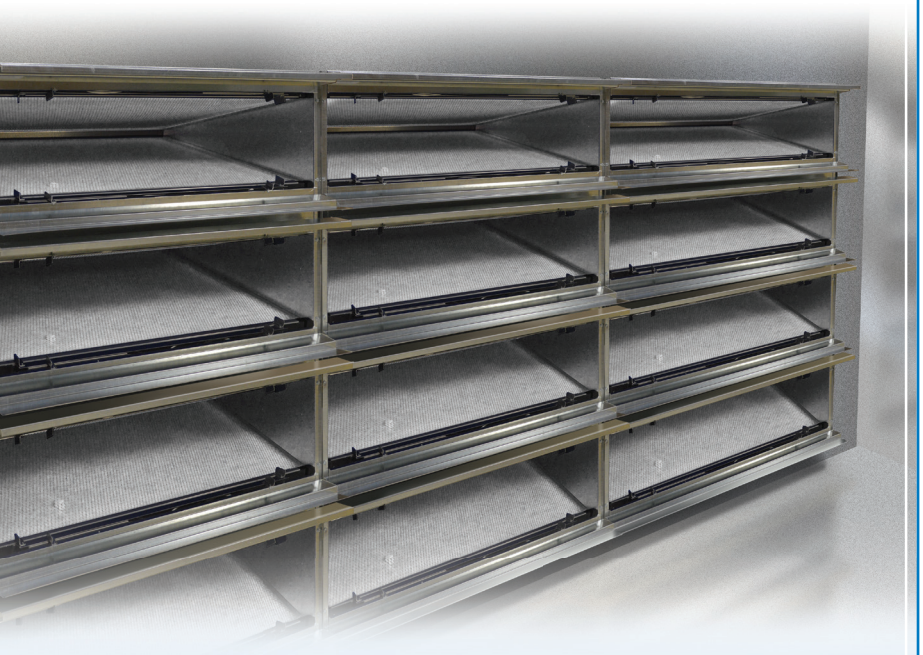
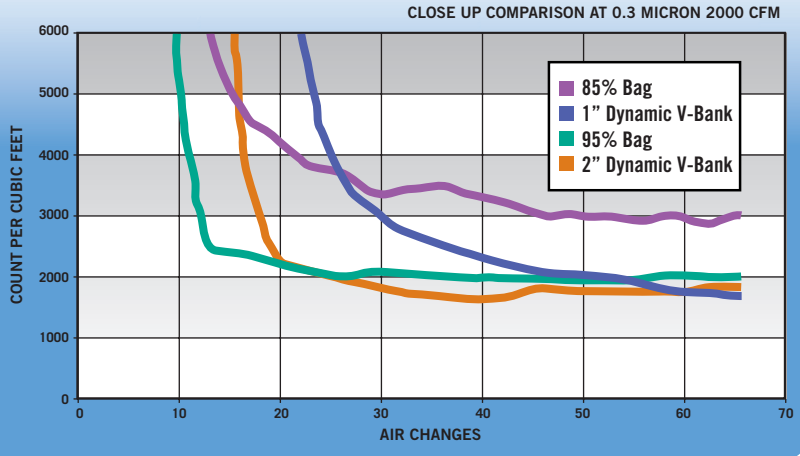
Dynamic Air Quality Solutions

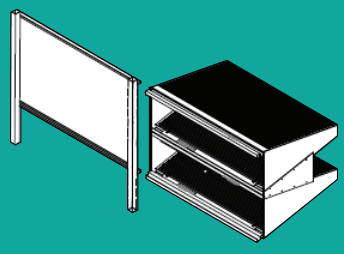
V-BANKS



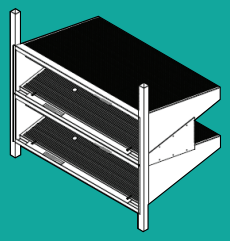


An Alternative to Bag and Cartridge Filters for Improved Filtration, Odor Reduction, Lower Energy Costs and Less Maintenance

- Polarized-Media Electronic V-Bank Air Cleaners for superior ultrafine particle, odor and VOC removal
- Effective in smoke and exhaust applications
- Superior dust loading for longer media life and reduced maintenance
- Helps compliance with ASHRAE Standard 90.1 energy requirements
- Can help implement the IAQ Procedure of ASHRAE Standard 62 to possibly reduce outdoor air
- Multiple mounting options including front-load and side-access filter modules
- Compatible with Sterile Sweep™ UVC Systems
- Limited 5 year warranty includes electronics
- Tested to meet CSA Standard C22.2 No. 187-M19986 and UL Standard 867
- Available with 1" and 2" panels in standard heights of 12" and 24" and depths of 16" and 24". Widths vary with the AHU dimensions to maximize available filter area and keep all modules the same width.



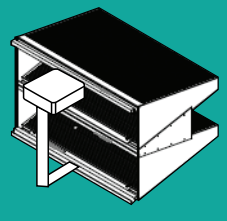
1" OR 2" HEADER TO FIT EXISTING FILTER TRACK



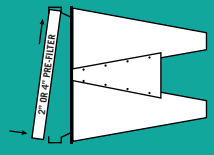
FACE MOUNT-BOLTED TO VERTICAL POSTS

PERFORMANCE DATA	16" DEEP 1VB	16" DEEP 2VB	24" DEEP 1VB	24" DEEP 2VB
Electrical Input:	24 VAC	24 VAC	24 VAC	24 VAC
Powerhead Output Voltage:	7 kV (DC)	7 kV (DC)	7 kV (DC)	7 kV (DC)
Power Consumption per 12" of Height:	3 Watts	6 Watts	3 Watts	6 Watts
Powerhead Volt/Amps Draw:	1.45 VA	3 VA	1.45 VA	3 VA
Ozone Generation:	None	None	None	None
Initial Static Pressure* @ 500 fpm:	.20 w.g.	.36 w.g.	.13 w.g.	.20 w.g.

