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*MANUFACTURING HIGH QUALITY  
ENVIRONMENTAL ABATEMENT EQUIPMENT  
SINCE 1988*

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# OmniAire 600V Operations and Maintenance Manual

|  |         |   |
|--|---------|---|
|   | WARNING |  |
| <p><b>This equipment to be operated only by trained personnel.</b><br/> <b>Do not use with combustible or explosive material.</b><br/> <b>Do not expose to water or rain.</b><br/> <b>Connect only to grounded outlet with GFCI device.</b><br/> <b>Disconnect power for cleaning and servicing.</b></p> |         |   |
|   |         |   |



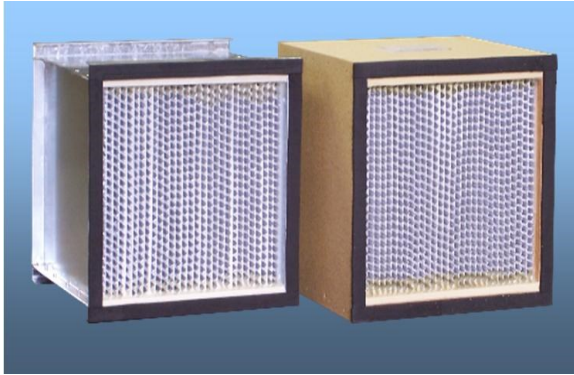
CONFORMS TO UL STD 507  
 CERTIFIED TO CAN/CSA STD  
 C22.2 NO. 113-M1984

**SPECIFICATIONS**

- Motor:** 1/4hp, 115 V 3.5 amps, thermal protected
- Controls:** Variable speed control, vacuum gauge 0-3” W.C.
- Airflow:** 150 - 600 cfm.
- Final Filter:** HEPA 99.97% @ 0.3 micron,, particle board frame, 12”x12”x11.5”
- Pre-filter:** 2-stage poly pad, 35% efficiency, 13”x13”x2”
- Housing:** Aircraft Grade Aluminum, mill finish
- Weight with Filters:** 55 lbs.
- Dimensions:** 30.5”L x 14”W x 18.5”H

**ORDERING INFO.....PART #**

|   |          |
|---|----------|
| OmniAire OA600V .....                   | OA600V   |
| HEPA Filter 99.97%, 0.3μ .....          | MFH12    |
| HEPA Filter 99.99%, 0.3μ .....          | MFH12G   |
| Vertical Stand Adapter .....            | HSTOA600 |
| Primary/Secondary Filter (qty 20) ..... | MFP1313  |
| Intake Manifold, 8” .....               | MFIM8    |
| Quick Clamp, 8” .....                   | QCW12    |
| Flexible Duct, 8”x25’ .....             | MD8      |
| OdorGuard 600 Carbon Filter .....       | OG1212   |



The OmniAire OA600V comes standard with a particle board 99.97% 0.3 $\mu$  HEPA filter and can be upgraded to a metal frame Certified 99.99% 0.3 $\mu$  HEPA.

## **OPERATING INSTRUCTIONS**

**Unpacking:** Visually inspect the unit for damage. Remove the primary/ secondary filter and ensure that the HEPA filter has not been dislodged during shipping. The HEPA filter should be sitting on the filter guides and the filter tabs that hold the HEPA filter in place should be tight. See Figure 1.

If the filter is not seated correctly then remove the filter tabs, reposition the filter, and reinstall the filter tabs before operation to ensure that there is no bypass around the filter.

If the filter tabs are loose verify that the filter is in the correct position and retighten the filter tab nuts.

