



Small Duct Heating, Cooling and Indoor Air Quality Systems

The Hi-Velocity Air Purification System

Installation and Operation Manual



Manufactured By



www.hi-velocity.com

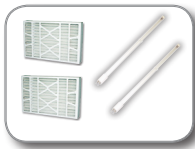
Hi-Velocity Air Purification System Parts List

Visit www.hi-velocity.com to find a Distributor



Item	Shipping Weight	Shipping Dimensions	Part Number
HE PS c/w MERV 13 Filter	31	29/11/21	20180100000
HE PS 1750 c/w MERV 13 Filter	36	32/14/23	20180101750

HE PS Replacement Parts



Item	Part Number
HE PS One Year Service Kit c/w two Merv 13 Filters and two UV Lamps	20180100007
HE PS 1750 One Year Service Kit c/w two Merv 13 Filters and two UV Lamps	20180100011



Item	Part Number
Replacement UV Lamps*	20180100001



Item	Part Number
Replacement MERV 13 Filter	20180100015
Replacement 1750 MERV 13 Filter	20180100012
Optional MERV 14 Filter (n/a for 1750)	20180100006



Item	Part Number
Electronic Lamp Ballast	20180100003



Item	Part Number
12 Volt Transformer	20180100004



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

***Caution:** Risk of fire - replace only with 20180100001 U.V. Lamps

Specifications	HE PS		HE PS-1750	
Capacity	1.5 - 3 Tons		4 - 5 Tons	
Application Range	2,000 Square Feet		3, 000 Square Feet	
Filter	Electrostatic MERV-13 Needled Fiber			
MERV Filter Size	24 3⁄4" x 3 3⁄4" x 15 7⁄8" (629mm x 95mm x 403mm)		24 3⁄4" x 3 3⁄4" x 20 1⁄8" (629mm x 95mm x 511mm)	
Power	120v/60Hz/54 watts/1.1 amps			
Fuse	AGC 2 amps			
UV Lamps	UVC Germicidal Wavelength - 254 nanometers			
Titanium Catalyst	12,220 cells/4,583 Sq. In of Surface Area			
Service Interval	Replace Filter every 6 Months, UV Lamps every 12 Months			
Unit Dimensions	25" x 10" x 17" (635mm x 254mm x 457mm)		25" x 10" x 21" (635mm x 254mm x 533mm)	
Flange	1⁄2" (13mm) around unit			
Unit Weight	23 Lbs (10kg)		26 Lbs (12kg)	
Shipping Box	29" x 11" x 21" (735mm x 280mm x 530mm)	Add 7.5 lbs (3.5kg)	32" x 14" x 23" (812mm x 355mm x 584mm)	Add 7.5 lbs (3.5kg)

MERV = ASHRAE Standard for Minimum Efficiency Reporting Value
UV = Ultraviolet

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 severe 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 luminaires.

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.

Installation

Make sure to install the Hi-Velocity Air Purification System so that the inlet or return air enters the side containing the MERV particle filter first (**Fig. 1**).

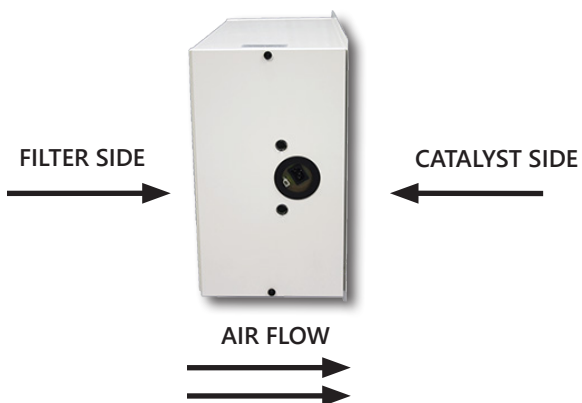


Fig. 1 HE PS Air Flow

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.

