or damage. Unnecessary injuries may occur by failing to follow the instructions within Manual. The following components are key to a safe workplace and safe operation of the fume extractor.

1. Insure that the working environmental is suitable for using the product.
2. Do not store or use flammable gas or liquids near the machine when in operation.
3. All non-operating personnel should keep proper distance from the unit when in use, to avoid risk of injury. Keep other persons away from the product, except for the operator, to avoid danger.
4. Inspect the electrical wires daily. If wiring is frayed or cut, immediately turn off the unit and turn off the power source and contact a qualified electrician

for repair.

5. Before replacing parts, turn the machine off and shut off power at the source.
6. Do not operate the product near flammable materials, as sparks may ignite these materials and cause an explosion.
7. Key components of the machine run at high speeds and can cause injury. Never place hands, body parts or foreign objects near moving parts. Do not wear loose clothing that can become entangled in moving parts.

OPERATION

OPERATING INSTRUCTIONS



The Welding Fume Extractor is designed for the filtration of smoke generated during ordinary welding process work. When installed and operated correctly, the machine will effectively collect and screen the smoke yielding a significant improvement in air quality within the working environment.

1. Before starting the machine, be sure to read this Manual carefully.
2. Before starting the machine, insure that relevant safety protection measures have been taken according

to the Manual.

3. Before starting the machine, confirm the motor is turning in the direction as labeled on the machine.

OPERATION

1. Attach compressed air to the unit for cleaning purposes, at a source pressure of 90 PSI.
2. Refer to control panel (above) for initiating power to the motor and subsequent vacuum from the unit.
3. The vacuum hood should be placed an approximate distance of 12" from the smoke source for efficient operation.
4. The pulse cleaning button is used for filter cleaning and for maximum effectiveness should be used as follows:
 - The unit should be powered off and the button pushed one to two times.
 - Cleaning as noted above should be daily or as any decrease in vacuum is observed.
5. If operating vacuum is weak after manual pulse cleaning, remove the metal filter, clean with water and re-install.
6. If vacuum remains weak after cleaning the metal filter, contact AVANI for filter replacement. (see contact list in this manual)

MAINTENANCE

FILTER IDENTIFICATION & ASSEMBLY

Filters

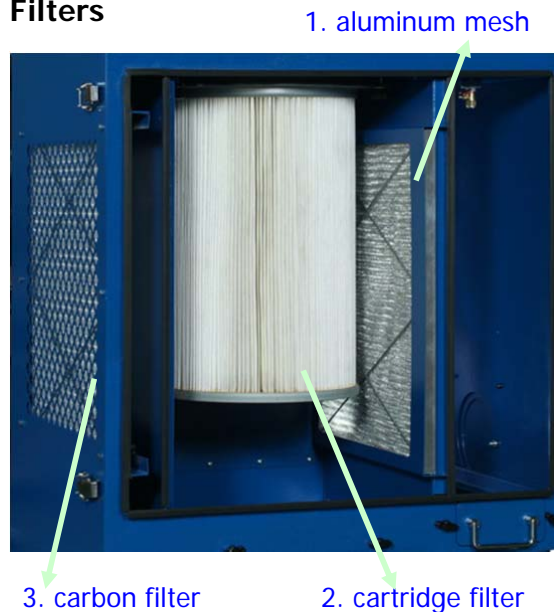


Figure 2 - Filters

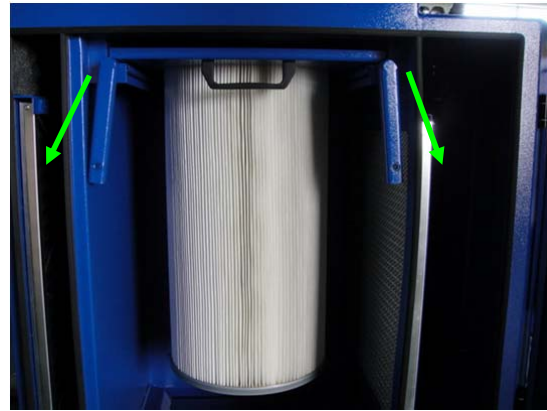
1. **ALUMINUM MESH** captures sparks and steel chips.
 - (1) specification: 17.3" x 21.3" x 0.87"
 - (2) filter efficiency: 25 ~ 30%
2. **PLEATED CARTRIDGE FILTER** that can be cleaned by push-button pulse-jet cleaning of the cartridge filter from an onboard air tank.
 - (1) specification: Ø12.8" x 23.6"
 - (2) quantity: 1 pc
3. **CARBON FILTER** cleans noxious fumes to provide a better working environment.
 - (1) specification: 17.3" x 21.3" x 0.87"
 - (2) filter efficiency: 25 ~ 30%