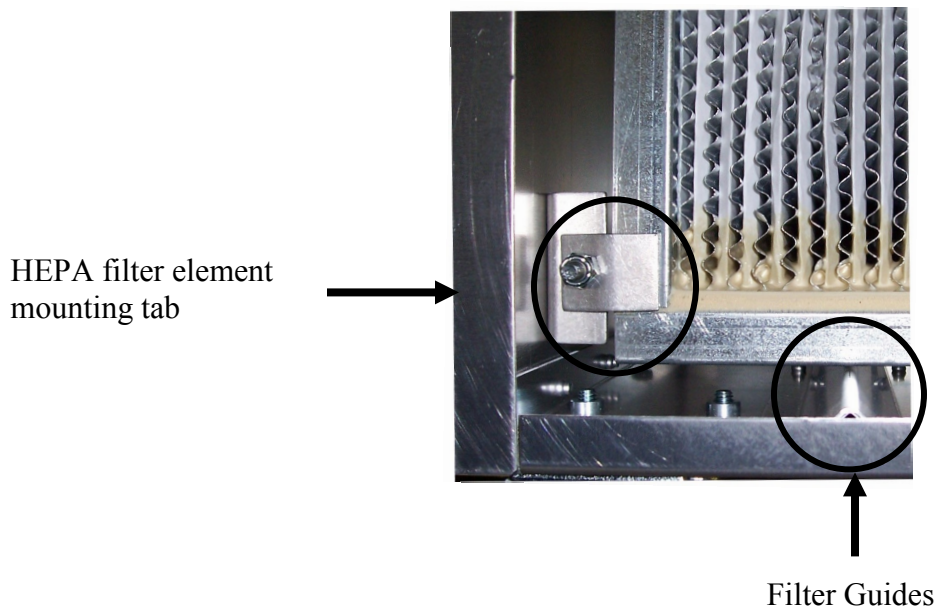


Figure 1

**To create negative pressure inside the containment,** more air has to be exhausted out than leaks into the containment. Place the machine inside the containment and hook a flexible duct to the outlet ring of the machine exhausting to outside the containment. (See Figure 2) All of the air being exhausted has been treated by the HEPA filter so no contaminants are being exhausted from the containment.

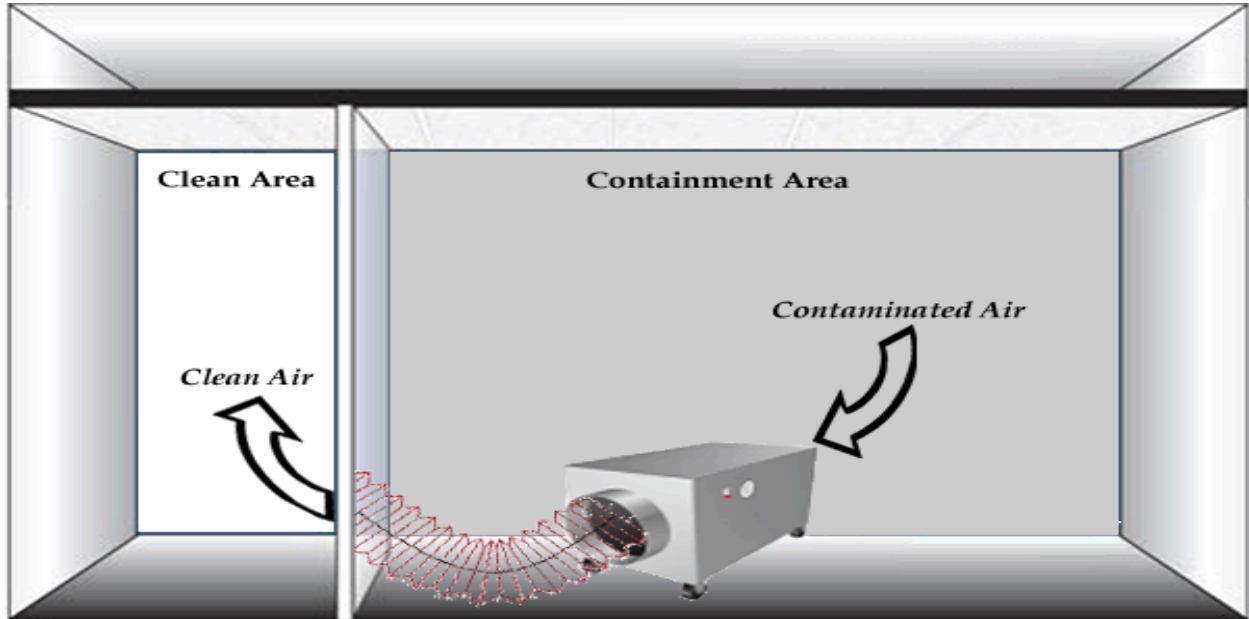


Figure 2

**To create positive pressure inside the containment,** more air has to be pumped in than leaks out of the containment. Place the machine outside the containment and hook a flexible duct to the outlet ring of the machine ducting the exhaust into the containment. (See Figure 3)

