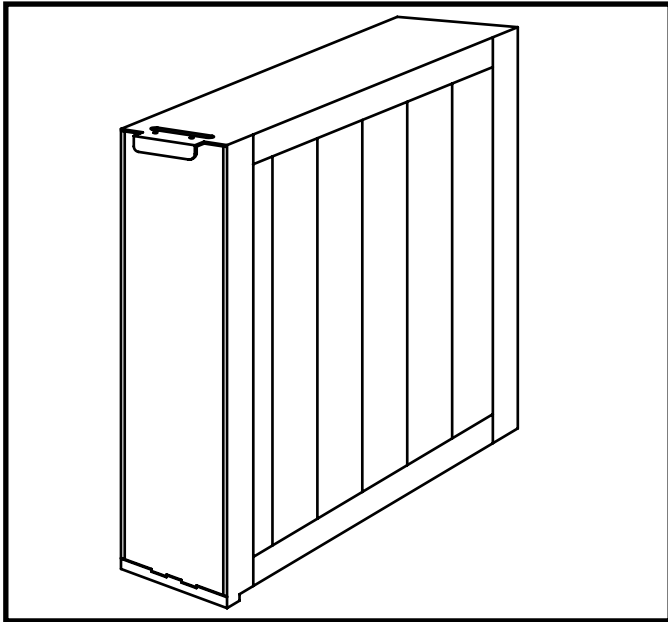


AXHF Media Air Cleaner

PRODUCT DATA



APPLICATION

The AXHF Media Air Cleaner captures a significant amount of the air-borne particles from the air circulated through the unit.

Use with electric forced warm air furnaces and with compressor cooling. Can be used with heat pumps if filter is changed regularly to prevent excessive pressure drop. Not recommended for applications where pressure drop may be critical

FEATURES

- High efficiency media filter (included with some models) captures particles as small as 0.3 micron.
- Efficiency and arrestance ratings based on the American Society of Heating, Refrigerating and Air Conditioning Engineers Standard 52.2-1999. (Applicable to all electric forced warm air furnaces and to compressor cooling up to 5 tons).
- Mounts in the return air duct.
- Cabinet can support weight of residential furnace and evaporator coil.
- Requires no electrical connections.
- Mounts in any position.
- Requires no maintenance except periodic media filter replacement.
- Quick and easy media filter replacement

SPECIFICATIONS

IMPORTANT

The specifications in this publication do not include normal manufacturing tolerances; therefore, an individual unit may not exactly match the listed specifications. This product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed.

AXHF Media Air Cleaner includes cabinet, access door and pleated media filter.

AXHF Efficiency:

Efficiency Ratings: Based on American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 52.2-1999. Minimum efficiency reporting valve (MERV) at 492 fpm.

MERV 8.

Filter Media:

Pleated for greater media capacity.

Capacity And Pressure Drop:

See Fig. 2.

Temperature Rating:

-40° to +140°F (-40° to +60°C).

Dimensions:

See Fig. 1.

Mounting:

Mounts in any position in the return air duct, usually next to the furnace blower compartment. Cabinet is sturdy enough to support weight of a residential furnace and evaporator coil.

