



Media Air Cleaner

With Media Filter

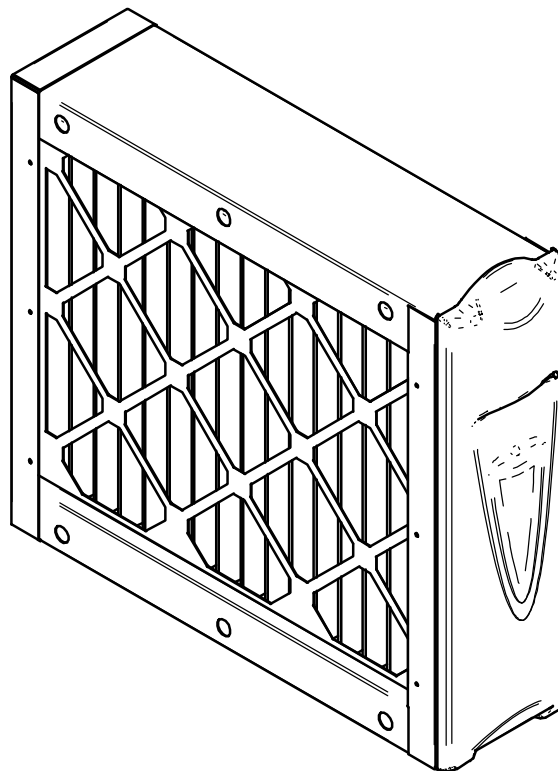
Model Number

ACM1000M-XXX

ACM1400M-XXX

ACM1600M-XXX

ACM2000M-XXX



OWNERS MANUAL

- Installation
- Operation
- Maintenance

Please read and familiarize yourself with the contents of this manual before installing, operating or performing maintenance on the unit.

INTRODUCTION

The Emerson Media Air Cleaner comes complete with a 4" media furnace air filter. This filter must be changed every three to six months to maintain efficiency of the filter and furnace system.

Please read instructions before installing and using the Air Filter Compartment.

⚠ CAUTION

The fiber filter used in this cabinet for air cleaning must be replaced every 90 to 180 days. Your heating and cooling efficiency will decrease due to insufficient air flow when filter becomes dirty.

⚠ WARNING

Do not attempt installation of this unit unless you are familiar with the necessary tools, equipment, and potential hazards.

Installation should be performed only by a qualified service provider.

Failure to do so could result in reduced performance of the unit, serious personal injury or death.

GUARANTEE

Emerson will not assume any responsibility for component failures due to incorrect installation procedures.

RULES FOR SAFE INSTALLATION AND OPERATION


1. Read the Owners Manual and the Rules for Safe Operation carefully. Failure to follow these rules and instructions could cause a malfunction of filter or unsatisfactory service.

⚠ WARNING

Installation of this unit must comply with local electric codes or other applicable codes.

Review and understand local codes prior to installation.

⚠ WARNING



Before installing or servicing, always shut off electricity. This will prevent any electrical shocks.

2. Follow a regular service and maintenance schedule for efficient operation.

TABLE OF CONTENTS	
Rules for Safe Installation and Operation	2
How the Air Filter Works	3
Construction of the Air Filter Compartment.....	3
Preinstallation.....	4
Installation	6
Maintenance.....	6

DID YOU GET THE RIGHT SIZE AIR FILTER COMPARTMENT

- Model ACM1000M** are designed for heating or cooling blowers delivering 600 to 1200 cubic feet of air per minute (cfm.)
- Model ACM1400M** are designed for heating or cooling blowers delivering 1000 to 1600 cfm.
- Model ACM1600M** are designed for heating or cooling blowers delivering 1200 to 1800 cfm.
- Model ACM2000M** are designed for heating or cooling blowers delivering 1600 to 2200 cfm.

Before installing the filter, make sure you have selected the proper size unit for your heating and cooling system requirements. See specifications on page 4.

BASIC TOOLS REQUIRED

- Tin Snip
- Screwdriver
- Ruler or Tape Measure
- Drill

HOW THE AIR FILTER WORKS

Dirty air flows through your return air ducts and enters the compartment where particles (hair, lint, etc.) are removed by the filter. See figure 1.

