

FRESH-AIRE UV[®]

PURITY[™]

LOW PROFILE

2" INSTALLATION & MAINTENANCE INSTRUCTIONS

IMPORTANT!

- Only qualified technicians should install this product
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

Installation

1. Turn off power to the air handler
2. Remove the existing filter from the 2" slot
3. Add foam padding strips (included) to frame as needed to assure a tight fit
4. Insert PLP into 2" slot
5. Power the Purity Low Profile (PLP)

A. Use a 110/24 VAC, 40 VA, Class 2 plug-in adapter power supply.
(Part # TUVF-40VA24VAC-WP sold separately)

or

B. Locate the 24 volt AC power source in your HVAC system then connect the leads of the power cord illustrated in the electrical wiring diagram.

See diagram (Fig. 1)

WARNING: Electrical work should be done by a qualified electrician or HVAC technician

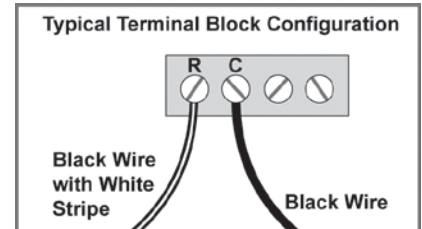


Fig. 1 HVAC Wiring

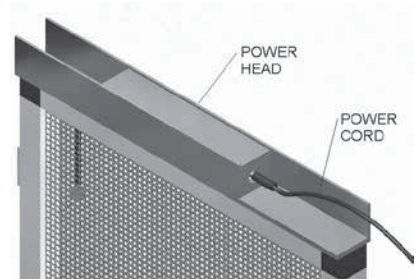
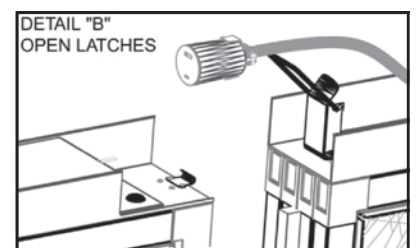
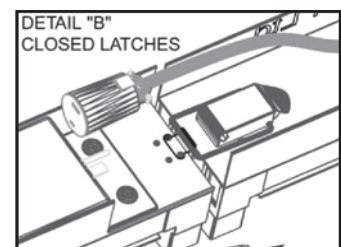
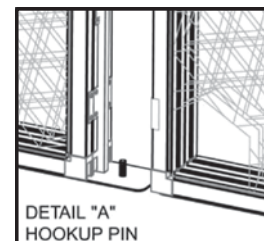
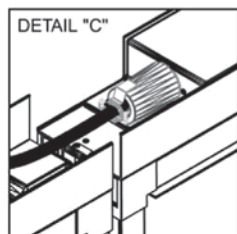
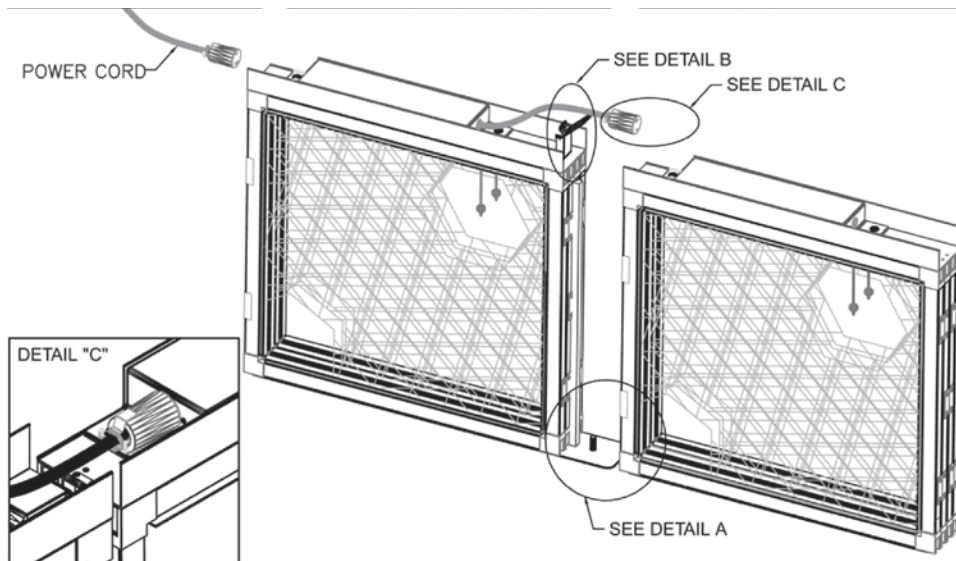


Fig. 2 Power Cord



TANDEM INSTALLATION

1. Mechanically hook-up filter panels at the bottom (See detail "A")
2. Snap top latches (See detail "B")
3. Electrically connect the filter panel (See detail "C")

POWER CONNECTION

By a licence electrical contractor (See "Control Box" instruction)

POWER CONSUMPTION

- 2 VA for each filter, one 24 Volts transformer can be used to power all filters
- Use only 24 VAC to power filters

Collector Pad Replacement

1. Turn off the power on the HVAC system.
2. Open the air handler filter access door.
3. Unplug the 24 volt power-cord and remove the PLP from the filter slot
4. Clean heavy accumulated dust on the outside screen with a vacuum.
5. Open the PLP and remove the old Collector Pad and discard it.
6. Insert new Collector Pad by sliding the electrode into the color tube inside the Pad.
7. Close the Air Cleaner and plug the 24 volt power cord into the power head.
8. Restore HVAC system power.