Filter Assembly

- **Aluminum mesh:**



1. Pull out the aluminum mesh and dispose of it properly. Install with a new one.



3. Pull down the left and right filter handles.

Cartridge filter installation procedure:



1. Open the front maintenance door.



4. Pull out the cartridge filter.



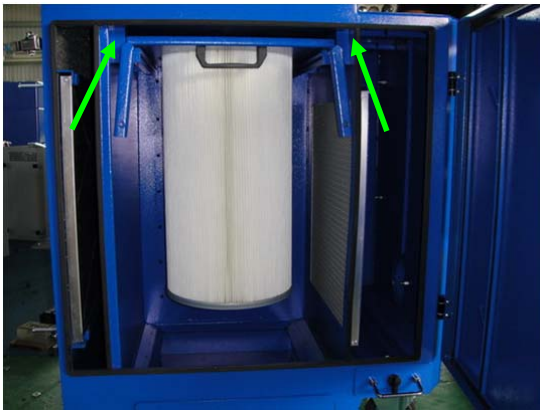
2. Loosen the screws and washers (circled in green). Release the filter handle fixing plate.



5. Unfasten the filter tray and install with a new cartridge.



6. Slide the cartridge into the track and push it to the end.



7. Pull up the left and right filter handles.



8. Attach the filter handle fixing plate upon the left and right filter handles. Fasten the plate and handles with screws and washers.

Carbon filter:



1. Release (2) knobs.



2. Pull out the carbon filter. Insert a new filter and secure it with (2) knobs.



3. Close the front maintenance door.
Assembly completed

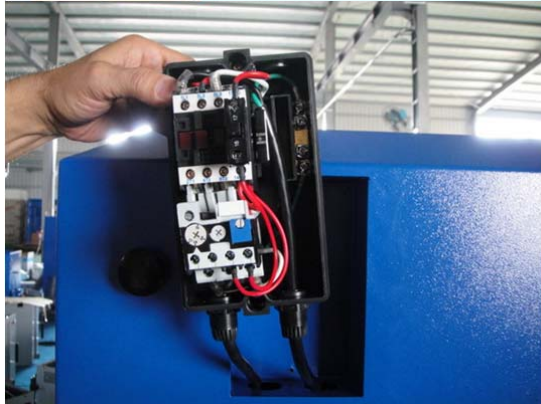
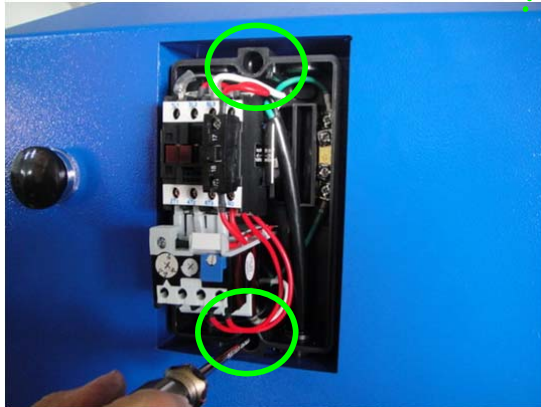
MAINTENANCE

Magnetic Switch Replacement

Procedure:



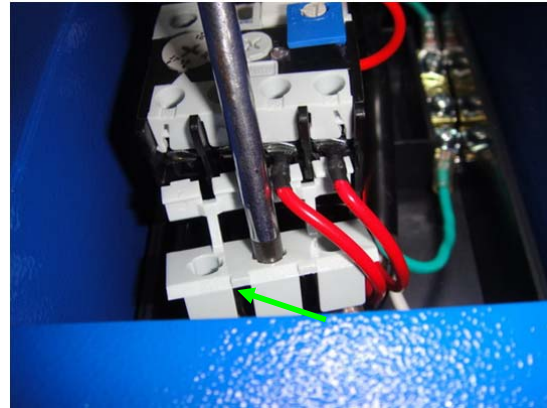
1. Release the upper and lower screws of the magnetic switch.



