

Options & Add-Ons

Filter Rack (Optional)

Available from Energy Saving Products is a 3" (76mm) Filter Rack. Filters are 1"(25mm) thick Merv 3, and the filter medium is approximately 14% efficient. Any after market filter may be used with the Hi-Velocity Filter Rack. (See Dimensions Below) Ensure that there is always a filter in place, and check every month to ensure that the filter is clean. To clean the filter, remove from system, wash the white side and vacuum the colored side. Once the filter has been washed, vacuumed and completely dried, replace in system (colored side to face the fan coil).



Fig. OPT-01 - ESP Filter

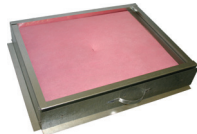


Fig. OPT-02 - Filter Rack and Filter

Filter Dimensions

Unit	50	70	100
Dim.	14" X 1" X 18" (355mm x 25mm x 457mm)	18" X 1" X 18" (457mm x 25mm x 457mm)	24" X 1" X 18" (609mm x 25mm x 457mm)

Hi-Velocity Air Purification System



Designed specifically for use with the Hi-Velocity Systems™ product line, the Hi-Velocity Air Purification System gives consumers unsurpassed indoor air quality.

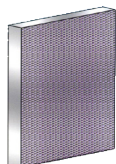
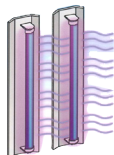
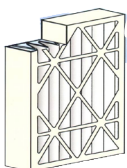
Three powerful technologies in one Air Purification System:

- Electrostatic MERV-13 Filter Removes Allergens
- Photo-Catalytic Oxidation destroys toxic chemicals and eliminates household odors
- Ultraviolet Light Kills Disease Germs on Contact

Our one-size-fits-all design allows for easy applications on any Hi-Velocity System. See our website (www.hi-velocity.com) for Brochure and Installation Module.

MERV-13 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.



Hi-Velocity Portable Air Purification System



Also available is our P-20 Portable Hi-Velocity Air Purification System. This powerfully advanced stand-alone system has 5 steps to give you the cleanest air possible:

- Step 1: A Treated Pre-filter removes all particles from the air larger than 5 microns.
- Step 2: A hospital grade HEPA Filter removes allergens so small they can only be seen by a microscope.
- Step 3: A specially formulated Gas Absorption Media removes toxic fumes.
- Step 4: "Photo-Catalytic Oxidation" destroys toxic chemicals and eliminates household odors.
- Step 5: Ultraviolet light 10,000 times the intensity of sunlight kills viruses and bacteria on contact.

Electronic sensors monitor air quality and automatically increase air purifier performance to compensate for periods of usually high chemical activity or during periods of high particle counts.