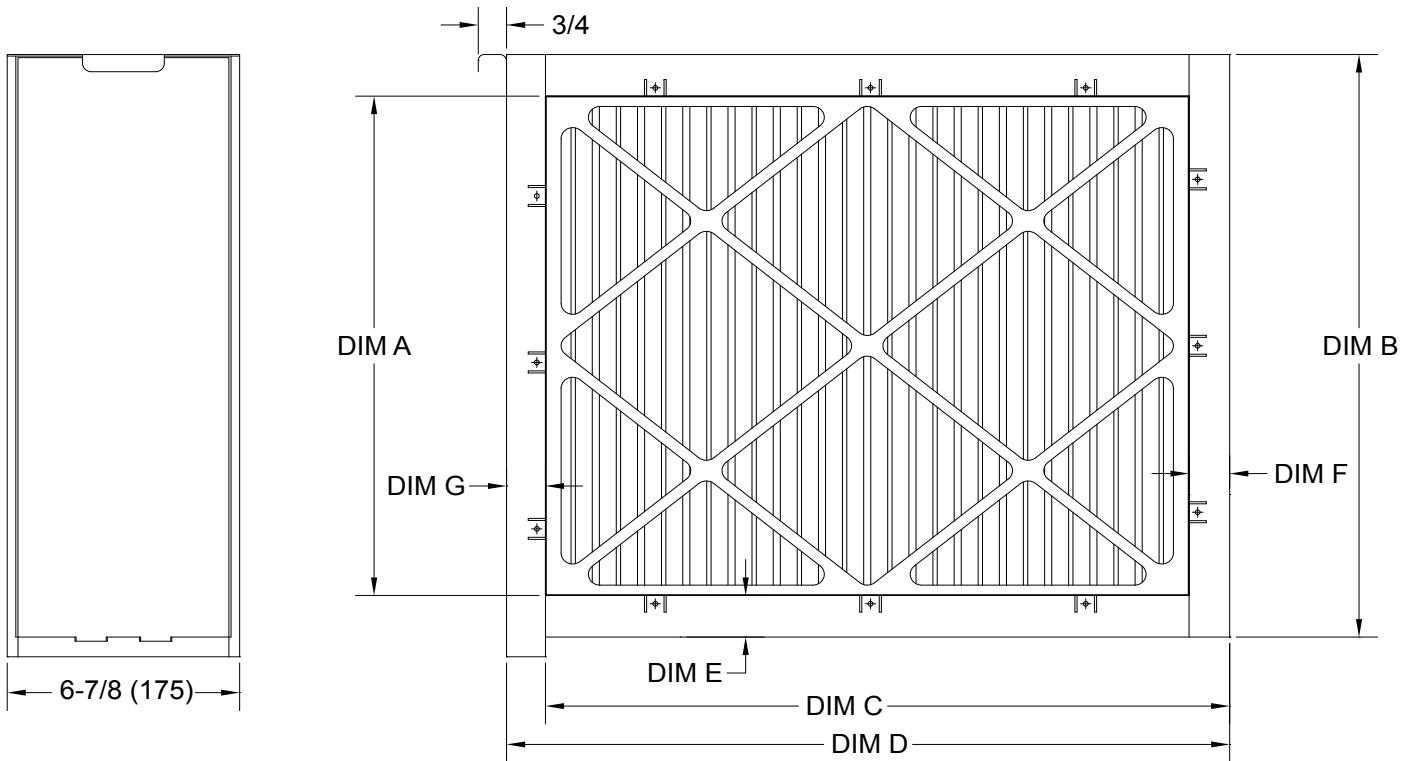


Fig. 1 Installation dimensions in inches (mm) of air cleaner. See table below

AXHF SIZE		DIM. A		DIM. B		DIM. C		DIM. D		DIM E		DIM F		DIM G	
IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm
21 X 17.5	533 X 445	15.00	381	17.50	444	18.69	475	21	533	1.25	32	1.18	30	1.13	29
21 X 21	533 X 533	18.50	470	21.06	535	18.69	475	21	533	1.28	33	1.18	30	1.13	29
21 x 24.5	533 X 622	22.00	559	24.50	622	18.69	475	21	533	1.25	32	1.18	30	1.13	29

Replacement Media:

For optimum system performance, replace the filter every six months (before heating season and before cooling season). Adjust the schedule to your needs, but replace the filter at least annually

Table 1. Replacement filters

Filter Size (in.)	MERV 8 Part Number
21 x 17.5	PD540040
21 x 21	PD540042
21 x 24.5	PD540044

