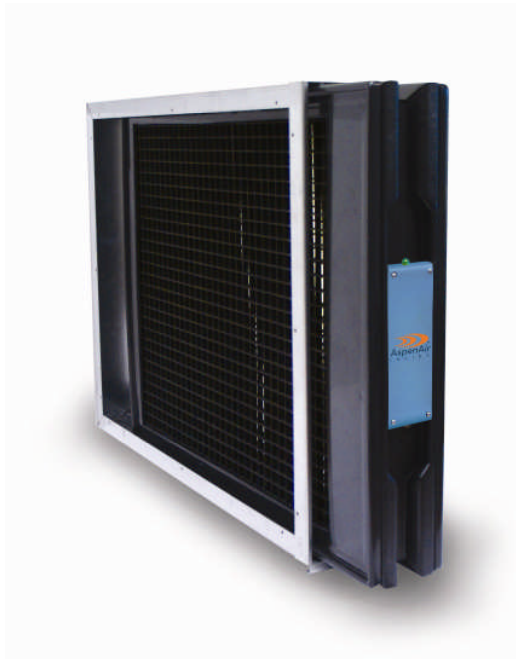


# ASPENAIR

Furnace Mount  
Electronic Air Cleaner  
Model FM 24



Owner's Guide for  
Installation, Operation & Maintenance

[www.AspenAirInside.com](http://www.AspenAirInside.com)

888 326-0976

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**CAUTION: Read installation instructions carefully before proceeding.**

## TABLE OF CONTENTS

1. INTRODUCTION
2. SPECIFICATIONS
3. AIR CLEANER CONSTRUCTION
4. PLANNING THE INSTALLATION
5. INSTALLATION
6. OPERATION and MAINTENANCE
7. WARRANTY

### Included Materials:

- 2ea RetroTraks (1ea only for “C” units)
- Grommet
- Power cable

# 1. INTRODUCTION

## AIR POLLUTION- THE INSIDE STORY

In the real world, the quality of the air we breathe can greatly impact the quality of our life. Indoor air pollution is a serious health hazard that can be life threatening. The very young and the elderly are the most vulnerable.

Indoor air pollution has everything to do with small particles that stay suspended in the air we breathe. Small airborne particles like bacteria, viruses, carbon soot and tobacco smoke are the main culprits, small enough to be inhaled directly into your lungs where they can and do cause damage.

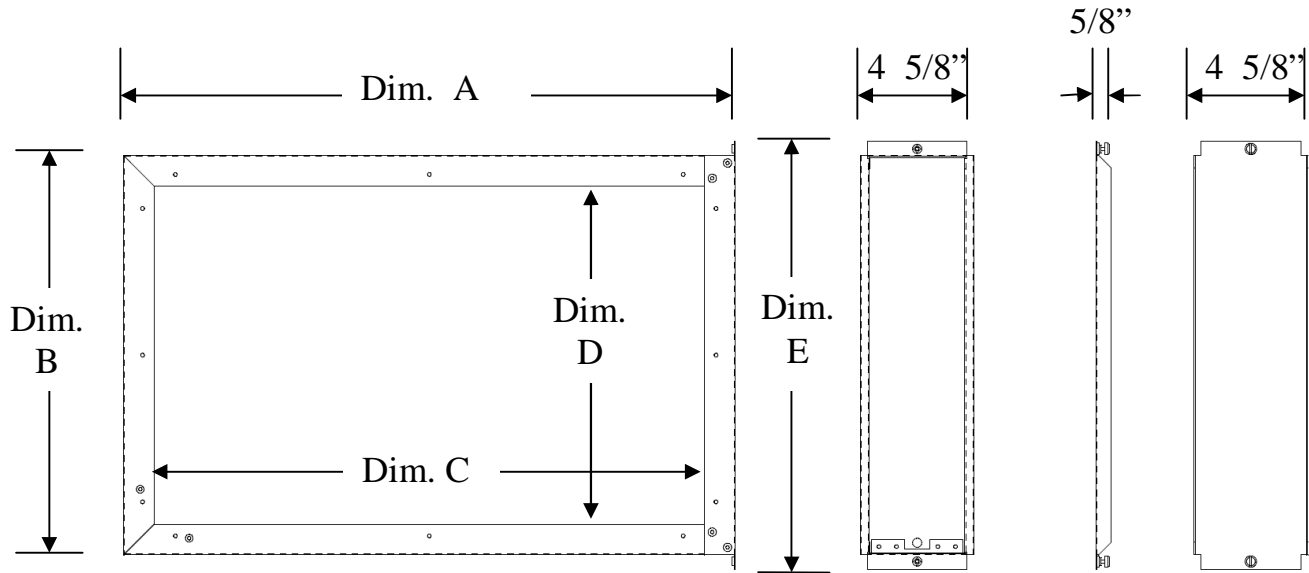
Most of us spend 90% of our lives indoors, in nearly air-tight homes and offices, breathing recirculated air.