Typical Horizontal and Vertical Installation (Fig. 2, Fig. 3)

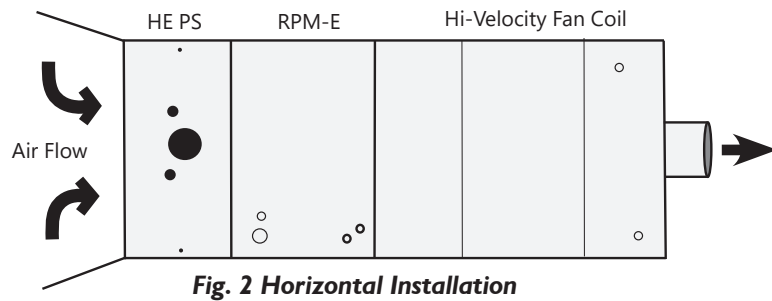


Fig. 2 Horizontal Installation

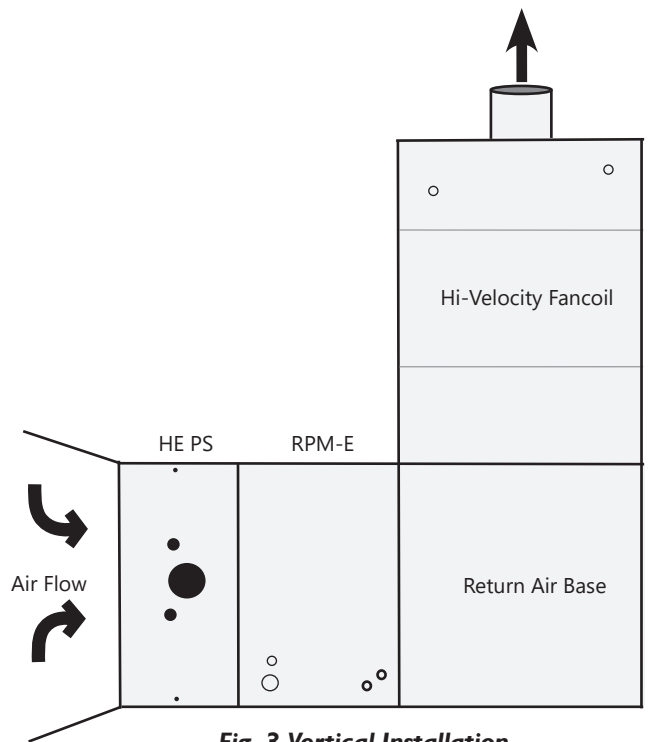
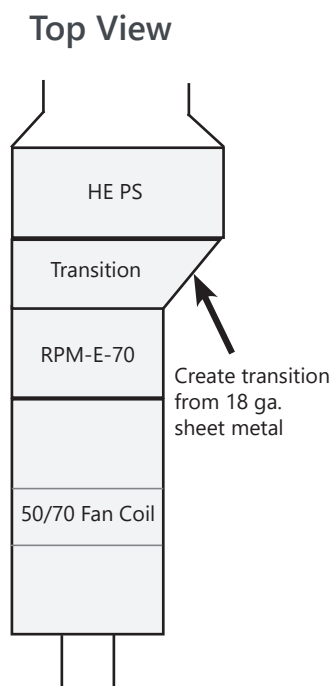
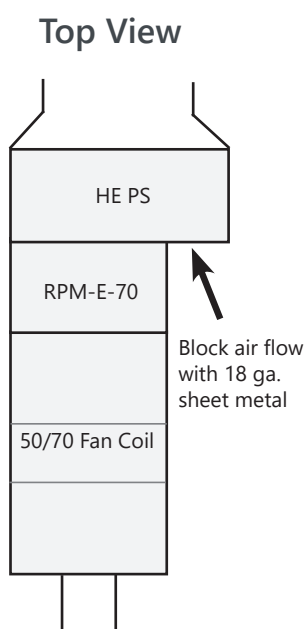


Fig. 3 Vertical Installation

4. When installing the HE PS to a Hi-Velocity 50 or 70 fan coil, a transition should be made (**Fig. 4**) or simply block air flow with a piece of sheet metal (**Fig. 5**).