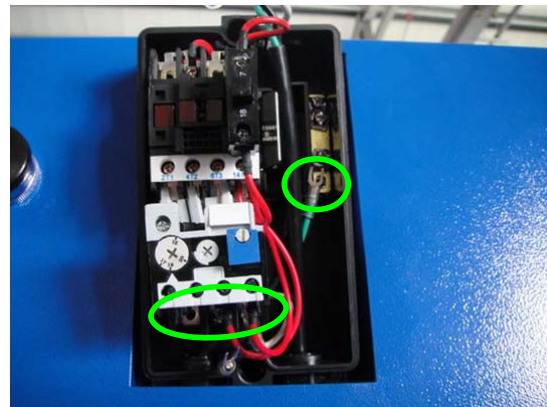
2. Open the switch cover and loosen the upper and lower screws to move out the whole magnetic switch.



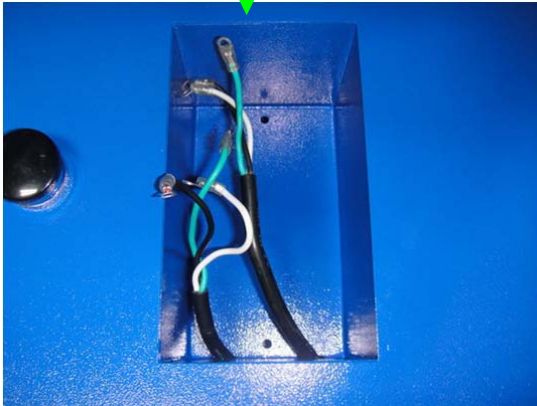
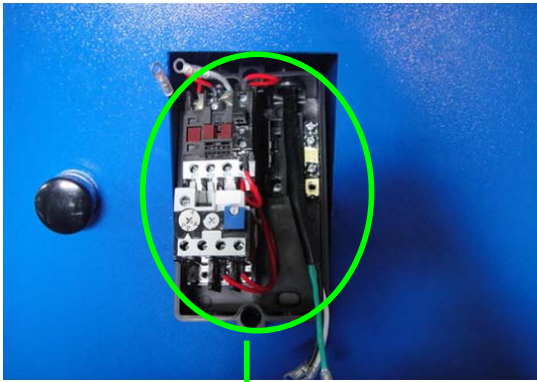
3. Dismantle L1 (in black) and L3 (in white) of the main power supply. Remove the Y-shape grounding (in green).



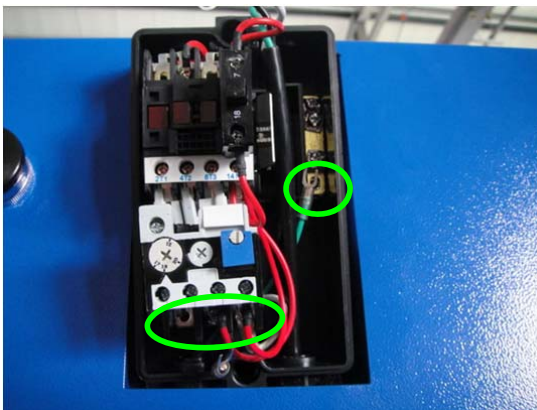
4. Take away the lower plastic cover.



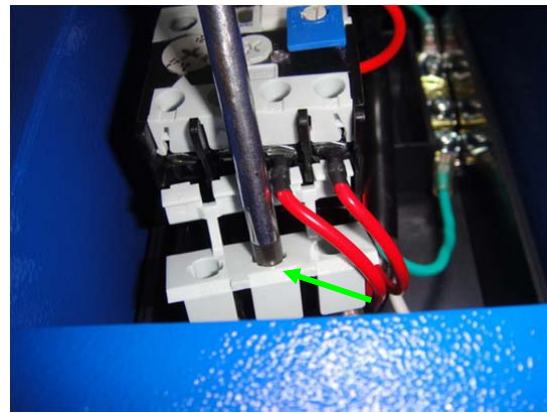
5. Dismantle L1 (in black) and L3 (in white) of the motor power supply. Remove the Y-shape grounding (in green).