Your professional HVAC contractor is a clean air specialist. The AspenAir Electronic Air Cleaning system can make a huge difference in the quality of the air you breathe and in the health of your family.

## 2. SPECIFICATIONS

Electrical Input	24 Vac	24 Vac
Electrical Output	24,000V DC	24,000V DC
Filter Housing Weight	8#	8#
Power Consumption	2 Watts (Nominal)	2 Watts (Nominal)

## AspenAir EAC Housing Dimensions



FM24 SERIES	DIM. A (IN)	DIM. B (IN)	DIM. C (IN)	DIM. D (IN)	DIM. E (IN)
FM241620	21	16-3/8	18-1/2	13-7/8	17-1/2
FM241624	25	16-3/8	22-1/2	13-7/8	17-1/2
FM242020	21	20-3/8	18-1/2	16-7/8	21-1/2
FM242024	25	20-3/8	22-1/2	16-7/8	21-1/2

### 3. AIR CLEANER CONSTRUCTION



Four basic components create the powerful, patented, AspenAir electronic air cleaning system.

These components have been time tested in the production of more than 800,000 units. Each element of the AspenAir Bi-Polar system demonstrates breakthrough innovation.

- A. The AspenAir Power Supply is the heart of all Bi-polar EAC products. It is compact, fully encapsulated and very powerful. So reliable it is warranted for 5 years.
- B. The Power Grids are non-metallic, permanently infused with Macon-D (an exclusive and proprietary development), which allows very high conductivity with no capacitance build-up and no shock. It is non-corrosive and eliminates arcing.

- C. The Ion Chamber is a fully enclosed electronic Bi-polar closed loop. There is no line ground contact. The full power of 24,000 (-/+ ) volts is concentrated only on the airflow, separating toxic particles from the air stream. As sub-micron particles become polarized and attach to the polarized disposable collection media, they “agglomerate” a process where smaller particles combine to form larger particles. The now larger particles, with greater surface area, are trapped in the collection media attracting smaller toxic particles, increasing the collection efficiency over time. This is a major improvement over conventional wire and plate metal electronic air cleaners.
- D. The AspenAir Disposable Collection Media has significantly greater collection surface than metal cell collectors (up to 10 times the area).

## **4. PLANNING THE INSTALLATION**

### **APPLICATION**

The AspenAir Electronic Air Cleaner is used in forced air heating, cooling and ventilating systems. The AspenAir air cleaner should be installed in the cold air return system so that all the household air is circulated through the air cleaner.

### **INSTALLATION REQUIREMENTS**

The best location for the AspenAir Furnace Mount air cleaner is in the return air duct adjacent to the blower compartment, under the blower compartment (for upflow) or above blower compartment (for downflow). Caution: For downflow applications, the AspenAir should be installed at minimum 12” above the blower compartment, with fan delay set at maximum. To avoid contact with the AspenAir filter, sheet metal screws should be pointed away from the AspenAir cabinet/housing when attaching to the air handler and duct sheet metal.

**\*\*DO NOT INSTALL THE AIR CLEANER IN THE DISCHARGE AIR DUCT.**

## **TRANSITIONS**

If the return air plenum does not fit the air cleaner cabinet, a gradual transition is recommended to reduce air turbulence through the air cleaner and maximize efficiency. Not more than a 20 degree on expansion should be used on each side of the transition fitting.

## **5. INSTALLATION**

*Note: The AspenAir Electronic Air Cleaner is designed to be connected to a 24VAC Power Source which is live only when the air handler/blower is running.*

### **CAUTION**

Only qualified HVAC professionals should perform installation or repair of your AspenAir system in accordance with all applicable codes and standards.

