

Electro Breeze Germicidal Air Purification System: Special UVC Stick with V-Bank Air Cleaners

Product Code: P-224E-T-V Bank

Specifications

- 2.0 **General:** The germicidal air purification V-Bank system shall consist of two polarized 2" panel air cleaner with an upstream array of UVC emitters in the middle of the V-Bank .
- Air Cleaning**
- 2.1.1 **General:** The overall system filtration shall be comprised of two stages: a pre-filter section followed by a bank of electronically enhanced polarized collector cushion pad air cleaners.
- 2.1.2 **Filter Rack:** The filter rack shall be configured so as to accommodate a bank of nominal 2" pre-filters arranged as per existing air handler rows that are 24" high followed by a bank of air cleaners in "V" configuration modules, each module being 24" high, 24" wide and 25.75" deep.
- 2.1.3 **Pre-filters:** The pre-filters shall be 25-30% ASHRAE-rated pleated disposable filters. They shall be nominally 24"x24"x2" in size.
- 2.1.4 Non-ionizing, polarized collector cushion pad electronic air cleaner modules:
- 2.1.5 **Certifications:** The air cleaner shall be tested and meet CSA Standard: C22.2 No: M1986 and UL Standard ANSI/UL Std. No 867 (4th Ed.) for electrostatic air cleaners.
- 2.1.6 **Operation:** The air cleaner shall have an active electrostatic field that polarizes a dielectric collector cushion pad. It shall not ionize airborne particles or produce ozone.
- 2.1.7 **Performance:** The air cleaner shall be able to remove at least 97.8% of all contaminants 0.3 microns and greater in a recirculating system. The pressure drop across the air cleaners shall be no more than .13"w.g. @ 500fpm when the collector cushion pads are clean. Removal of ambient VOC's shall be accomplished at a minimum rate of 30% per pass.
- 2.1.8 **Construction:** The construction of the air cleaner frame and screens shall be aluminum. Two miniaturized electronic power supplies (power heads) shall be mounted in a channel on the frame of the air cleaner in a non-conductive housing. Two glass fiber collector cushion pads shall be placed between the two outside grounded frame/screens and the center frame/screen. The power heads shall impart a high DC voltage to the center conductive collector cushion of the pad. The air cleaner frame shall be hinged so as to allow the frame to be opened and the media changed without removing the air cleaner from the filter bank.
- 2.1.9 **Electronics:** the power heads shall be capable of converting 24VAC to 7,200 KVDC. The power heads shall draw no more than two watts of power. The power head shall transmit the 7,200 KVDC to the center collector cushion pad through a special copper filament. The power head shall be entirely encased in a hard resin compound that will both insulate the high voltage output and protect the components from moisture and external contaminants. Each power head shall have a "Power On" lamp and be equipped with a high voltage resistor to de-energize the air cleaner when the power is shut off. Each power head shall have an input jack and an output cord so that each air cleaner may carry the 24VAC to the next. The power heads will be connected in electrical parallel.
- 2.1.10 **Power Supply:** The 24VAC power supply must be a UL or GSA certified transformer, class "2" type, which shall permit one side of the secondary output (24V) to be attached to electrical ground.
- 2.1.11 **Filter Media:** Replaceable collector cushion pad shall be individual, disposable glass fiber pad, which shall consist of one ply of fiber glass folded in two with a conductive collector cushion of aluminum or activated carbon. This collector cushion shall be permanently enclosed between a folded piece of fiber glass and shall be disposed of when the collector cushion pad is changed. The glass fiber collector cushion pad must be fabricated from a constant filament so that any shed fibers are not enhanced. The glass fiber must have a minimum of a class "2" fire rating. Each air cleaner shall have two collector cushion pads: one with an aluminum conductive center and the other with an activated carbon center.
- 2.1.12 **Configuration:** The air cleaners will be arranged in "V-Bank" modules. These will be fabricated from galvanized steel and will hold two air cleaner panels in a self-contained unit that may be accessed from the front or side. Each module shall be nominally 24" in height, 24" in width, and at least 24" in depth.