



Small Duct High Velocity Heating, Cooling and Home Comfort Systems

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

Installation and Operation Manual



From the Manufacturers of



www.hi-velocity.com

Hi-Velocity HEPS In-Duct Air Purification System



Included:

- 1 - HEPS Air Purification System
- 1 - 120v Quick Connect Power Cord
- 2 - UVC Lamps
- 1 - Instruction Manual

**READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY
BEFORE PROCEEDING WITH THE INSTALLATION**

Please retain these instructions after installation.

Installed By: _____ **Phone:** _____ **Install Date:** _____

IMPORTANT SAFETY CONSIDERATIONS



WARNING: Never expose eyes or skin to UVC light from any source.

- Looking directly at the UVC light may cause permanent eye damage or blindness.
- Never operate the HEPS Air Purifying System out of the plenum.
- Designed for a closed duct system. Do not mount near a supply or a return air opening.
- All duct openings in direct line of site of the UV light must be sealed with aluminum tape or equivalent sealing methods.

WARNING: UV light will break down plastic materials not rated for UV exposure (examples: wire insulation, flex duct, drain pans and humidifiers).

- The unit must be mounted at least 3" from the above stated type of materials.
- If it is necessary to mount the unit in direct line of site of these types of materials, they must be shielded with aluminum foil, aluminum foil tape, or sheet metal.

WARNING: DO NOT mount this unit outdoors.

- This product is designed for indoor installation only (i.e. attics, crawl spaces, basements, etc.).

WARNING: Never touch broken lamp or internal contents of lamp. The lamp contains mercury.

- After opening the carton, unpack and inspect the unit and lamp for damage. Do not install this unit if any damage is noticeable. If lamp is damaged, cracked or broken, do not touch lamp or other contents in carton. Close carton and return to seller immediately.
- In case of accidental exposure to internal contents of lamp, wash hands and any other affected skin area with mild detergent. Remove affected clothing immediately. If skin surface is pierced, seek medical attention immediately.

NOTE: If you touch the glass of the lamp, you should wipe the glass clean with isopropyl alcohol and a lint free wipe. If the lamp is not cleaned, the film of hand oils causes a reduction in the light intensity.

WARNING: Before installing or servicing a humidifier, air filter, HVAC system, or this unit, etc., always turn all power OFF and have unit unplugged. Electrical shock can cause personal injury or death. **Never expose eyes or skin to direct UVC light from any source.**

WARNING: To prevent water damage or electric shock, do not mount unit under a humidifier.

WARNING: This product is designed for indoor installation only (i.e. attics, crawl spaces, basements, etc.). For use on gas fired, oil fired, electric and split system heat pump forced air systems.* This product is NOT designed to be mounted outside on gas fired or heat pump packaged units.**

* Split system heat pumps are systems where the air handler and the air conditioning compressor are separate units.

** Packaged units are systems where the air handler and the air conditioning compressor are built together and are installed outside of the building.

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 install insulation within 3" (76 mm) 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.

Hi-Velocity Air Purification System Parts List

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



Item	Shipping Weight	Shipping Dimensions	Part Number
HEPS c/w MERV 13 Filter	29	29/11/21	20180100000
HEPS 1750 c/w MERV 13 Filter	39	32/14/23	20180101750

HEPS Replacement Parts



Item	Part Number
HEPS One Year Service Kit c/w two Merv 13 Filters and two UV Lamps	20180100007
HEPS 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
HEPS Catalyst Module (no lamps)	20180100005
HEPS 1750 Catalyst Module (no lamps)	20180100013

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

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 aluminum grid 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 HEPS 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 aluminum grid core with cleaning solutions. The catalyst is radiated with short wave ultraviolet light during period of non-air flow and is self-cleaning.

Do not install insulation within 3" (76 mm) 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.

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).