- Very few elements of the AspenAir unit are user serviceable. Attempts to service or enter unserviceable components may cause serious injury due to electrical shock.
- Ensure that at minimum, a Class 2, UL listed 24 Volt power source is used for input power. Minimum power rating of 6VA is required.
- Do not install the AspenAir Electronic Air Cleaner in the discharge air duct.

**WARNING:** Disconnect power to air handler or other power source until installation is complete as 120Volts may cause serious injury from electrical shock.

**Prior to installing air cleaner, read instructions carefully for safe operation. Failure to follow them could damage the product and invalidate the warranty.**

1. Preparing the cabinet for the AspenAir EAC: See Figures below
  - a. Insert rubber grommet into the pre-drilled hole at rear of the housing. (Note: If retrofitting an existing cabinet: 3/8" hole must be drilled at rear of cabinet as shown below).
  - b. Insert power cord from inside of the housing cabinet through grommet in preparation to connect to 24VAC power source as described below. Leave the jack connector end hanging out of the front of the cabinet.
  - c. Place one plastic RetroTrak on the floor of the housing, using the 4ea strips of 2-sided tape to secure in place. Ensure that the wire is lying loose in the center of the housing floor, **under** the Retrotrak.



(Note: If retrofitting an existing cabinet: Secure an additional RetroTrak on the ceiling of the cabinet, so that both upper and lower RetroTraks are **secured against the inside edge** of the cabinet to create a tight fit). See figure below.

### QuikTrak RetroKit



A competitor's housing with AspenAir's RetroKit tracks.



AspenAir system slides into place.



Simple and fast retrofit saves time and money.

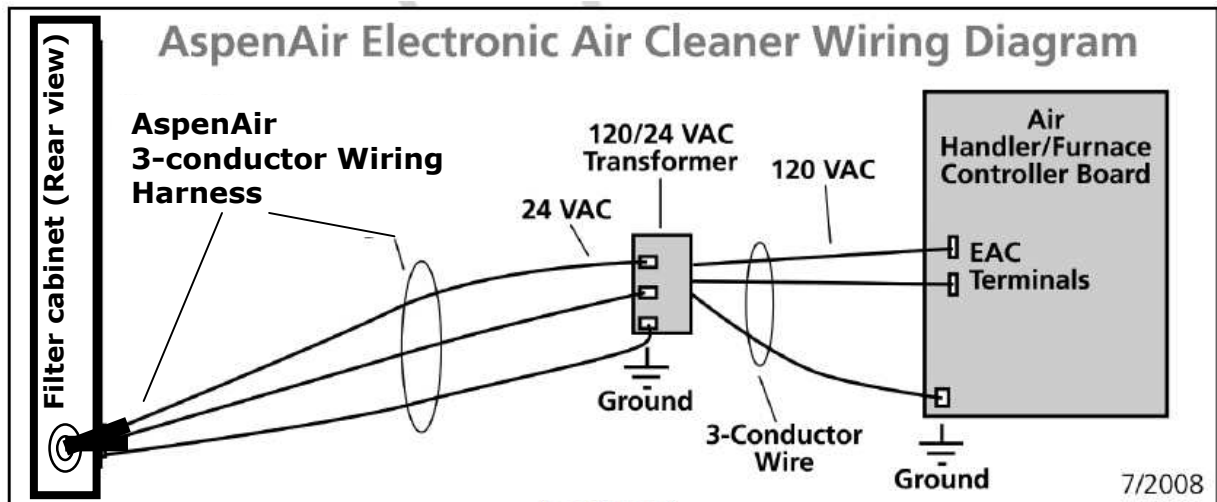
2. Install cabinet to furnace using the pre drilled holes and appropriate screws to attach to air handler. Seal with either mastic or duct tape to create an air tight connection.
3. Install the return air plenum to the filter cabinet.
4. Ensure that the AspenAir filter media is positioned inside the system with the loosely woven side facing upstream toward incoming air.
5. **Electrical Wiring – See Wiring Diagram Below:** Disconnect power to furnace/air handler. Ensure thermostat is in “off” position. To maintain warranty integrity, AspenAir system must be installed to a power source which is live only when the air handler/blower is running.
  - a. Install a Class 2, 120V to 24VAC step-down transformer to a grounded surface near Air Handler. Note: minimum Transformer power rating of 6VA is required.
  - b. Transformer Wiring Connections
    - i. Transformer to Air Handler: Connect primary 120V transformer input to the 120V EAC terminals of the furnace/air handler in accordance with transformer and furnace/air handler instructions.