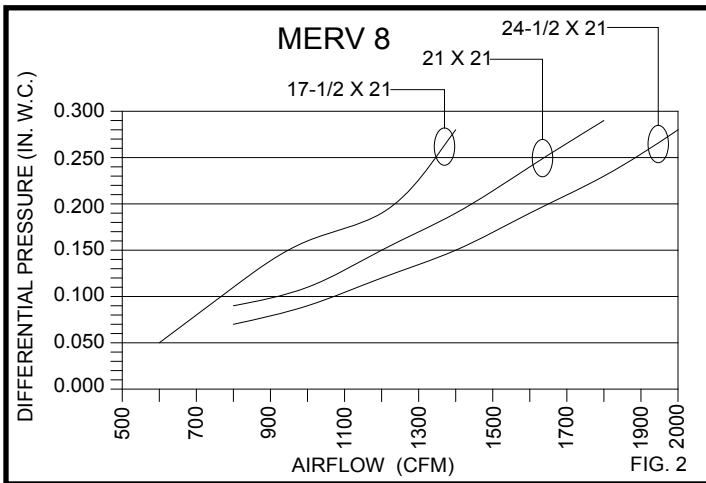


Fig. 2. Capacity, pressure drop and area of AXHF filter media

PLANNING THE INSTALLATION

Location

The media air cleaner should be installed where all the air passing through the system is circulated through it. The best location is in the return air duct next to the blower compartment so the media air cleaner can help to keep the blower motor and evaporator coils clean. Do not mount in the supply air duct. For most efficient air cleaning, spread airflow evenly across the face of the media. If the duct is a different size than the media air filter cabinet, gradual transitions are required. If the duct turns sharply just before the air filter, turning vanes are required. Choose a location that is readily accessible for checking and replacing the filter. Allow at least 26 in. (660 mm) clearance in front of the unit for removal of the cartridge. Install the media air filter where the temperature will not exceed the ratings in the Specifications.

Applications With Air Conditioning

Mount the media air cleaner upstream of the evaporator coil in a cooling system. The filter will help to keep the coil clean and reduce maintenance.

Applications With a Humidifier

The media air cleaner is compatible with humidifiers. Avoid applications where water mist will reach the media. If an atomizing humidifier is used, the filter media will require replacement more often because of minerals in the water.

Choose Mounting Position

The media air cleaner can be mounted in any position, but the arrow on the cartridge must point in the same direction as the airflow. See Figs. 4-10 for proper location of the media air cleaner for a variety of furnace installations. Note that the media air cleaner cabinet is sturdy enough to easily support the weight of the furnace and evaporator coil. See Fig. 4.

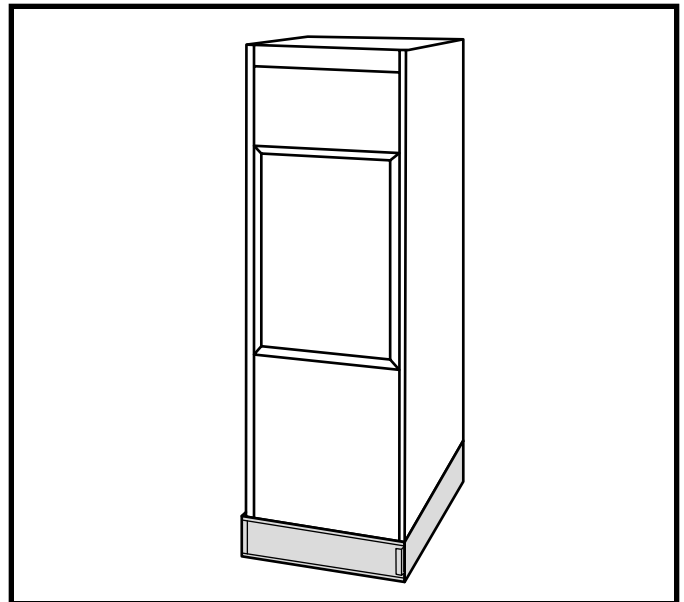


Fig. 3. Upflow air handler, with installation beneath air handler. Media air cleaner is mounted horizontally where return enters from below.

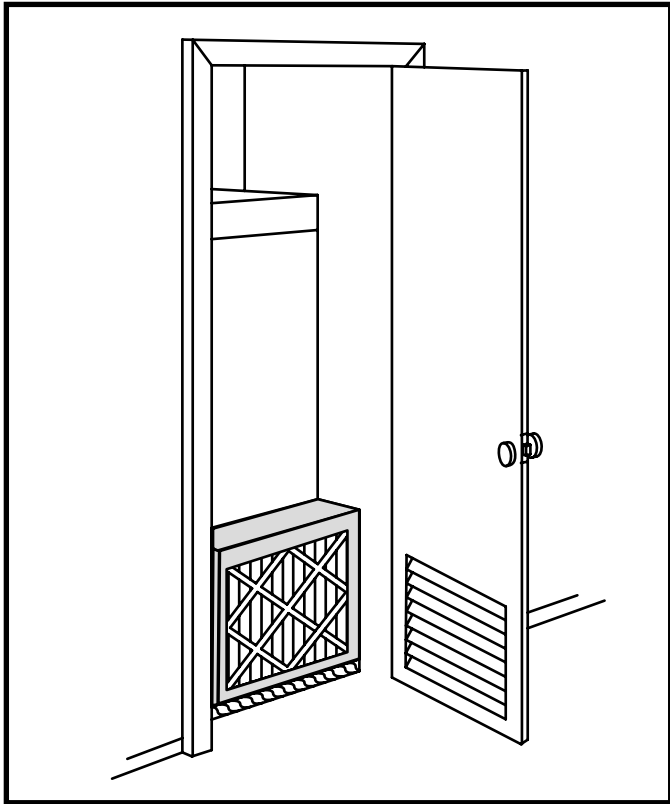


Fig. 4. Upflow air handler, with closet installation. Media air cleaner is mounted vertically on furnace between air handler and louvered return air opening in closet door.