6. Remove the whole set and replace with a new magnetic switch.



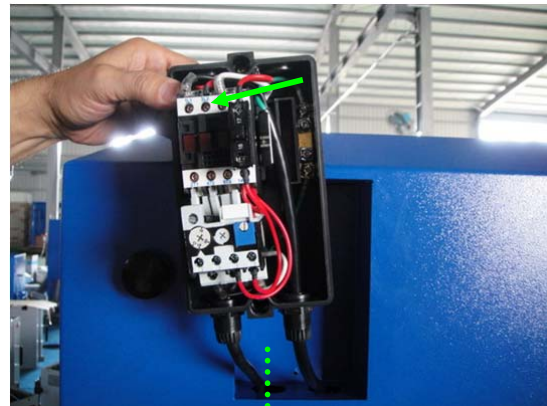
7. Connect L1 (in black) and L3 (in white) of the motor power supply. Link the Y-shape grounding (in green).

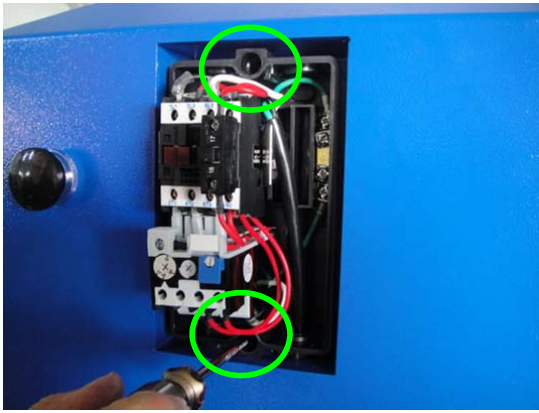


8. Put back the lower plastic cover.



9. Fasten L1 (in black) and L3 (in white) of the main power supply. Secure the Y-shape grounding (in green).





10. Fix the white plastic cover of the contactor. Put the control switch in position. Lock the upper and lower screws. Put back the switch cover.



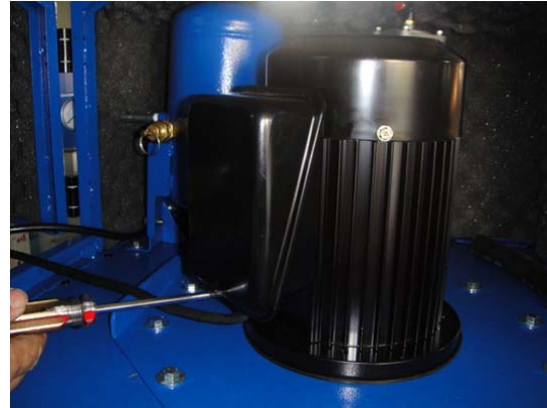
11. Fasten the upper and lower screws of the magnetic switch.



12. Open the top maintenance door.

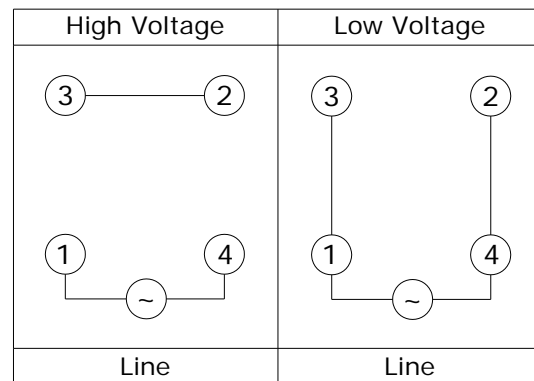


13. Look for the motor junction box.



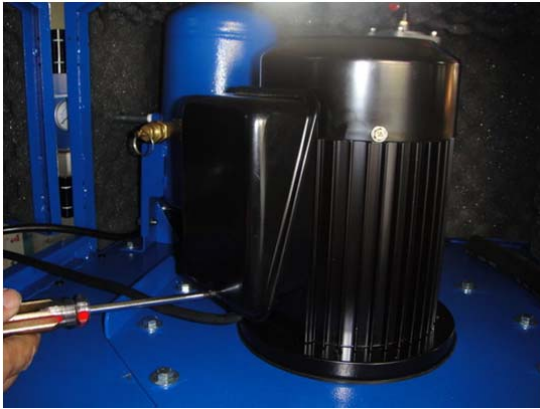
14. Unscrew the motor junction box.

