



*The* **Hi-Velocity**  
*Air Purification System*



Installation and Operation Manual

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# Hi-Velocity Air Purification System Parts List

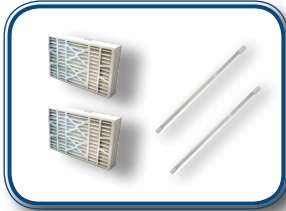
## HE PS



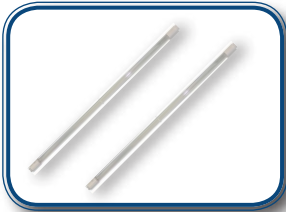
### Hi-Velocity Air Purification System

Item	Weight	Shipping Dimensions	Part Number
HE PS c/w MERV 11 Filter	31	29/21/11	20180100000
HE PS 1750c/w MERV 11 Filter	36	32/23/14	20180101750

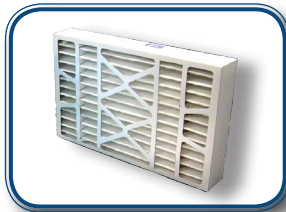
## HE PS Replacement Parts



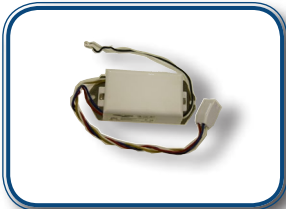
Item	Part Number
HE PS One Year Service Kit c/w two Merv 11 Filters and two UV Lamps	20180100007
HE PS 1750 One Year Service Kit c/w two Merv 11 Filters and two UV Lamps	20180100011



Item	Part Number
Replacement UV Lamps (2/pkg) (For both HE and LV-E Units)	20180100001



Item	Part Number
Replacement MERV 11 Filter	20180100002
Replacement 1750 MERV 11 Filter	20180100012
Optional MERV 14 Filter (for HE Series Units only)	20180100006



Item	Part Number
Electronic Lamp Ballast (For both HE and LV-E Units)	20180100003



Item	Part Number
12 Volt Transformer (For both HE and LV-E Units)	20180100004



Item	Part Number
HE PS Titanium/Honeycomb Catalyst	20180100005
HE PS 1750 Titanium/Honeycomb Catalyst	20180100013

## IMPORTANT SAFETY INSTRUCTIONS

Before installing the Hi-Velocity Air Purification System, inspect for any signs of damage. During handling and installation, **take care to protect the catalytic honeycomb side** of the product from physical damage, as the aluminum-titanium core is very soft and can be easily damaged.

Warning - **Always** unplug the power cord from the HE PS System when changing the filter or ultraviolet lamps. **Never** look into a burning ultraviolet lamp without proper eye protection as sever damage to the eyes can result. This product is rated for standard ambient air temperatures during heating and air-conditioning functions and not rated for elevated air temperatures in excess of 125 degrees fahrenheit.

**Do not** attempt to clean the catalytic honeycomb core with cleaning solutions. The catalyst is radiated with short wave ultraviolet light during periods of non-air flow and is self-cleaning.

**Do not** install insulation within 76MM or 3 inches of Luminaries.

Access for service is required when mounting above ceilings or behind walls.

**Do not** install in a position where the interior module can gravity fall from an elevated position and cause injury to people or equipment below.

### Specifications

**Model:** HE PS c/w MERV-11 Filter

**Dimensions:** 25<sup>3/4</sup>" W x 17<sup>3/4</sup>" H x 10" D

**Weight:** 25 lbs

**Shipping Box:** 7.5 lbs

**Power:** 120v/54 watts/1.1amps

**Fuse:** AGC 2 amps

**Service Panel:** 12 vac.

**UV Lamps:** (2) ESP LT 016

**Titanium Catalyst:** 12,220 cells/4,583 Sq. In of Surface Area

**Caution:** Risk of fire - replace only with ESP LT 016 U.V. Lamps

**Particle Filter:** Electrostatic Needled MERV -11

**Service:** FILTER - 6 month

U.V. LAMPS - 1 year

## Operation

The Hi-Velocity Air Purification System installs in the air-inlet side of the Hi-Velocity unit up to five tons in size. Only operation of the air-handler fan unit is required for air purification and sterilization to take place.