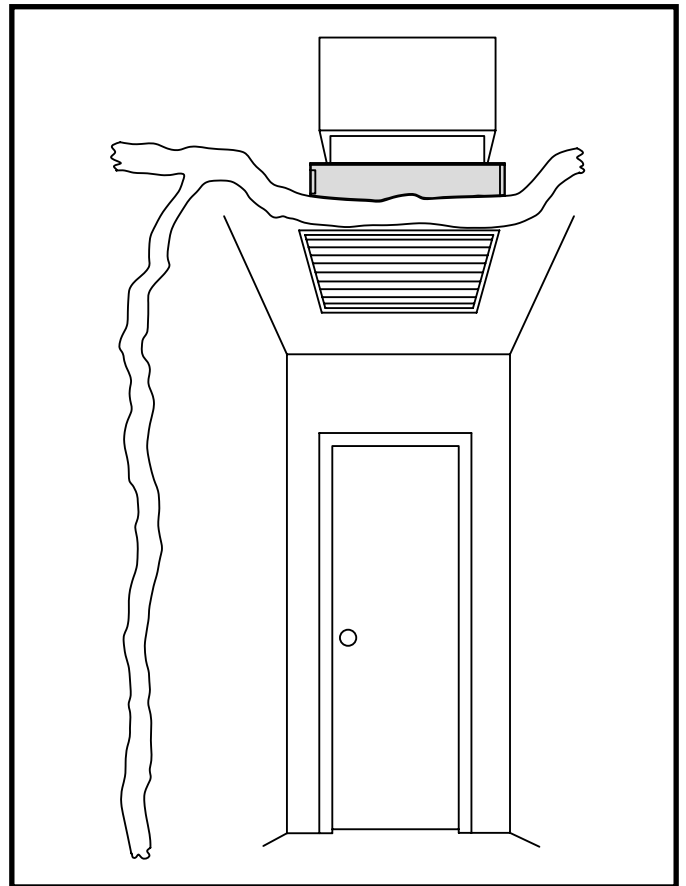


Fig. 6. Central fan installation, with media air cleaner mounted horizontally in central return duct.

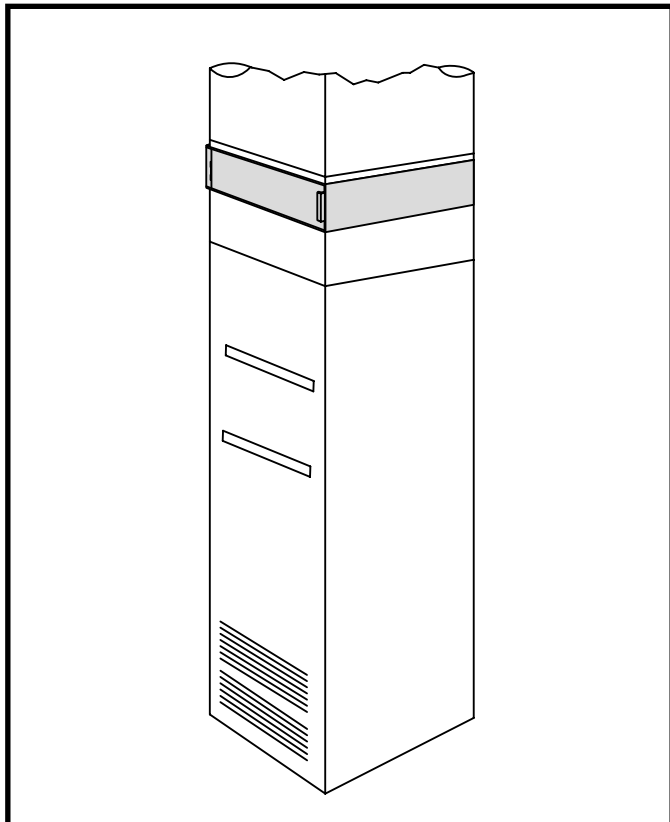


Fig. 5. Downflow air handler, with media air cleaner mounted horizontally in return duct or plenum just above air handler.