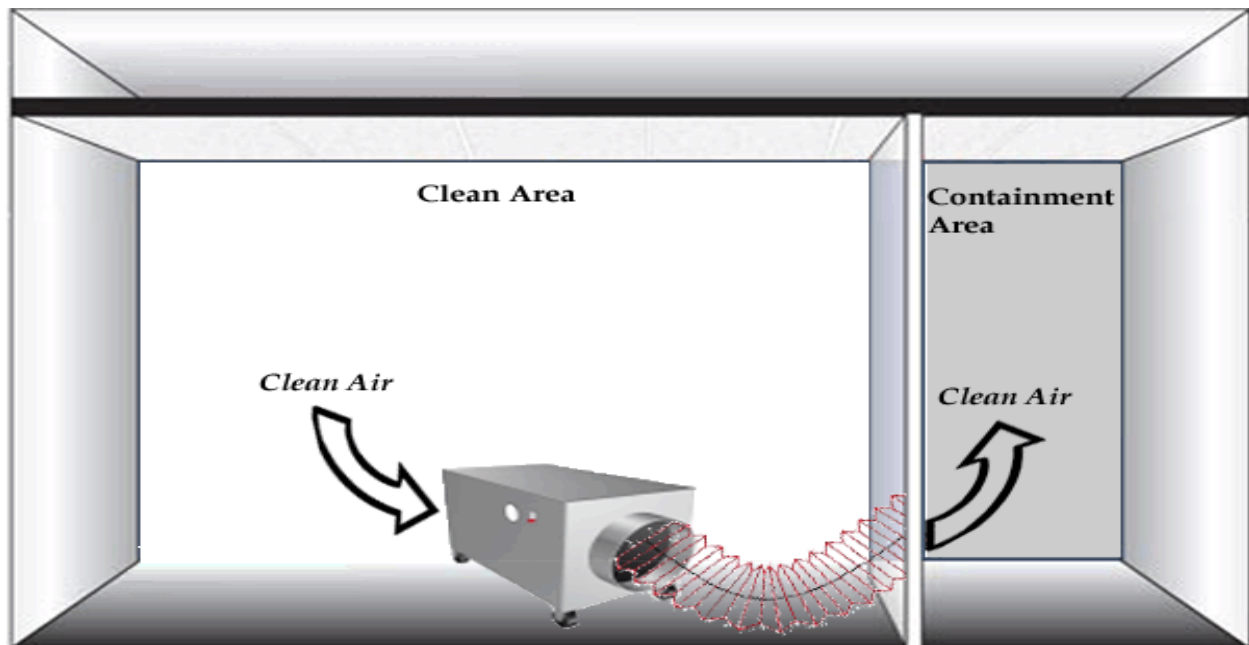


Figure 3

## **MAINTENANCE INSTRUCTIONS**

Due to tolerance issues in the zeroing of the water column gauge please note the initial reading of the water column gauge with the machine in HIGH SPEED operation here \_\_\_\_\_.

### **REPLACEMENT OF THE PREFILTER**

Once the gauge reads .2 above the initial reading with the machine in HIGH SPEED then the prefilter must be replaced. When replacing the prefilter ensure that the orange side of the prefilter is facing the HEPA filter. At this time the gauge reading will drop.

When the gauge reading does NOT drop after replacing the prefilter then the HEPA filter is full and must be replaced to maintain airflow.

Please note that even though the HEPA filter is fully loaded the filter is still removing the particulates from the air, but at a reduced airflow which will affect the ability of the machine to provide positive or negative pressure within the containment.

### **REPLACEMENT OF THE HEPA FILTER**

To replace the HEPA filter remove the screen/manifold and remove the prefilter. You will see 4 filter tabs holding the HEPA filter in place. See figure 4 below. These tabs are secured with 1/4-20 Nylock nuts, which require a 7/16" wrench or socket to remove them. Remove all 4 filter tab retaining nuts and remove the filter tabs as well. Slide the HEPA filter out along the filter guides and remove it from the machine.

***ALWAYS TREAT THE USED HEPA FILTER AS HAZMAT AND PROCESS IT ACCORDING TO YOUR ESTABLISHED HAZMAT PROCEDURES.***

To replace the HEPA filter ensure that the gasket on the HEPA filter faces inwards toward the flange, slide the filter in place along the filter guides and re-install the filter tabs and filter tab securing nuts. The nuts should initially be tightened to where the stud is flush with the end of the nut. This will compress the gasket on the filter approximately 1/2 of the thickness. This allows for the filter to be resealed and tightened at a later time if necessary.