**Fig. 4 Transition
(Top View)**



**Fig. 5 Block Air Flow
(Top View)**

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. 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.

Service

MERV-13 Filter: Change every **6 months**

Ultraviolet Lamps: Change every **12 months**

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.

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.

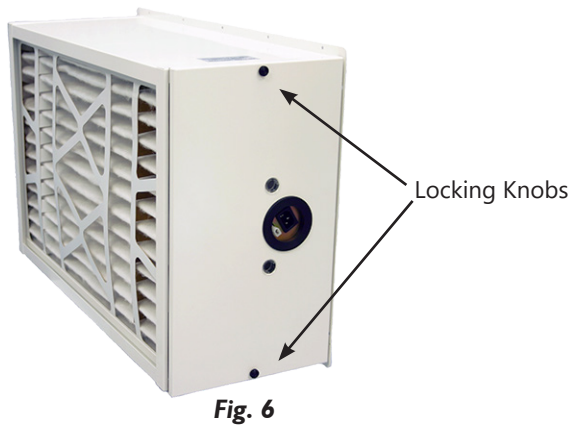
The HE PS System combines **three unique technologies** to protect people against indoor air pollutants. **Photocatalytic Oxidation (PCO)** technology combined with high efficiency **electrostatic MERV-13 particulate filtration** and **germicidal ultraviolet light** quickly reduces and eliminates toxic 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.

Changing the Filter

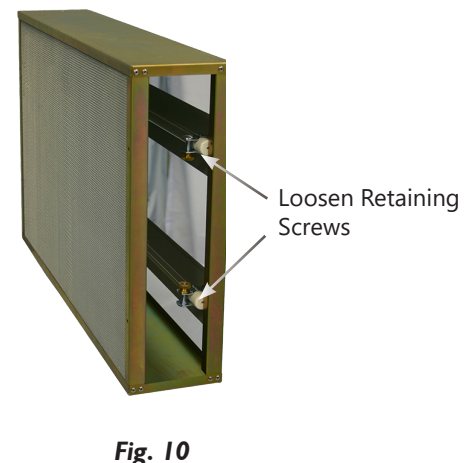
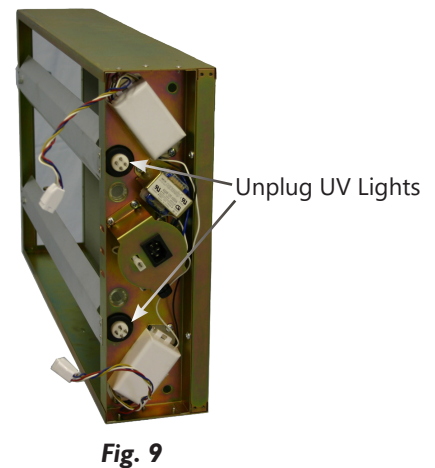
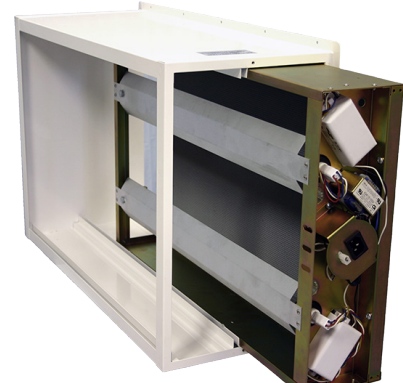
1. Unplug the power cord from the HE PS unit. Unscrew the two locking knobs and remove the door **(Fig. 6)**
2. Remove old filter and replace with new filter. Make sure airflow arrow on filter is pointing to the inside of module. **(Fig. 7)**



Changing the UV Lamps

1. Remove filter as in above. **(Figs. 6, 7)**
2. Remove Photocatalytic module. **(Fig. 8)**
3. Unplug UV lights, loosen retaining screws, and remove UV lights. **(Figs. 9, 10)**
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.