Filtered air re-enters to the supply duct system of your building.

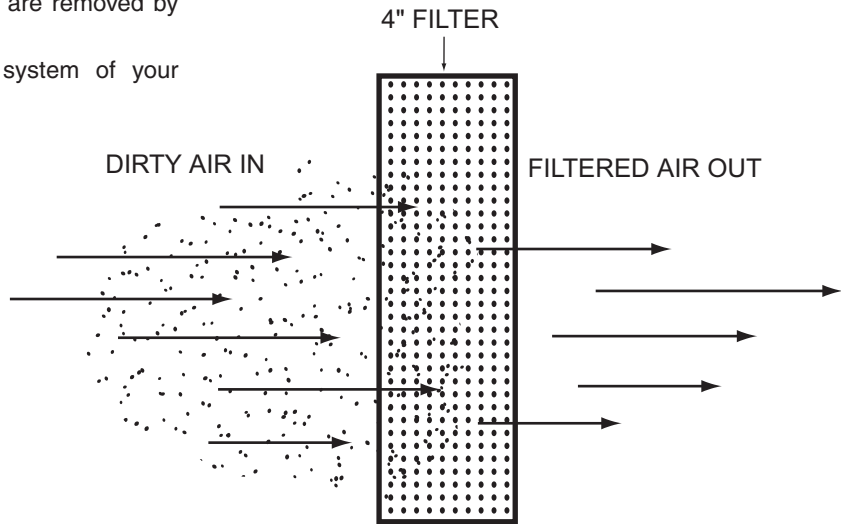


Figure 1

CONSTRUCTION OF THE AIR FILTER COMPARTMENT

Not only is your air filter compartment easy to install, it is also easy to maintain. Its basic components, and their functions, are as follows: (See Figure 2)

Air Filter Cabinet – mounts to existing duct work and houses the filters

4" Filter – collects dust, dirt and other particles.

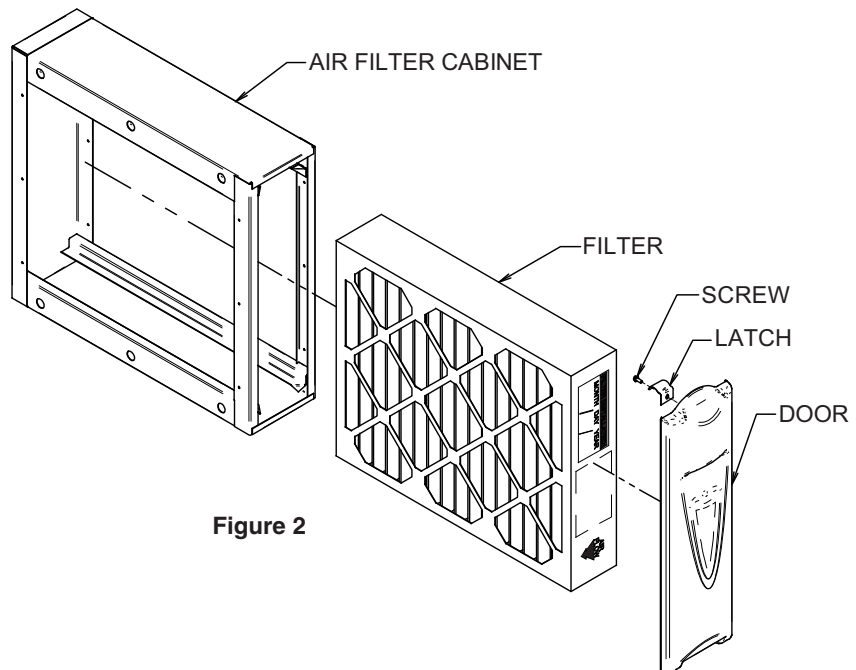


Figure 2

PREINSTALLATION

LOCATING THE AIR FILTER

Your air filter must be mounted in the return air duct of a central forced-air system, on the air entering side of your furnace. (See Figure 3 for example).