15. Voltage Change Diagram:



- (1) This unit is prewired at the factory for 120 volt, 60Hz, 1-phase operation. (See above wiring diagram.)
- (2) It can be wired for 220 volt, 60Hz, 1-phase operation. (See above wiring diagram.) For high voltage operation, the 120V control box must be exchanged for a higher volt control box and installed on unit.
- (3) Have a qualified electrician install properly and connect wiring to control box in accordance with local and national codes.

- (4) Test the unit to be sure motor fan rotates in direction of rotation arrow.
Switch any two leads (not Ground) to reverse rotation if needed.

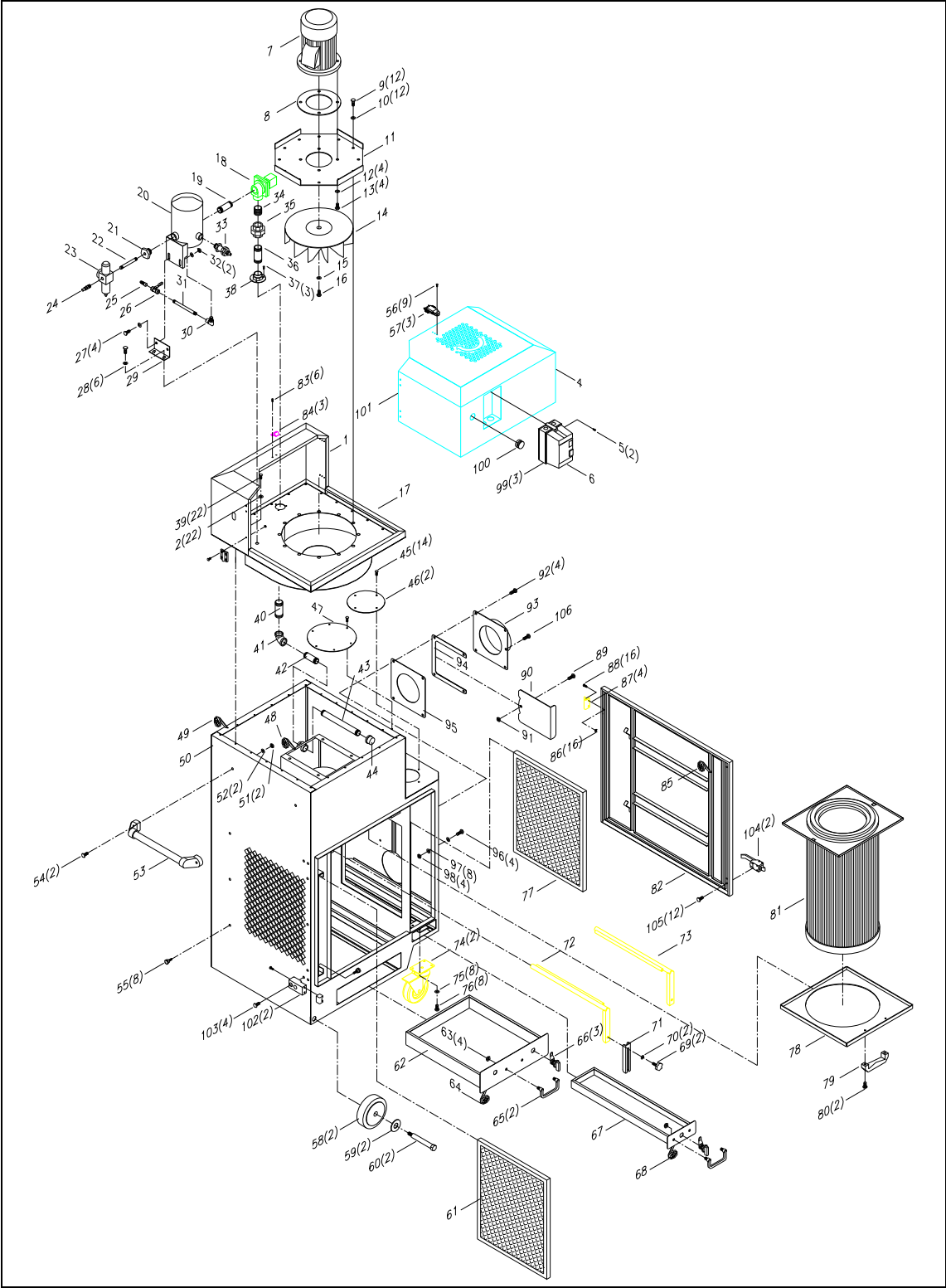


16. Secure the motor junction box with screws.



17. Close the top maintenance door.
Assembly completed.

Repair Parts Illustration



PARTS

Repair Parts List

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Reference Number	Description	Part Number	Quantity
1	Back Motor Cover	A02-02-PS-150-1	1
2	Flat Washer (1/4"xOD19x2t)	A02-02-PS-150-2	22
3	Lower Front Motor Cover	A02-02-PS-150-3	1
4	Front Motor Cover	A02-02-PS-150-4	1
5	Phillips Head Sheet Metal Screw (5/32"x3/4")	A02-02-PS-150-5	2
6	Magnetic Switch	A02-02-PS-150-6	1
7	Motor	A02-02-PS-150-7	1
8	Motor Gasket	A02-02-PS-150-8	1
9	Hex Screw (5/16"x3/4")	A02-02-PS-150-9	12
10	Flat Washer (5/16"xOD18x2t)	A02-02-PS-150-10	12
11	Motor Base	A02-02-PS-150-11	1
12	Lock Washer (5/16")	A02-02-PS-150-12	4
13	Hex Screw (5/16"x3/4")	A02-02-PS-150-13	4
14	Impeller	A02-02-PS-150-14	1
15	Flat Washer (5/16"xOD30x3t)	A02-02-PS-150-15	1
16	Hex Screw (5/16"x3/4")	A02-02-PS-150-16	1
17	Blower	A02-02-PS-150-17	1
18	Magnetic Valve	A02-02-PS-150-18	1
19	Nipple Connector	A02-02-PS-150-19	1