Note: The ultraviolet lamps are wired to operate continuously. This feature allows the catalyst to burn off surface impurities, cleaning and reactivating itself during periods of non-use or no airflow.

The HE PS System combines **three unique technologies** to protect people against indoor air pollutants. **Photocatalytic Oxidation (PCO)** technology combined with high efficiency **electrostatic MERV-11 particulate filtration** and **germicidal ultraviolet light** quickly reduces and eliminates toxic gasphase chemicals, lung damaging dust and airborne germs from the living environment.

Many new homes have smart programmable thermostats that allow for automatic operation of the air-handler fan unit when there is no demand for heating or air conditioning. It is important that the HE PS is operating at least **(30) minutes per hour (24) hours per day** to remove toxic materials from the indoor environment.

The length of operation depends on the location of the home or office in relation to point source pollution such as refineries, processing plants, automobile traffic and areas that produce high levels of pollen. Individuals that are sensitive to mold spores, dust mites, chemicals or have respiratory problems such as asthma, emphysema, and chronic allergies should extend the run time to (40) minutes or more per hour.

## Service

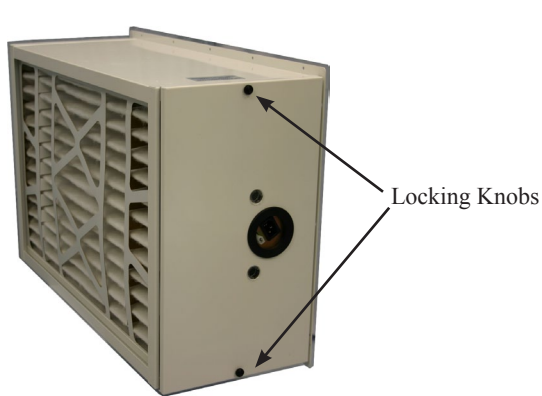
The Hi-Velocity Air Purification System comes with a built-in Remote Mounted Service Panel to automatically keep track of service intervals. Indicator lights will tell you when to change the filter and ultraviolet lamps 30 days in advance.

MER 11 Filter: Change every **6 months** - service light turns from green to yellow after five months and to red after six months.

Ultraviolet Lamps: Change every **12 months** - service light turns from green to yellow after eleven months and to red after twelve months.

## Changing the Filter

1. Unplug the power cord from the HE PS unit. Unscrew the two locking knobs and remove the door (**Fig. 1**)
2. Remove old filter and replace with new filter. Make sure airflow arrow on filter is pointing to the inside of module. (**Fig. 2**)



**Fig. 1** - Unplug the power cord from the HE PS unit. Unscrew the two locking knobs and remove the door.

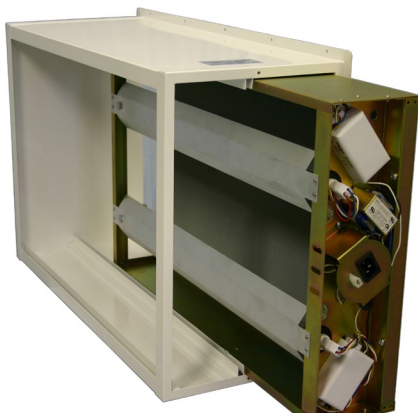


**Fig. 2** - Remove old filter and replace with new filter. Make sure airflow arrow on filter is pointing to the inside of module.