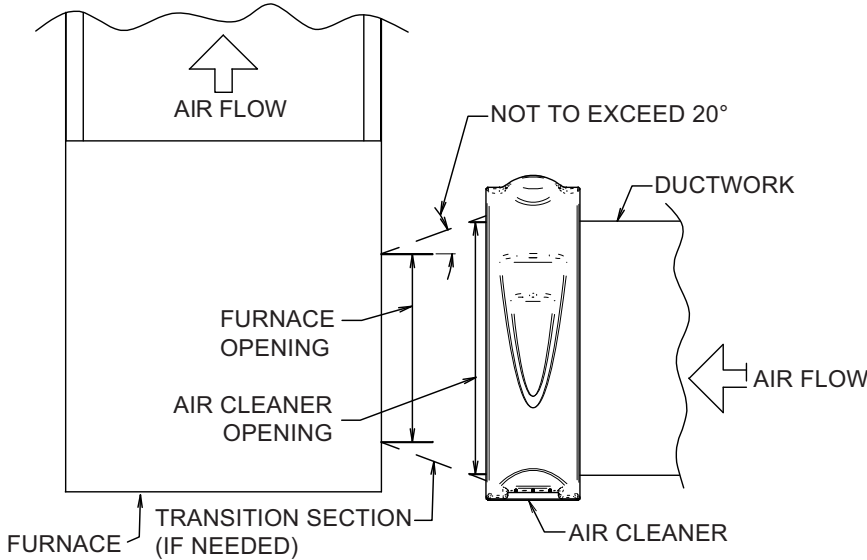
Select a location that meets the following:

1. The face of the filter will be at a right angle to the air stream.
2. Allow 25" of clearance in front of the air filter compartment door to permit removal of filters.

See figure 4 for complete compartment dimensions.

3. The air filter is not to be placed in the discharge of either the heating or cooling unit.
4. **IMPORTANT:** If atomizing spray type humidifier is used, it must be installed downstream from the air filter.

If furnace opening cannot be enlarged to required size, a transition sheet metal section must be used. Transition must be planned for each job. Reduction should not be more than 4 inches per linear foot, approximately 20 angular degrees (Figure 3).



LOCATING THE AIR FILTER

AN AIR FILTER MUST BE MOUNTED IN THE RETURN AIR DUCT OF A CENTRAL FORCED-AIR SYSTEM, ON THE AIR ENTERING SIDE OF FURNACE.

Figure 3

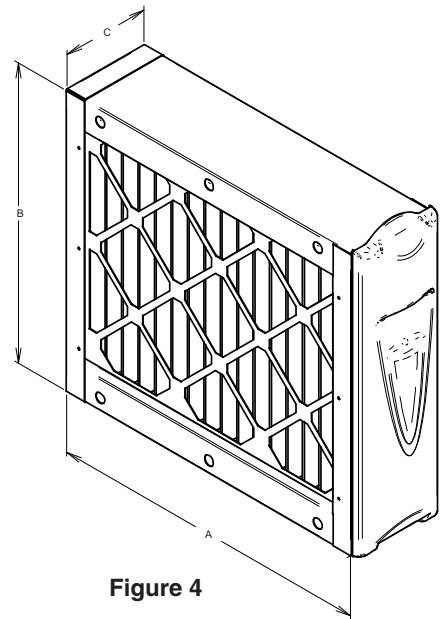


Figure 4

Model NO.	A	B	C	CFM RATING
	LENGTH	HEIGHT	WIDTH	
ACM1000M-XXX	19-13/16	18-5/16	5-7/16	600 TO 1200
ACM1400M-XXX	24-13/16	18-5/16	5-7/16	1000 TO 1600
ACM1600M-XXX	19-13/16	22-5/16	5-7/16	1200 TO 1800
ACM2000M-XXX	24-13/16	22-5/16	5-7/16	1800 TO 2200

TYPICAL MOUNTING POSITIONS

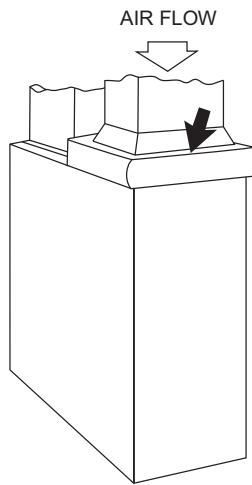


Figure 5
BASEMENT FURNACE (LOWBOY)
 Filter is mounted horizontally in return plenum, just above furnace.