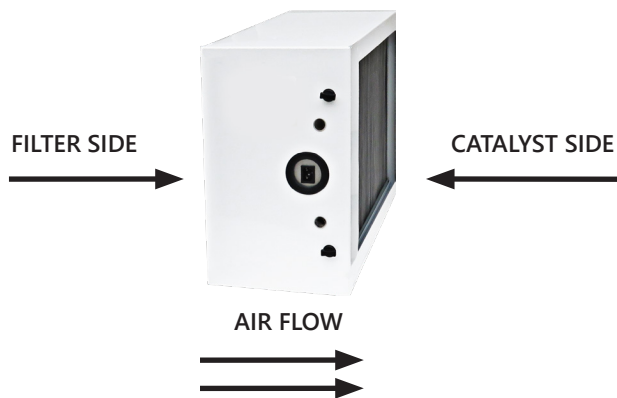


Fig. 1 HEPS Air Flow

1. Rotate the cam latches to release the door 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

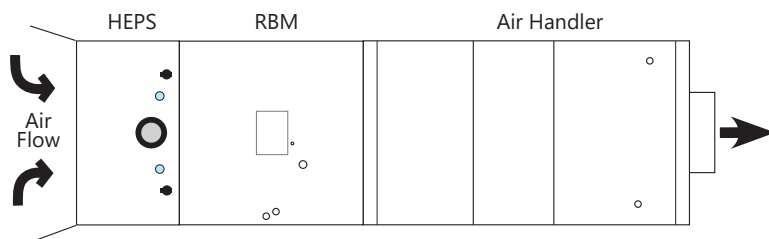


Fig. 2 Horizontal Installation

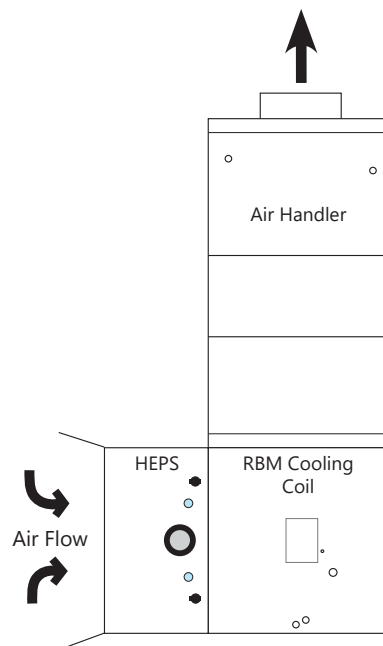


Fig. 3 Vertical Installation

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

Top View (Horizontal Installation)

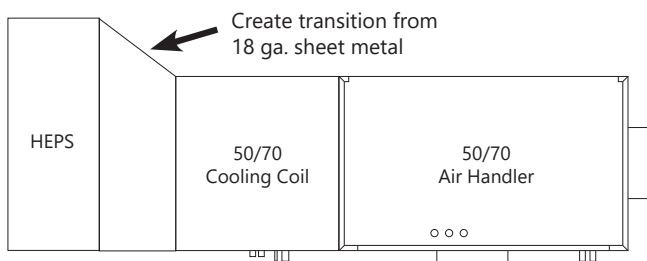


Fig. 4 Transition Example

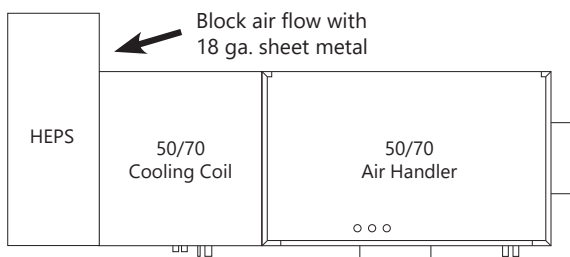


Fig. 5 Block Air Flow Example

5. Tape all seams between the air handler and the outlet side of the HEPS so there can be no air bypassing the system.

6. Attach the air handler to the outlet side of the HEPS 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.

Directions for Use

Only operation of the air handler fan unit is required for air purification 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.

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 HEPS is operating at least **(30) minutes per hour (24) hours per day**.

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. In locations with higher point source pollution, the run time should be extended to (40) minutes or more per hour.

Changing the Filter

1. UNPLUG THE POWER CORD FROM THE HEPS UNIT
2. Remove door by twisting the two locking cam latches so that they are vertical to the short edge of the unit. (Fig. 6)
3. Remove the door at an angle, from the cam latch side first. (Fig. 7)



Fig. 6



Fig. 7

4. Remove old filter and replace with new filter. Make sure airflow arrow on filter is pointing to the inside of module. (Fig. 8)



Fig. 8

5. Replace door by inserting the flange of the door into the filter side of the cabinet. (Fig. 9)



Fig. 9



Fig. 10

6. Close the door at an angle. Twist the 2 locking cam latches such that they are horizontal to the short edge of the unit. (Fig. 10)

Changing the UV Lamps

1. UNPLUG POWER CORD FROM THE HEPS UNIT
2. Remove door as described previously. (Figs. 6,7)
3. Remove inside module from outer cabinet. (Fig. 11)
4. Unplug UV lights, loosen retaining cam latches, and remove lamp(s). (Figs. 12, 13)