*Typical final static pressure is initial static pressure x2



STERIL SWEEP MOUNTING TRACK



2" OR 4" PRE-FILTER TRACK

Specifications for V-Bank Air Cleaners

1.0 **General:** The overall system filtration shall be comprised of two stages: a pre-filter section followed by a bank of electronically enhanced polarized-media air cleaners.

1.1 **Pre-filters (Optional):** The pre-filters shall be 25-30% ASHRAE-rated pleated disposable filters. They shall be nominally 24x24"x2" in size.

1.2 **Non-ionizing, polarized media electronic air cleaners:**

1.2.1 **Certifications:** The air cleaner shall have been tested and meet CSA Standard C22.2 No. 187-M19986 and UL Standard 867 for electrostatic air cleaners.

1.2.2 **Operation:** The air cleaner shall have an active electrostatic field that polarizes a dielectric media. It shall not ionize airborne particles or produce ozone.

1.2.3 **Performance (1" 24" V-Bank):** The air cleaner shall be able to remove 98.6% of all contaminants 0.3 microns and greater in a re-circulating system. The pressure drop across the air cleaners shall be no more than 0.15"w.g. @ 500fpm when the media pads are clean. Units shall be able to hold up to 1,000 grams of dust with a static of less than .37" w.g. There shall be documented field data to show removal of ambient VOCs at a minimum rate of 30% per pass.

Performance (2" 24" V-Bank): The air cleaner shall be able to remove 98.6% of all contaminants 0.3 microns and greater in a re-circulating system. The initial pressure drop across the air cleaners shall be no more than 0.23"w.g. @ 500fpm. Units shall be able to hold up to 1,600 grams of dust with a static of less than .5" w.g. There shall be documented field data to show removal of ambient VOCs at a minimum rate of 70% per pass.

1.2.4 **Construction:** The construction of the air cleaner shall be aluminum. Air cleaner sides and screens shall be of galvanized steel. Electronic power supplies (power heads) shall be mounted in a channel on the frame of the air cleaner in a non-conductive housing. Glass fiber media pads shall be placed between grounded frame/screens. Power heads shall impart a high DC voltage to the center conductive mesh of the media pad. The air cleaner frames shall be hinged so as to allow the frame to be opened and media changed without removing the air cleaner from the filter bank.

1.2.5 **Electronics:** The power heads shall be capable of converting 24VAC to 7 kV (DC). The power heads shall draw no more than two watts of power. The power head shall be insulated from the air cleaner frame and shall transmit the 7 kV (DC) to the center mesh of the media pad through a titanium filament. 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.

1.2.6 **Power Supply:** The 24VAC power supply must be a UL or CSA certified transformer, class "2" type, which shall permit one side of the secondary output (24V) to be attached to electrical ground.

1.2.7 **Filter Media:** Replaceable filter media shall be individual, disposable glass fiber "pillows", which shall consist of two ply of fiber glass with a conductive center screen of activated carbon mesh. This center screen shall be permanently enclosed between the two pieces of fiberglass and shall be disposed of when the media pad is changed. The glass fiber media must be fabricated from a constant filament so that any shed fibers are not respirable. The glass fiber must have a minimum of a class "2" fire rating.

1.2.8 **Configuration:** The air cleaners will be arranged in pre-fabricated V-Bank assemblies comprised of separate air cleaners, sides and attachment flanges. Each "V" Bank shall be 12" or 24" in overall height, with widths up to 48" and depth of 16" or 24".

1.3 **Mounting:** Air cleaners will be constructed so as to allow front or side access for filter media changes and shall include provisions for mounting with:

- Flanged for permanent mounting to vertical posts
- Flanged for permanent mounting with tracks for Sterile Sweep UVC Emitters
- Flanged for permanent mounting with 2" or 4" pre-filter tracks
- 1" or 2" headers to slide into the tracks in a filter section designed for bag/cartridge filters

2.0 **Reduced Outside Ventilation Air (Optional):** The system shall be designed to remove particulates and contaminants and meet ventilation rate requirements using the ASHRAE Standard 62.1 Indoor Air Quality Procedure.

2.1 **Alternates:** Any alternately specified system shall have demonstrated the ability to remove particulates and contaminants and meet ventilation rate requirements using the ASHRAE Standard 62.1 Indoor Air Quality Procedure in at least three similar installations.

2.1.1 **Test Reports:** Alternately specified air cleaners shall be required to conduct air quality tests before and after the installation to demonstrate that indoor air quality is at least as good as it would have been had outside air been brought in at ventilation rates using the ASHRAE Standard 62.1 Ventilation Rate Procedure.

3.0 **Warranty:** The air cleaner shall carry a written Five (5) Year Limited Warranty on parts. The warranty shall provide that a replacement will be furnished at no charge for any part of the product which fails in normal use and service during the warranty period and shall commence on the date of installation.

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NAFA National Air Filtration Association

IAQA Corporate Member

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Specifications subject to change without notice

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