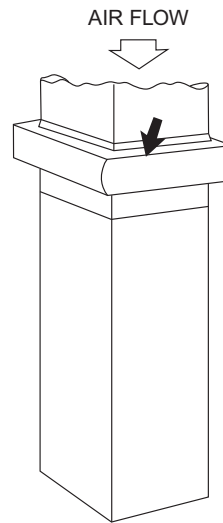


Figure 6
COUNTERFLOW FURNACE
 Filter is mounted horizontally in return duct or plenum, just above furnace.



Figure 7
HIGHBOY FURNACE
 Side installation. Filter is mounted vertically, where return air enters side inlet of furnace.

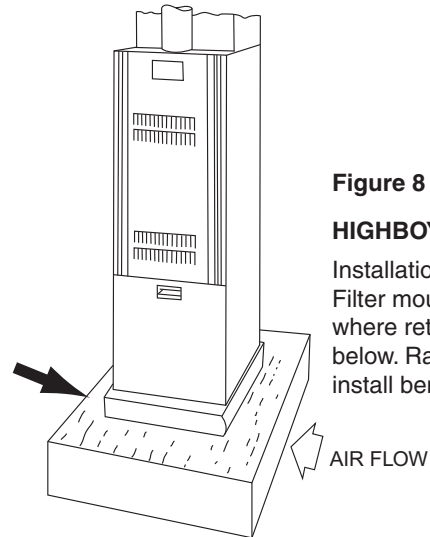


Figure 8
HIGHBOY FURNACE
 Installation beneath furnace. Filter mounts horizontally, where return air enters from below. Raise furnace and install beneath base.

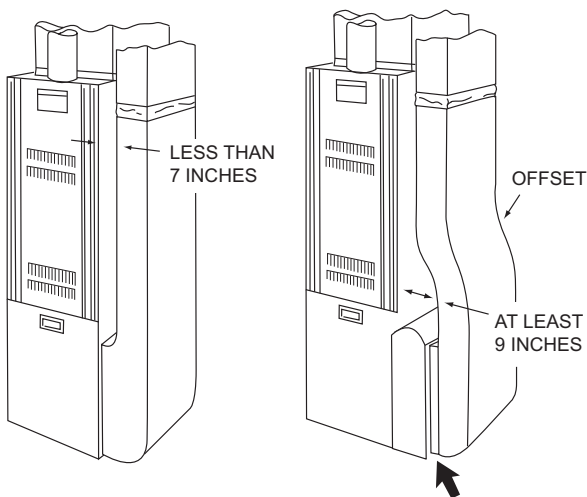


Figure 9
OFFSET INSTALLATION
 Typical use of duct offset to match air filter opening. If duct connection to furnace allows less than nine inches for mounting the air filter, shorten the lateral trunk, or attach an offset fitting to the elbow.

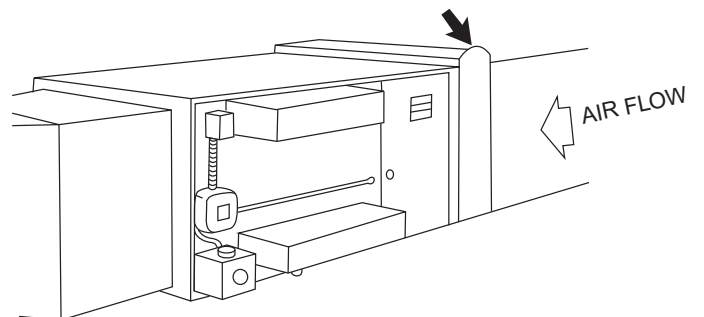


Figure 10
HORIZONTAL FURNACE
 Filter is mounted vertically in the return duct near furnace.

INSTALLATION

REMOVE OLD FILTER AND DISCARD (Figure 11)

NOTE: This filter may be mounted in the furnace compartment.

CLEAN BLOWER COMPARTMENT

NOTE: The air filter cannot remove dirt from blower and ducts.

INSTALLATION

The following is a typical installation of the air filter on a "Highboy" furnace (Figure 7).