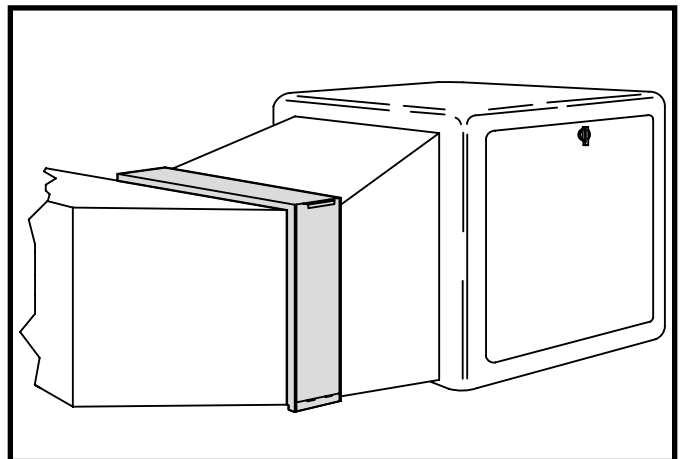


Fig. 7. Horizontal air handler, with media air filter mounted vertically in return duct near air handler.

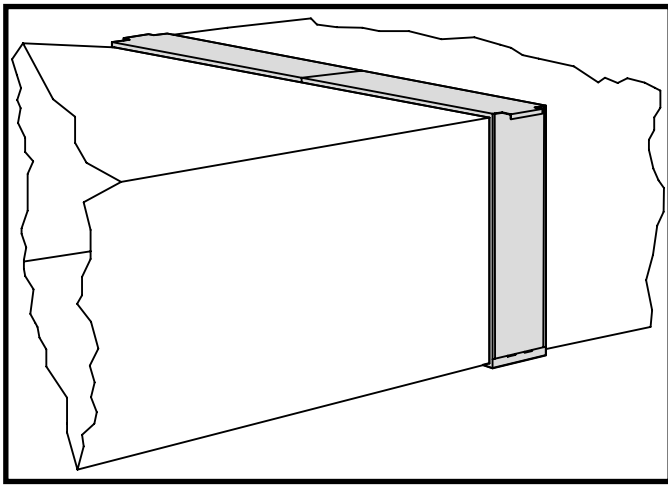


Fig. 8. Two or more media air cleaners used in a high capacity system.

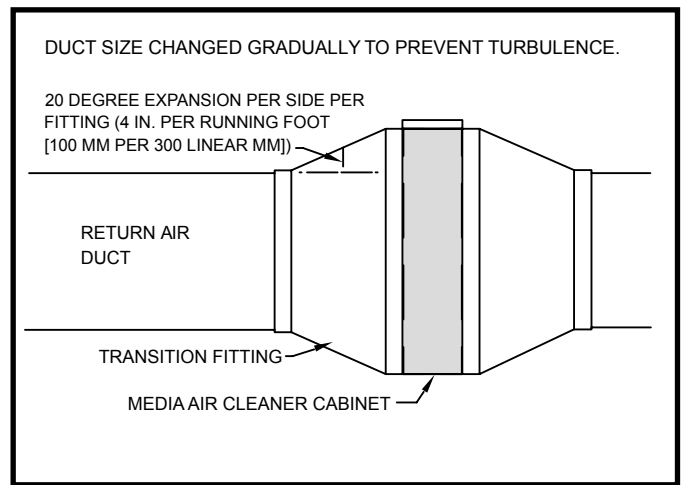


Fig. 9. Duct size changed gradually to prevent turbulence.

Determining Sheet metal Requirements

The media air cleaner is adaptable to all new or existing forced air heating and cooling systems used in residential applications. Transitions or turning vanes may be required in some applications for effective media air cleaner operation.

Transitions

Transitions are needed when the duct is a different size than the media air cleaner cabinet. Follow these guidelines when fabricating:

1. Use gradual transitions to reduce air turbulence and increase efficiency. See Fig. 10
2. Use no more than 20 degrees (about 4 in. per running ft. (100 mm per 300 linear mm) of expansion on each side of a transition fitting.

Turning Vanes

If the media air cleaner is installed next to an elbow or angle fitting, add turning vanes inside the angle to distribute airflow more evenly across the face of the media. See Fig. 11.