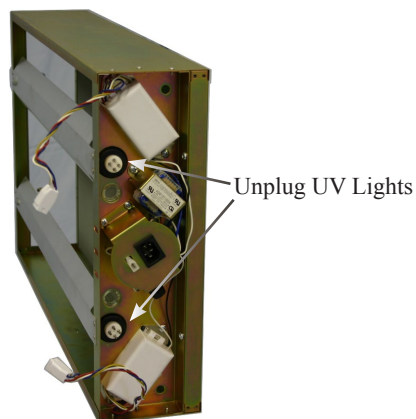
## Changing the UV Lamps

1. Remove filter as in above. (**Figs. 1, 2**)
2. Remove Photocatalytic module. (**Fig. 3**)
3. Unplug UV lights, loosen retaining screws, and remove UV lights. (**Figs. 4, 5**)
4. Replace UV lights, re-tension retaining screws, and replace plug-ins.
5. Replace Photocatalytic module and filter, secure door and re-insert plug, check sight ports to ensure lamp illumination.

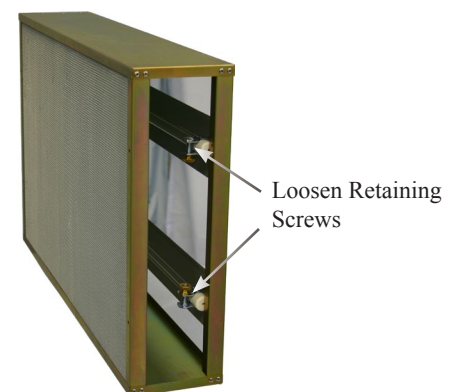
**NOTE! ENSURE FILTER AND PHOTOCATALYTIC MODULE ARE INSTALLED IN PROPER AIR FLOW SEQUENCE.**



**Fig. 3**



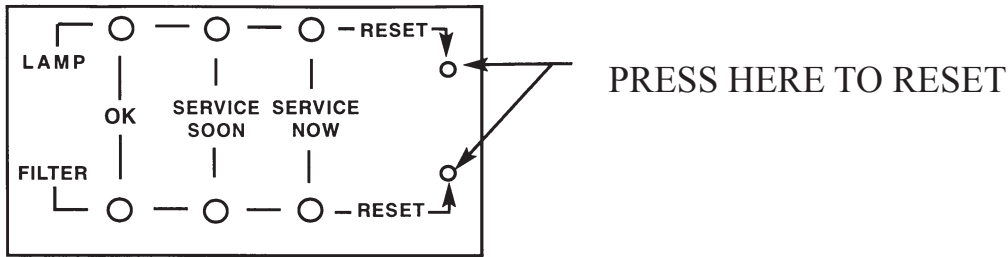
**Fig. 4**



**Fig. 5**

## Resetting Service Lights

On the right side of the service panel, there are arrows pointing to two small holes marked reset. One is marked filter and one is marked lamp (**Fig 6**). Using a small paper clip, bend out one leg straight and insert the end of the paper clip into only the hole corresponding to the replaced component and push lightly until the service light returns to the green position. The computer is now reset.