1. Place the air filter compartment on the floor. Stand it upright with the door facing you (Figure 2). If a horizontal installation is being planned, lay the compartment on its side, this will help you to visualize the relative location of all parts.
2. Remove the door (by grasping top and pulling door away from compartment) and set it aside. Remove 4" filter by grasping it at the top and bottom. Set in a safe location until the cabinet is installed.
3. Set the compartment next to the furnace (if possible) to match the opening in the compartment.

If the furnace opening cannot be enlarged, a transition fitting should be used. (Figure 3).

The compartment can be attached directly (Figure 12), or a starting collar can first be fitted to the furnace inlet. A butt or slip joint can be used.

Securely attach the compartment to furnace inlet, using at least two of the mounting holes on each side of the compartment.

4. Using butt joint, attach duct work (normally an elbow) to the upstream side of air filter compartment. (Note the use of the sheet metal turning vanes inside the elbow to improve air distribution.) (Figure 13)

Transition Fittings

If the air duct does not fit the compartment opening, a transition fitting should be used. Gradual transitions are preferred for greatest efficiency. Not more than four inches per linear foot (approximately 20° angle) should be allowed (Figure 3).

5. Connect the vertical duct section to the elbow. Wedge a wood block between floor and elbow for support (Figure 14).
6. Seal all joints in the return air system downstream from the air filter with duct tape to prevent dust from entering the air stream. Tape is usually applied on the outside of ducts, but may also be applied on the inside, or both.
7. With the air filter compartment installed, re-install 4" filter and door. (Figure 2)

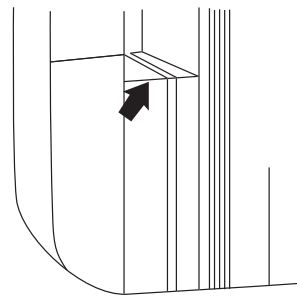


Figure 11

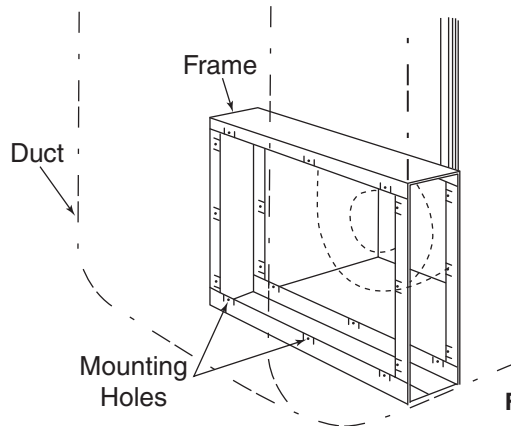


Figure 12

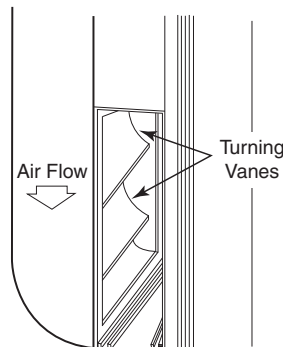


Figure 13

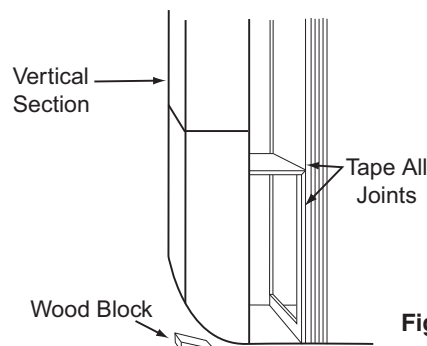


Figure 14

MAINTENANCE

For maximum efficiency, your air filter should be inspected once a month and changed if dirt loading is heavy. When changing is required, the following procedure should be used.

1. Remove door from air filter compartment.
2. Remove 4" filter and discard.
3. Insert new 4" filter by sliding it into the compartment. (Note direction of air flow.)
4. Replace door.

CAUTION

The fiber filter used in this cabinet for air cleaning must be replaced every 90 to 180 days. Your heating and cooling efficiency will decrease due to insufficient air flow when filter becomes dirty.

NOTES

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