20	Air Tank	A02-02-PS-150-20	1
21	Bushing (3/4"x1/4")	A02-02-PS-150-21	1
22	Connector	A02-02-PS-150-22	1
23	Dehumidifier	A02-02-PS-150-23	1
24	Connector	A02-02-PS-150-24	1
25	Connector (1/4")	A02-02-PS-150-25	1
26	Switch Valve	A02-02-PS-150-26	1
27	Hex Screw (5/16"x3/4")	A02-02-PS-150-27	4

Reference Number	Description	Part Number	Quantity
28	Flat Washer (5/16"xOD18x2t)	A02-02-PS-150-28	6
29	Fixing Base for Air Tank	A02-02-PS-150-29	1
30	Elbow (1/4")	A02-02-PS-150-30	1
31	Nipple Connector	A02-02-PS-150-31	1
32	Hex Nut (5/16")	A02-02-PS-150-32	2
33	Safety Valve (1/2")	A02-02-PS-150-33	1
34	Connector	A02-02-PS-150-34	1
35	Connector	A02-02-PS-150-35	1
36	Connector	A02-02-PS-150-36	1
37	Phillips Head Sheet Metal Screw (5/32"x1/2")	A02-02-PS-150-37	3
38	Pipe Connecting Base	A02-02-PS-150-38	1
39	Button Head Screw (1/4"x3/4")	A02-02-PS-150-39	22
40	Connector	A02-02-PS-150-40	1
41	Connector	A02-02-PS-150-41	1
42	Connector	A02-02-PS-150-42	1
43	Connector	A02-02-PS-150-43	1
44	Cap	A02-02-PS-150-44	1
45	Button Head Screw (1/4"x3/4")	A02-02-PS-150-45	14
46	Arm Port Cover (6")	A02-02-PS-150-46	2
47	Arm Port Cover (8")	A02-02-PS-150-47	1
48	Foam Tape	A02-02-PS-150-48	1
49	Foam Tape	A02-02-PS-150-49	1
50	Machine Body	A02-02-PS-150-50	1
51	Hex Nut	A02-02-PS-150-51	2
52	Flat Washer (3/8"xOD23x2t)	A02-02-PS-150-52	2
53	Handle	A02-02-PS-150-53	1
54	Cap Screw	A02-02-PS-150-54	2
55	Knob (1/4"x3/4")	A02-02-PS-150-55	8
56	Phillips Head Sheet Metal Screw (5/32"x1/2")	A02-02-PS-150-56	9
57	Spring Dual Buckle	A02-02-PS-150-57	3
58	Castors (6")	A02-02-PS-150-58	2
59	Caster Axle Washer	A02-02-PS-150-59	1
60	Caster Axle	A02-02-PS-150-60	1
61	Activated Carbon Filter	A02-02-PS-150-61	1