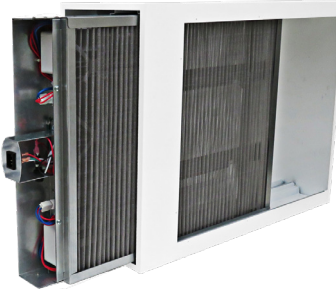


Fig. 11

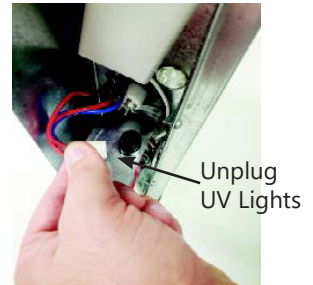


Fig. 12



Fig. 13

5. Slide new lamp into the module. (Fig. 14) Tighten retaining cam latches (finger tighten ONLY or lamp may be damaged.) Plug the ballast connector back on to the lamp.
6. Replace door as described previously. (Figs. 9, 10)



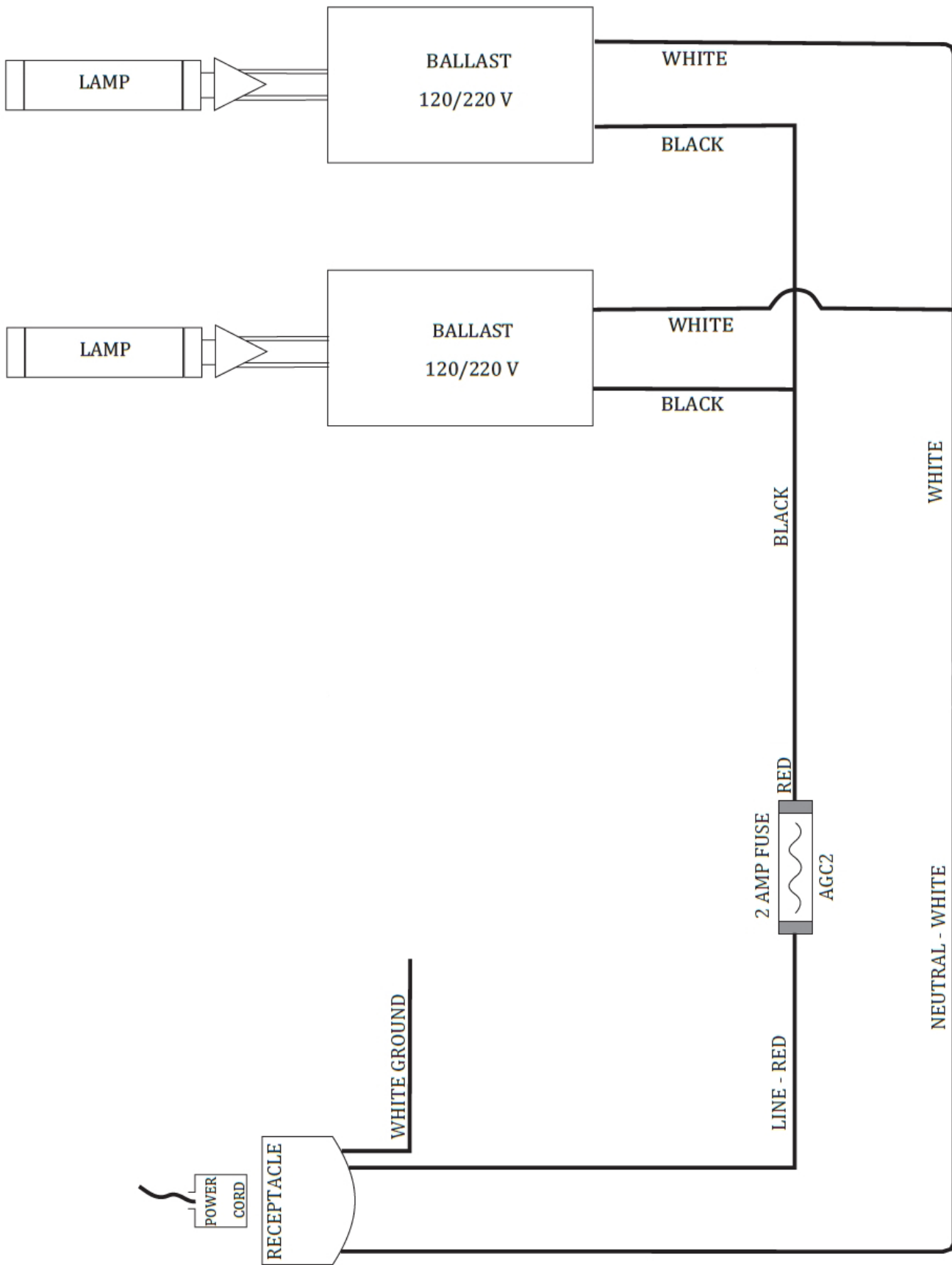
Fig. 14

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



WARNING: Never touch broken lamp or internal contents of lamp. The lamp contains mercury.

HEPS ELECTRICAL DIAGRAM



Installation Notes



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 HEPS 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 HEPS 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.

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Build Smart, Breathe Easy

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



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