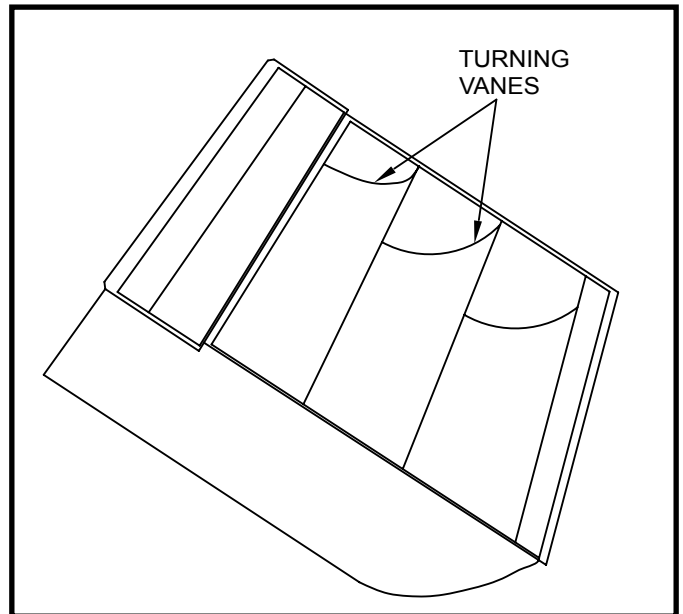


Fig. 10. Turning vanes installed in bend help distribute airflow evenly over face of media.

INSTALLATION AND CHECKOUT

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the media air filter or cause a hazardous condition.
2. Check the ratings given in the instructions and on the media air cleaner to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.

Remove Filter And Clean Blower Compartment

Before starting the installation, remove and discard the existing filter (if used). Thoroughly clean the blower compartment. If possible, power vacuum the ductwork to remove accumulated dust in an occupied home or remove construction dirt in a new home. The media air cleaner cannot remove dirt that has settled in the blower compartment and distribution ducts.

Review The Installation Plan

Temporarily place the cabinet on the floor, oriented as it will be when installed. Insert and remove the cartridge to make sure the plan allows adequate clearance for easy removal and replacement of the cartridge.

Make sure that shop-fabricated sheet metal components, such as turning vanes, are available.

Fasten The Cabinet To The Air Handler

Align the cabinet with the return air opening. Place blocks under the cabinet, as necessary, to make sure the unit sits securely. Create an opening in the air handler to match the cabinet opening. Attach the cabinet securely to the air handler. Attach the unit directly or fit a starting collar in the air handler opening. Either drill holes and fasten with sheet metal screws or rivets, or use slip joints. If you are drilling holes, use a locking pliers to help hold the unit in place during drilling.

Install Turning Vanes

Install turning vanes to help distribute air equally over the full surface of the upstream side of the media. Install them whenever an abrupt 90 degree elbow is installed directly against the media air cleaner cabinet.

Fasten Cabinet To Ductwork

Fasten side of cabinet to the ductwork using sheet-metal screws, rivets, or slip joints, as appropriate.

Connect Ductwork

Connect the vertical duct section to the elbow. If the vertical drop of the duct is less than 7 in. (178 mm) from the side of the furnace, shorten the horizontal trunk or attach an offset fitting to the elbow. See Fig. 11. When ductwork is properly aligned, connect the vertical duct to the horizontal trunk.

Seal Joints

Seal all joints in the return air system between the media air filter and the furnace to prevent dust from entering the clean airstream.

Install Filter Cartridge

Slide the filter cartridge into the cabinet, making sure the arrow on the cartridge points in the direction of air flow.

Replace access door. Insert the tab on the bottom of the door into the slot in the cabinet.

Swing the door closed and press it into place.

Checkout

Visually check the installation. Make sure:

- Airflow is in the direction of the arrow on the media air filter cartridge.
- Turning vanes and transitions, if used, are properly installed.
- Joints in sheet metal between media air filter and air handler are sealed.
- All sheet metal connections are complete.
- Original furnace filter has been removed and blower compartment is cleaned.

Replace any access doors removed during the Installation or Checkout.

Run the cooling system through one complete cycle to make sure the system operates as desired.

Maintenance

The media filter must be replaced when pressure drop across the media filter reaches 0.5 in. w.c. (0.1 kPa). or at least annually. If the media air cleaner is installed downstream from an atomizing humidifier or if the installation includes both heating and cooling, more frequent replacement may be necessary. Clogged media must be replaced promptly to avoid restricting airflow and reducing efficiency of the heating cooling system. Record the replacement date in the space provided on the replacement media filter

LIMITED FIVE - YEAR WARRANTY

5 years from date of purchase



Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

**RHEEM
AIR CONDITIONING
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