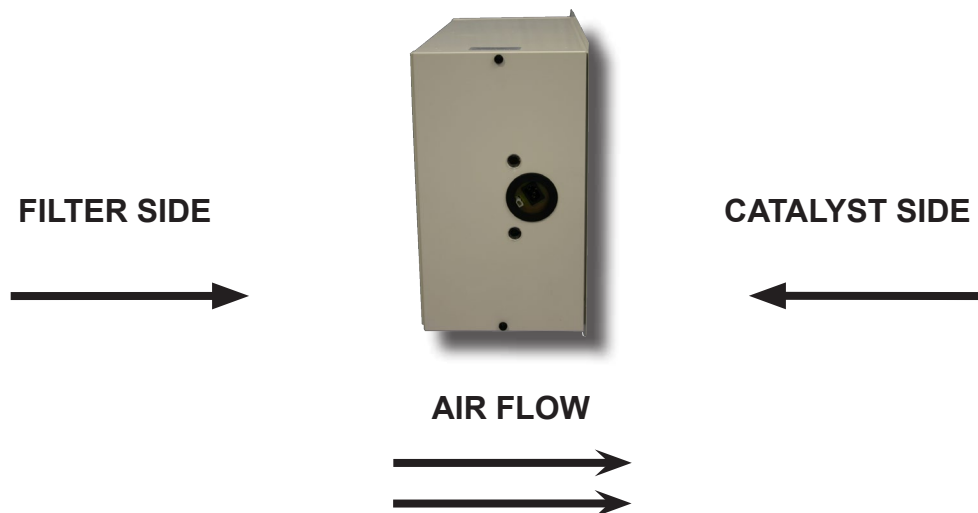
**Fig. 6 SERVICE PANEL**

## Replacement Filters and Ultraviolet Lamps

Replacement components are available in the form of a replacement kit containing (2) filters and (1) set of UV lamps. Replacement kits are available from your local HVAC wholesaler or contractor.

## Installation

Make sure to install the Hi-Velocity Air Purification System so that the inlet or return air enters the side containing the MERV-11 particle filter first (**Fig. 7**).