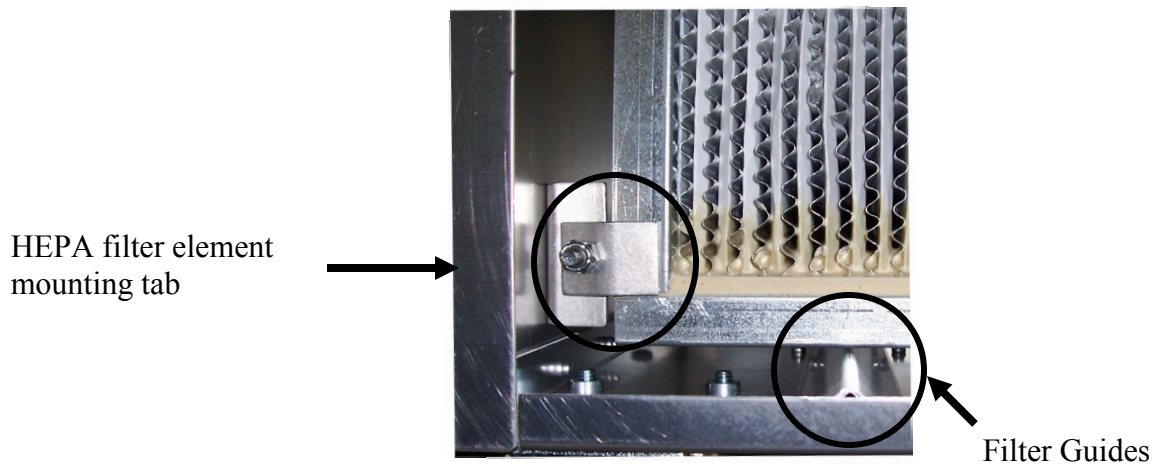


Figure 4

## **Troubleshooting**

Your Omnitec Design machine is designed and engineered to provide years of trouble free service. Occasionally though problems do occur. Here are some helpful tips and solutions to common problems.

### **The machine does not start or just hums when turned on**

1. Check the circuit you have the machine on and ensure that it has power.
2. Remove the HEPA filter and push the blower wheel by hand. If it does not move freely or if you hear a grinding/scraping noise as you spin it then the blower wheel is touching the side of the blower housing. The most common reason for this is that due to an impact of some kind the motor mounts have been bent. Remove the motor/blower assembly and replace the bent motor mounts.
3. If the blower wheel spins freely the next thing to check is the capacitor. With the HEPA filter still removed from the machine push the blower wheel and as it is spinning turn the power switch on. If the machine runs at this point then the problem is in the capacitor. Ensure that the wiring connected to the capacitor is plugged in and not broken. If the wiring is correct, then the capacitor is faulty. Replace the capacitor.

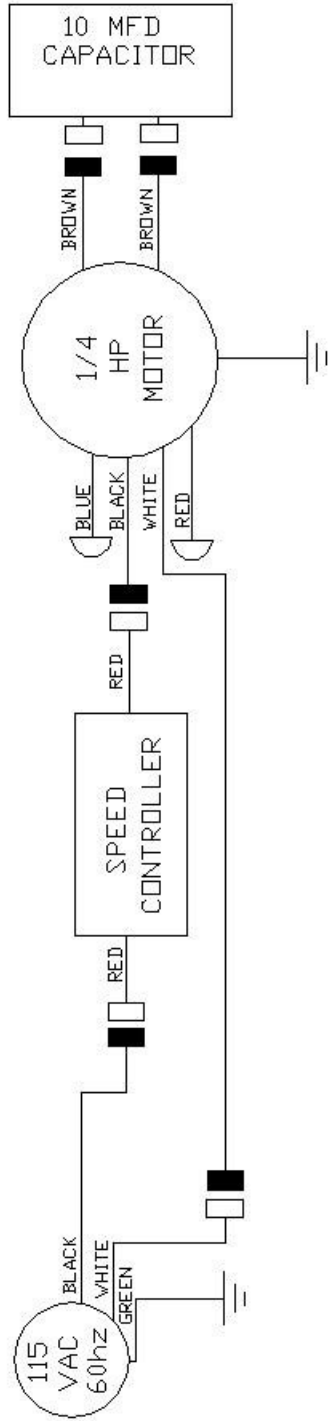
### **The machine will run for a few minutes then turn off**

1. This machine MUST be run with a HEPA filter in place. If you are trying to run it without a filter in place the motor will overheat within a few minutes and the thermal overload in the motor will engage. Let the motor cool off for 30 minutes, install the filter and try running the machine again.
2. If the filter is in place and the machine still shuts off after a few minutes then the motor is faulty. Replace the motor.

### **The machine vibrates excessively when running**

1. This is an indication that the motor bearings are worn. If the machine is allowed to continue running at this point the vibration will cause the center hub of the blower wheel to separate from the wheel requiring replacement of both the motor and blower. Replace the motor.

If the machine does require electrical servicing of the motor or switches the following page contains a wiring diagram to aid in repair or troubleshooting.



|  |                       |            |                                  |
|--|-----------------------|------------|----------------------------------|
| Dnntec Design<br>2125 196th St SW #115<br>Lynnwood, WA 98036 | DA600V Wiring Diagram | Revision A | Revision Notes<br>Date: 11/01/06 |
|--|-----------------------|------------|----------------------------------|

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