NOTE: Alternate Connection Methods: Connecting transformer to 120V equipment without EAC terminals; Install a pressure differential switch (Example: Grainger 2E462). Always follow manufacturer’s instructions to ensure suitability to your specific application.

- ii. Connect wires from the AspenAir unit to the 24VAC side of the step-down transformer. Note: Assumes 3-conductor wire has 1 Green wire (designated for Ground) and 2 others. Ensure Green wire is properly grounded.

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6. Install the AspenAir Electronic Air Cleaner filter unit into the cabinet by sliding it over the RetroTrak.



7. Insert Power Connector plug into the AspenAir jack (Located on underside of blue panel).
8. Powering System:
  - a. After all electrical connections are complete, reconnect power to Air Handler.
  - b. Switch Thermostat to “Fan ON” position to test that power is being delivered to the system. Green Power Light should illuminate.
    - i. AspenAir recommends testing that the lamp illuminates during “Heating, Cooling, and Fan ONLY” conditions.
  - c. Set thermostat for normal operation. Green Lamp will only be illuminated when blower is operating.
9. Your AspenAir system is now operational.

## 6. OPERATION and MAINTENANCE

### **General Operation:**

Your AspenAir EAC should work reliably for many years to come. Maximum performance is obtained when the HVAC system blower is set for continuous operation, at lowest fan speeds.

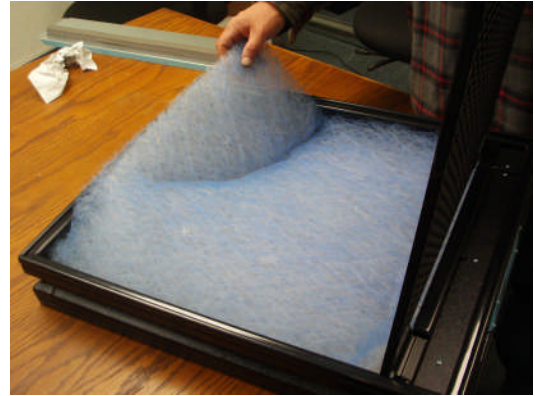
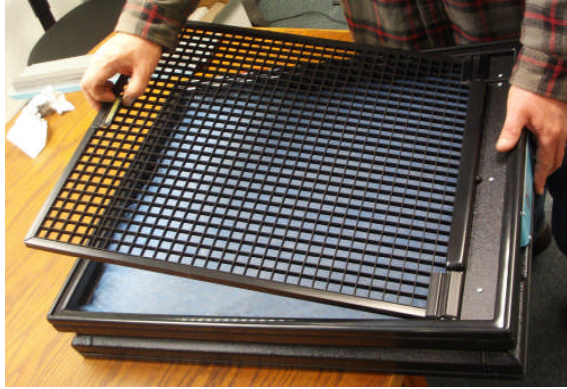
### **General Maintenance:**

Every 6-12 months the collection media should be replaced. This is a general guideline. The collection media may need to be changed more or less often depending on usage and amount of particulate matter in the air. You should visually check the filter every 3 months until you see that it should be changed. Collection media will typically be black or gray in color throughout when it needs to be changed. We recommend that the collection media be changed at minimum every 12 months.

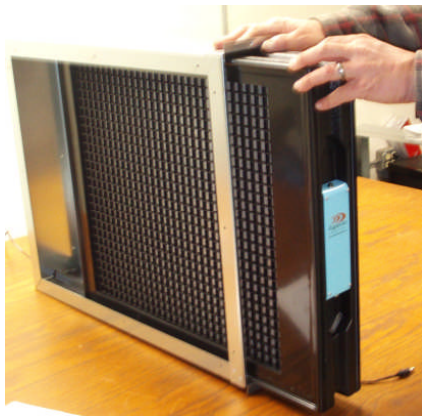
**Caution:** Excessively dirty collection media causes the air handler to work harder and consume more energy as it attempts to pull air through the filter. As with any air filter, failure to change your collection media as required has the potential to cause damage to your air handling equipment.