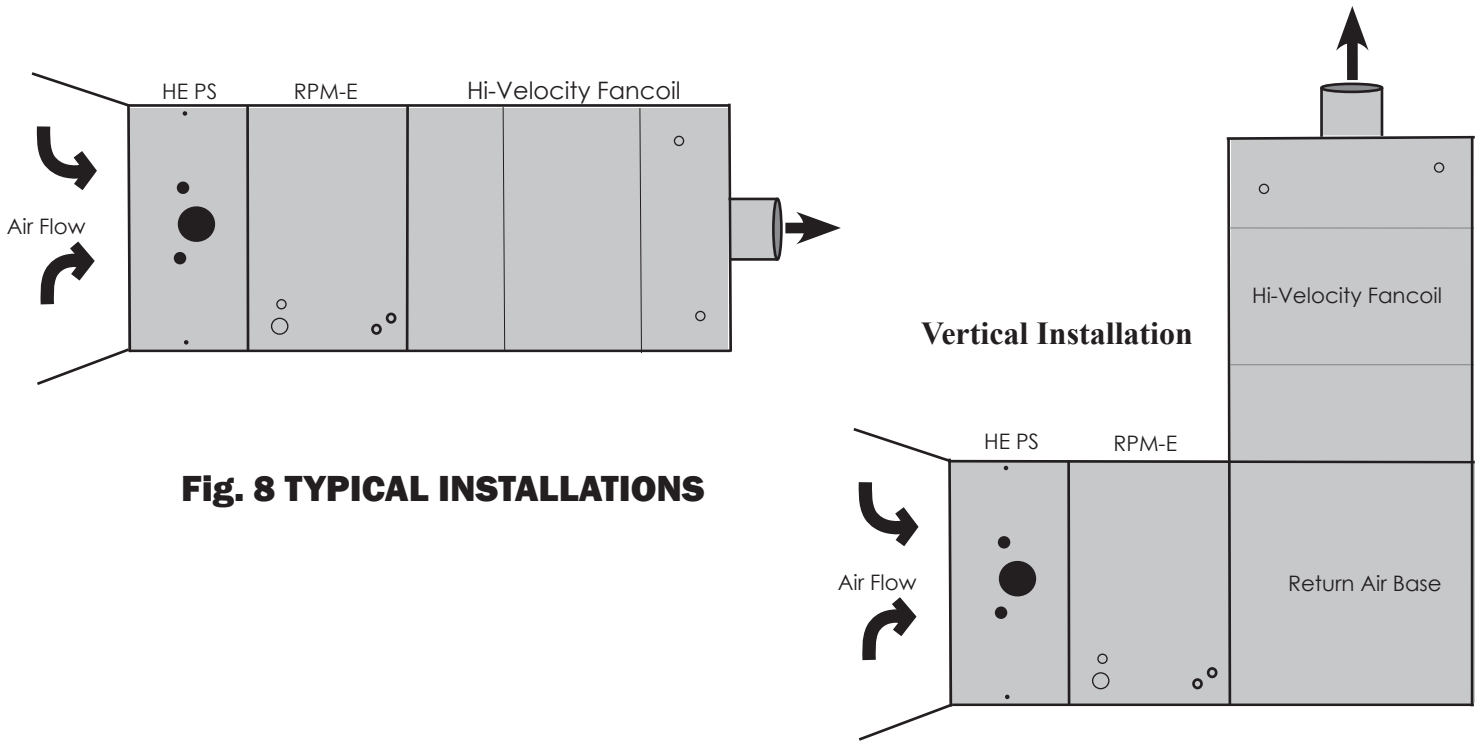


**Fig. 7 HE PS AIR FLOW**

## Typical Horizontal and Vertical Installation

1. Unscrew the two locking knobs and remove the inside components from the outer case.
2. Take care not to bend or distort the outer metal enclosure.
3. Mount the outer case to the support plenum Note: Do not use a screw length that will extend into or penetrate the inside module containing the catalyst or filter.

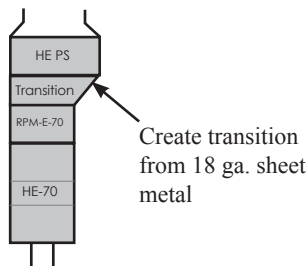
## Horizontal Installation



**Fig. 8 TYPICAL INSTALLATIONS**

4. When installing the HEPS to an HE-50 or HE-70 fancoil, a transition should be made (**Fig. 8**) or simply block air flow with a piece of sheet metal (**Fig. 9**).