Note: You may hear a little snapping noise at the beginning. This is normal because of variations in temperature and humidity. This noise should cease after a few hours of operation. If the noise persists, contact your HVAC service company.

Periodical Operation Maintenance

Your collector pad should last 4 to 6 months, depending on the amount of air pollutants and fan usage. For maximum effectiveness of the PLP, we recommend that the fan control on the thermostat be in the "ON" position.

WARNING: Failure to change the collector pad on a regular basis will result in a reduction of air flow through the HVAC system. This can cause short cycling of your air handler system and may cause damage to your equipment.



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TUV-PLP2-MAN 032520

HOW POLARIZED MEDIA WORKS

The magic is simple. The reasons why the Electro Breeze polarized media commercial air cleaners work so much better compared to other media air filters is because they take advantage of three scientific filtration principles combined in one product to filter air and trap unwanted and harmful particulate. These principles also apply to the only other competitor in polarized media, the Dynamic commercial air cleaner.

Eco-friendly building means lower energy usage, less waste produced, less bulk of consumables, less maintenance, higher efficiency filtration for better indoor air quality, so when your plans call for eco-friendly building, Electro-Breeze is the answer.

The three scientific principles at work in the Electro Breeze polarized media commercial air cleaner are Impingement, Polarization and Agglomeration. Virtually every other filtration media type filters, with the exception of the Dynamic commercial air cleaner, use only impingement. The combination and benefits of combining these three principles are explained below:

Impingement

Impingement is the process that all media filters use to trap dust. Simply stated, in order to trap particles the impingement process relies on media being placed in the path of oncoming airborne particles and striking the particles as they flow by in an effort to stop it.

The degree of effectiveness of this method depends on the amount of material contained in the media filter placed in the path of the oncoming airborne particulate.

Commercial filters using this type of process cover the entire range of efficiencies. The finer and more dense the media used the greater the efficiency. High efficiency particulate air (HEPA) filters have high efficiencies along with very dense fiber packing, however the tradeoff associated with these filters is a reduced volume of filtered air - all things being equal.

Impingement type filters always have a built-in compromise between airflow and efficiency. The greater the efficiency of the filter, the lower the volume of air that is filtered. The greater the flow of air the lower the efficiency except in the case of Electro Breeze electronic air filters, which incorporate polarization and agglomeration to trap particulate.

Electro Breezes unique induced polarized media commercial air cleaners are the exception to this principle. Electro Breeze air cleaners are not subject to compromise between airflow and high efficiency, and they meet all the demands for increased airflow and high efficiency.

Polarization

The second major scientific principle used in engineering Electro Breeze air cleaner is polarization. Just like charging a nail to make it into a magnet, the filter media is charged and becomes a dust magnet.

With tens of thousands of charged fiber strands in each filter the efficiency of this polarized process is greatly enhanced. In addition, as each particle attaches itself to the fiber strands it in turn becomes part of the collection process thereby increasing the effectiveness of the filter as it loads.

Any particles that may escape through the influence of the polarized filter media travel through the system without any residual charge and are then filtered out on subsequent passes.

Agglomeration

Airborne particles, as explained above, enter the Electro Breeze air cleaner and are polarized by the induced static charge and take on characteristics of millions of tiny magnets. As a result four distinct possibilities can occur:

These magnetized particles can attach themselves to the charged fiber strands in the filter. They can strike or become attached to each other and form larger particles. (Agglomeration)

These larger (Agglomerated) particles can become attached to the fiber filter strands.

The particles may pass through the filter and AGGLOMERATE and be captured on subsequent passes.

agglomeration

The combination of induced electrostatic polarization along with the process of agglomeration results in filtration that compares with clean room standards. A HEPA air cleaner filter can, by definition, remove at least 99.97% of 0.3-micron particles. The Electro Breeze polarized media commercial air cleaner initially eliminates 97% down to 0.3-micron particles then gets more efficient as it loads! What is a micron?

Typically, whenever you add higher filtration performance to your air handling system, you will increase your pressure drop and draw more energy. The result is higher utility bills because your system is working harder to deliver the air. The Electro Breeze air cleaner technology allows you to get all this performance without losing airflow. That is eco-friendly building!