Reference Number	Description	Part Number	Quantity
62	Drawer (large)	A02-02-PS-150-62	1
63	Hex Nut	A02-02-PS-150-63	4
64	Foam Tape	A02-02-PS-150-64	1
65	Drawer Handle	A02-02-PS-150-65	2
66	Drawer Lock	A02-02-PS-150-66	3
67	Drawer (small)	A02-02-PS-150-67	1
68	Foam Tape	A02-02-PS-150-68	1
69	Knob (5/16"x3/4")	A02-02-PS-150-69	2
70	Flat Washer (5/16"xOD18x2t)	A02-02-PS-150-70	2
71	Filter Handle Fixing Plate	A02-02-PS-150-71	1
72	Filter Handle (left)	A02-02-PS-150-72	1
73	Filter Handle (right)	A02-02-PS-150-73	1
74	Casters w/ brakes (5")	A02-02-PS-150-74	2
75	Flat Washer (5/16"xOD18x2t)	A02-02-PS-150-75	8
76	Hex Screw (5/16"x3/4")	A02-02-PS-150-76	8
77	Aluminum Mesh	A02-02-PS-150-77	1
78	Filter Tray	A02-02-PS-150-78	1
79	Handle	A02-02-PS-150-79	1
80	Cap Screw (5/16"x3/4")	A02-02-PS-150-80	2
81	Cartridge Filter	A02-02-PS-150-81	1
82	Door	A02-02-PS-150-82	1
83	Phillips Head Sheet Metal Screw (5/32"x1/2")	A02-02-PS-150-83	6
84	Spring Dual Buckle	A02-02-PS-150-84	3
85	Foam Tape	A02-02-PS-150-85	1
86	Flange Nut	A02-02-PS-150-86	16
87	Roller Chain	A02-02-PS-150-87	4
88	Cap Screw	A02-02-PS-150-88	16
89	Hex Screw (3/8"x3/4")	A02-02-PS-150-89	1
90	Blast Gate	A02-02-PS-150-90	1
91	Hex Nut (3/8")	A02-02-PS-150-91	1
92	Button Head Screw (5/16"x3/4")	A02-02-PS-150-92	14
93	Blast Gate Connector	A02-02-PS-150-93	1
94	Blast Gate Gasket	A02-02-PS-150-94	1
95	Blast Gate Base	A02-02-PS-150-95	1
96	Hex Screw (3/8"x3/4")	A02-02-PS-150-96	4

Reference Number	Description	Part Number	Quantity
97	Flat Washer (3/8"xOD23x2t)	A02-02-PS-150-97	8
98	Hex Nut (3/8")	A02-02-PS-150-98	4
99	Strain Relief	A02-02-PS-150-99	3
100	Manual Air Pulse Jet Button	A02-02-PS-150-100	1
101	Foam Tape	A02-02-PS-150-101	1
102	Compression Latch Base	A02-02-PS-150-102	2
103	Round Phillips Head Screw (5/16"x3/4")	A02-02-PS-150-103	4
104	Compression Latch	A02-02-PS-150-104	2
105	Countersunk Inner Hex Screw	A02-02-PS-150-105	12
106	Knob (5/16"x1/2")	A02-02-PS-150-106	1



Phone: (952) 894-6637

Fax: (952) 894-0750

Email: info@ventaire.com

12-MONTH WARRANTY

VENTAIRE warrants their products, to the original purchaser, to be free from defects in material and workmanship under normal use and service (except for those cases which buyer supplied materials are used) for a period of 12 months from the original date of shipment. During the warranty period, **VENTAIRE**, will at its option, repair, replace, or issue credit for any components that are deemed defective by **VENTAIRE**.

Buyer's failure to pay the full amount due within (60) days of invoice shall release seller from any and all liability or obligation to any warranty.

Before returning equipment for repair or replacement, a **Return Authorization Number** must be obtained from **VENTAIRE** (952-894-6637). The **Return Authorization Number** must be written on the outside of all shipping cartons. Items returned without a **Return Authorization Number** will be refused. Items returned should be in original condition in which it was received and must be accompanied with a written explanation of the reason(s) for their return.

This warranty does **not** cover damage caused by accident, misuse, misapplication, or unauthorized service modification.