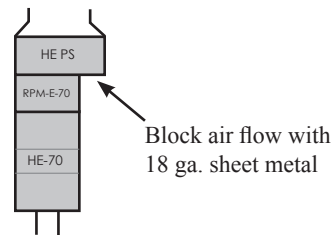
### Top View



**Fig. 8**

OR

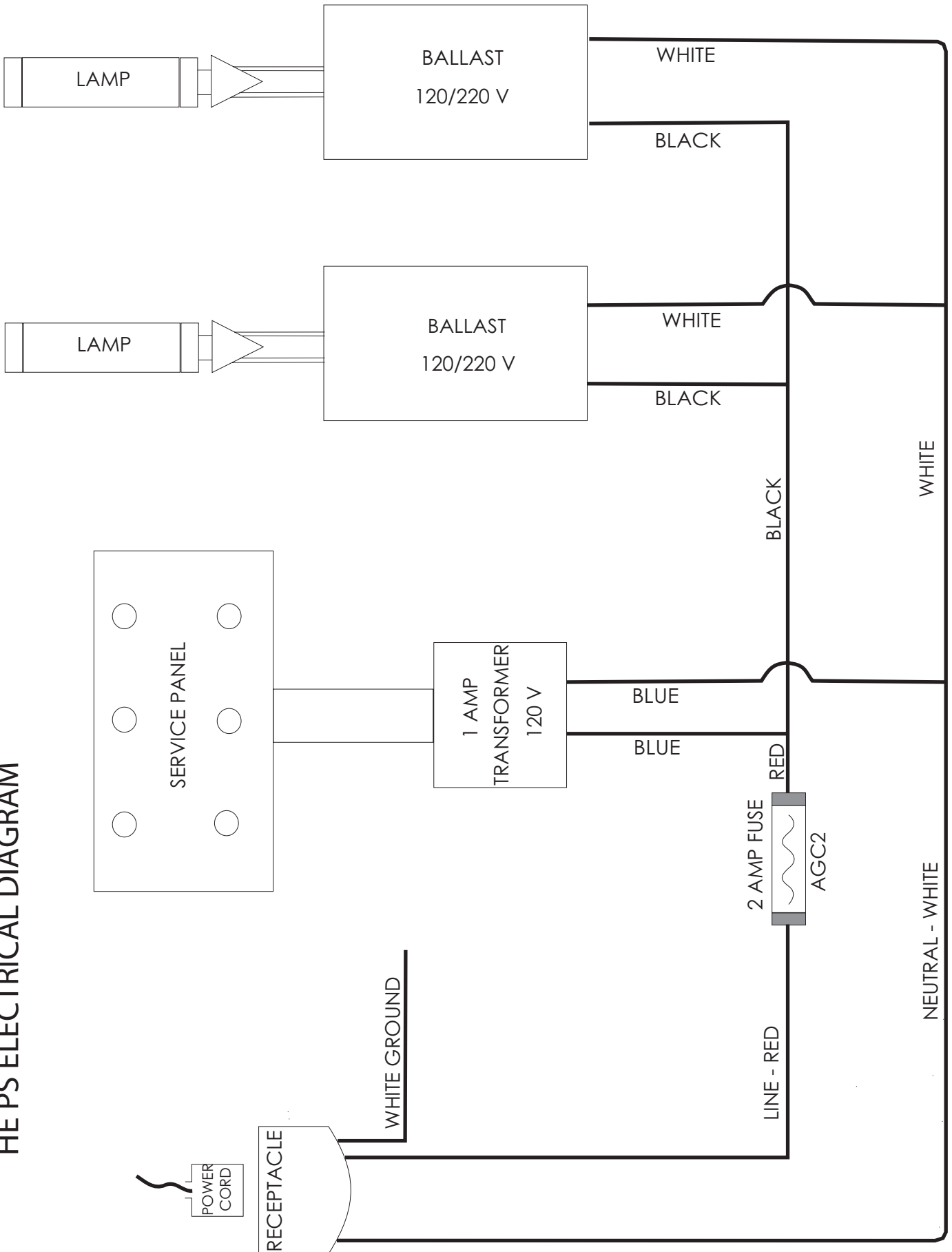
### Top View



**Fig. 9**

5. Tape all seams between the air handler and the outlet side of the HE PS so there can be no air bypassing the system.
6. Attach the air handler to the outlet side of the HE PS and fasten with #10 x 3/8 self-drilling sheet metal screws.
- NOTE: Only 1/2 inch of clearance has been provided between the outer and inner case.
7. Slide the components into the outer case and tighten locking knobs finger tight. Make sure the inner module will freely slide in and out of the outside enclosure.
8. Plug in the power cord to any 120vac outlet and check both sight ports to make sure both lamps are illuminated. Ultraviolet lamps must remain on at all times regardless of thermostat or AirCycler settings.
9. Check the service panel (**Fig. 6**). The LED lights should be flashing in sequence for a 15 second period of time and then return to green. The filter lamp should be flashing green and the UV lamp light should be a steady green.
10. Set the thermostat or the AirCycler to operate the fan unit for at least 25 minutes every hour. If air quality problems persist after one week, increase the fan unit operating time by (5) minute intervals.

HE PS ELECTRICAL DIAGRAM



**Fig. 10 ELECTRICAL DIAGRAM**



### *Limited Lifetime Warranty*

Each Hi-Velocity Air Purification System comes with a limited lifetime warranty excluding expendable parts such as filters and UV lamp. This exceptional warranty provides for repair or replacement of any defective parts or components for two years from the date of purchase at no charge for labor or materials. Warranty work for the remaining life of the product will be provided with a maximum cost not to exceed \$85.00 dollars to the original owner. This warranty does not cover the expendable ultraviolet lamp, which must be replaced on an annual basis (1-year) or the expendable filter cartridge media, which must be replaced every six months.

Energy Saving Products Ltd. only manufactures the HE PS and is not responsible for the installation of this product. This warranty does not cover faulty installation or damage to personal property resulting from incorrect or faulty installation. This warranty does not cover the cost for removal or reinstallation of the HE PS when service or warranty work is required. All warranty repair work must be performed either at the factory or by a factory certified service center. Shipping cost to the factory or service center is the responsibility of the owner of the Hi-Velocity Air Purification System. Warranty return shipping from the factory is prepaid for the first two years only. This warranty is provided to the original purchaser of the HE PS and may not be transferred, sold or bartered.

This product is not warranted against freight damage, failure resulting from misuse, connection to incorrect voltage, or acts of God such as fires, earthquakes, or floods.