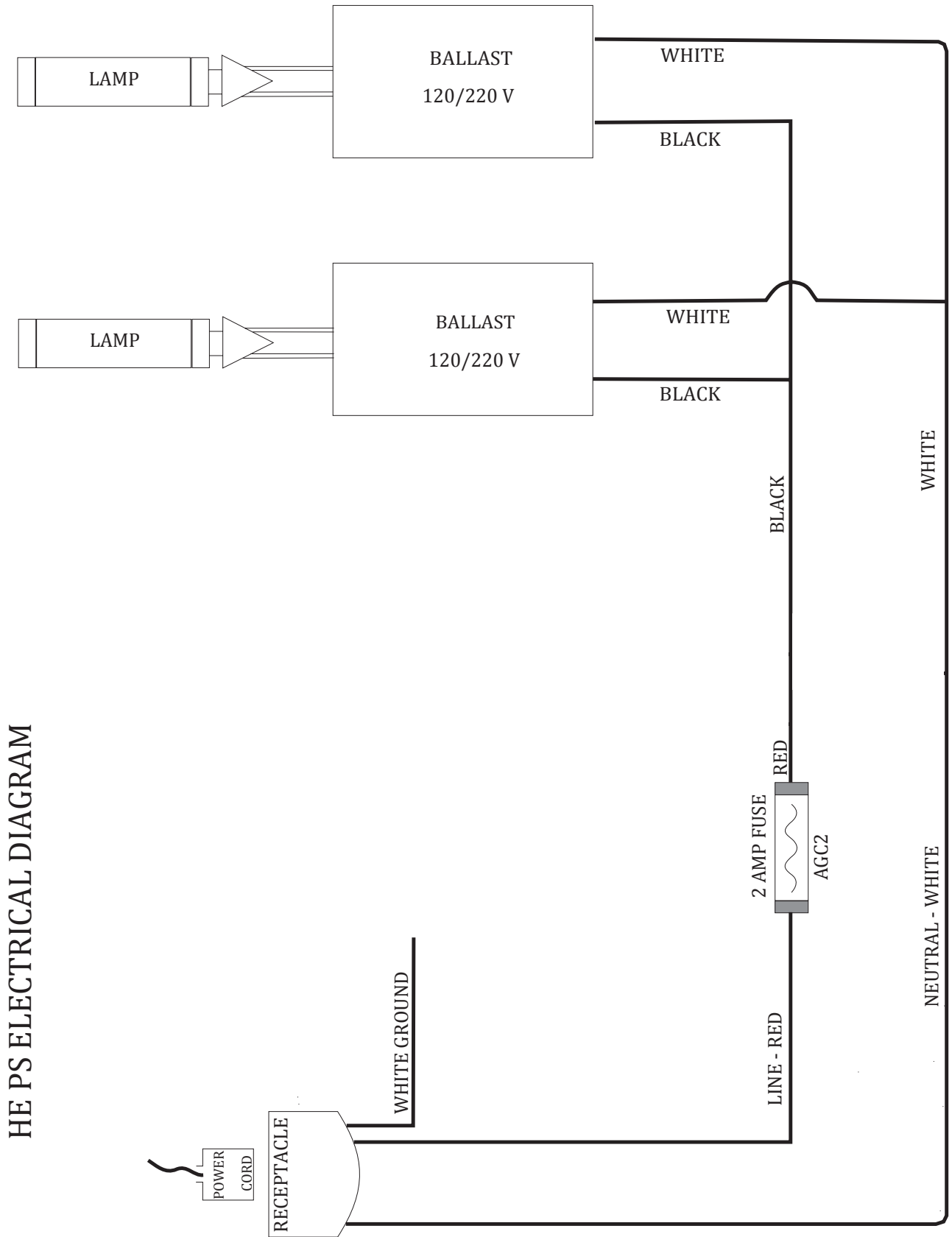


Fig. 12 HE PS Electrical Diagram



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. 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.

Build Smart, Breathe Easy

Hi-Velocity HE-Z Fan Coils, **Green** Technology



Phone: 780-453-2093

Fax: 780-453-1932

Toll Free: 1-888-652-2219

www.hi-velocity.com