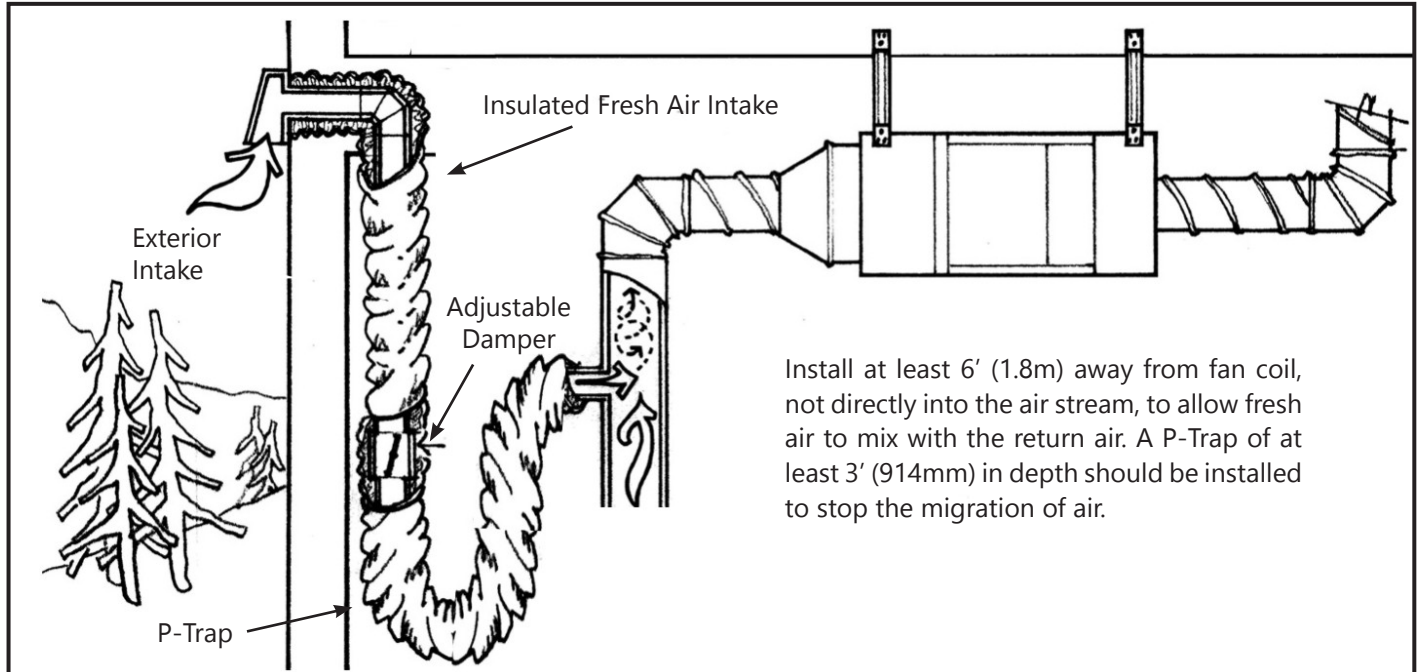
Turbo Meter™ from Davis Instruments



The Turbo Meter provides uncommon accuracy, sensitivity, and pocket-sized convenience. It is based on the principle that a freely turning turbine will rotate at a speed directly proportional to the wind speed. To insure maximum sensitivity and accuracy, the turbine is suspended on sapphire jewel bearings, and its rotation is sensed by an infrared light beam which adds no friction. The resulting signal is processed electronically by an LSI (Large Scale Integrated) circuit for improved reliability and reduced size. A special three digit display is used for extra resolution and provides excellent viewing contrast in bright sunlight. A handy switch selects between four different scales — knots, feet per minute, meters per second, and miles per hour — for unmatched versatility. Unit is compact size (2.6 x 4.7", 7x 12cm) and light weight (3oz., 85g). Measures wind speed from 0 - 99.9 mph. Available from Energy Saving Products, or directly from Davis Instruments.

Third Party Options

Fig. OPT-03 – Fresh Air Make up



Install at least 6' (1.8m) away from fan coil, not directly into the air stream, to allow fresh air to mix with the return air. A P-Trap of at least 3' (914mm) in depth should be installed to stop the migration of air.

Fresh Air Make-Up

For areas that require fresh air make-up, a small intake may have to be installed. It is recommended to install an insulated flex duct, with a damper, into the return air plenum. The damper can then be adjusted to supply the exact amount of fresh air needed to meet local building codes (Fig. OPT-03). This should be balanced to the exhaust air levels of the structure. Either filter the combined air stream through a common filter or use separate filters for both air streams.

Install the fresh air duct to the side of the return air and not directly into the air stream. As shown in Fig. 03, the fresh air duct should be installed more than 6' (1.8m) away from the fan coil and before a 90° bend.

If too large of a duct is installed, the excess fresh air will increase system operating costs and decrease system performance.

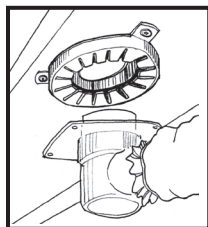
An approximate fresh air duct sizing is: 3" (76mm) for the 50 unit, 4" (102mm) for the 70 unit, and 5" (127mm) for the 100 unit.

Fire Stopping

Some areas require a Fire Stopping device to stop the spread of a fire and/or prevent the duct system from supplying oxygen to the fire. The Hi-Velocity System can be used in conjunction with several types of Fire Stopping devices such as pipe collars, wrap strips and mechanical shut-offs.

Fig. OPT-04 – Fire Stopping Devices

With our Rough-In Boots, Metacaulk pipe collars work very well; Fig. OPT-04 gives an illustration of a pipe collar used with the Rough-In Boot. Many options are available to the designer. If assistance is needed in product choice, call our representatives at Energy Saving Products for free technical advice.

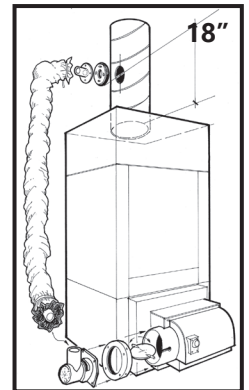


Humidity Control

It is recommended to use a steam humidifier in single zone applications. For multi-zone applications, contact the manufacturer.

Fig. OPT-05 – Humidifier

When a bypass type humidifier is used, the humidifier can be mounted on the return air duct, and then a 2" (51mm) take-off from the hot air side is run back (Fig. OPT-05). DO NOT use any size larger than 2" (51mm), and be sure to install a summer shut-off, or it will create problems with the airflow.



HRV/ERV

An HRV (Heat Recovery Ventilator) is typically a flat-plate air-to-air heat exchanger that transfers temperature between the two air streams. An ERV (Energy Recovery Ventilator) will exchange water vapour as well as temperature. It is usually a "heat wheel" and some amount of air will leak between the two airstreams. It is generally more costly than an HRV but it has the advantage of reducing the latent capacity and not just the sensible capacity.

There are several ways to integrate these products into the Hi-Velocity System. The easiest is to draw the exhaust from the return duct and then to add the fresh air a minimum of 5' downstream.

However, the best method is to have a separate return for the exhaust air. This will minimize any short circuiting of air between the fresh air and the exhaust, optimizing the location of the exhaust returns, which are best located in bathrooms.