### **Changing the Media:**

1. Ensure thermostat is set for “fan off” (or AUTO with heating/cooling set to “Off”). Fan blower should not be running.
2. Remove the filter cabinet door. Lamp should not be illuminated on the AspenAir unit.
3. Disconnect Power Plug from the front of the AspenAir unit.
4. Slide AspenAir filter completely out of cabinet.
5. Open the hinged door panel of AspenAir Electronic Air Cleaner by carefully pulling the handle (as shown below).



6. Remove dirty collection media. Take care to place the dirty media in a plastic bag for disposal/recycling.
7. Install new collection media and close door. Ensure that the AspenAir filter media is positioned inside the system with the loosely woven side facing upstream toward incoming air.
8. Wipe the grids with a dry cloth if excessively dusty.
9. Slide AspenAir filter unit into cabinet.
10. Insert Power Connector plug into the AspenAir jack (Located on underside of blue panel).



11. Install door panel onto cabinet.
12. Set thermostat for normal operation. Green Lamp should only be illuminated when blower is operating.
13. Your AspenAir is now operational.

## **7. AspenAir's Limited Five-Year Warranty**

This limited warranty (hereinafter "Warranty") covers all AspenAir Furnace Mount and Filter Grille Air Cleaning Systems (hereinafter "System") manufactured and sold after January 1, 2007, and is extended to the original purchaser and to any succeeding owner of the real property to which the System has been originally affixed. This warranty applies only to products purchased and retained for use within the United States of America and Canada.

AspenAir hereby warrants its electronic air cleaner to be free from defects in workmanship or material, under normal use and service, for a period of five (5) years from the date of original purchase by the original owner. If any part of your System fails under normal use as the result of either faulty workmanship or materials within five (5) years from the date of original purchase, AspenAir will, without charge to you, make all the necessary repairs to your System or replace the System in its entirety with either a new or refurbished System, entirely at our discretion. This Warranty does not cover the disposable collection media which must be replaced periodically, as outlined in your AspenAir Owner's Guide.

During this five (5) year period, all costs to ship your System to AspenAir for repair or replacement will be paid by the Customer. AspenAir will pay the freight charges to return the unit back to you, our Customer.

Any and all additional costs: local transportation costs, related service labor, costs of service calls to diagnose the problem, to remove the system prior to shipment, or to reinstall the system are expressly excluded from this Warranty and subject to additional charge.

This Warranty shall not apply if AspenAir determines that the defect or malfunction resulted from Customer's unreasonable use or Customer's failure to properly maintain their System.

To qualify for this Warranty, the following conditions must be met:

1. The System must have been sold and installed by a qualified HVAC Contractor/Dealer.
2. The System must have been properly enrolled in AspenAir's warranty program. See WARRANTY REGISTRATION below.
3. The System to be repaired must have been removed from the housing by a licensed HVAC Contractor/Dealer.
4. When calling for warranty service, the Customer or their Contractor/Dealer must provide AspenAir with the model number, serial number, the name of the Contractor/Dealer who originally installed the system, the date of installation, the name of the Dealer/Installer who is providing the warranty service, the problem the customer is experiencing and the Contractor/Dealer's diagnosis of the probable root cause of the problem. Please consult your AspenAir Owner's Guide or our website [www.AspenAirInside.com](http://www.AspenAirInside.com) for the correct procedure to use when requesting warranty service.

Please note: in order for this Warranty to be applicable, Customers must not attempt to remove, repair, or replace the System or any part of the System, as it is AspenAir's express intent that its System, and parts and products thereof be sold, installed and maintained by qualified HVAC Contractors/Dealers.

**THIS WARRANTY SHALL NOT OBLIGATE ASPENAIR FOR ANY LABOR COSTS OTHER THAN THOSE EXPLICITLY STATED ABOVE, AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS CAUSED DIRECTLY OR INDIRECTLY BY YOUR OWN INSTALLER.**

**THE IMPLIED WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFOREMENTIONED FIVE (5) YEAR PERIOD. ASPENAIR'S TOTAL LIABILITY SHALL BE LIMITED AND CAPPED AT THE TOTAL PURCHASE PRICE FOR THE SYSTEM. UNDER NO CIRCUMSTANCES SHALL ASPENAIR BE OR INCUR ANY LIABILITY OF ANY KIND FOR SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM**







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