



INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS

Residential Duct Mount Builder's Box Media Air Cleaner

Part Numbers: P102-BB14A, P102-BB20

IMPORTANT: Read entire instructions before installing the builder's box media air cleaner.

IF YOU NEED HELP call toll free: 1-800-267-8305

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SAFETY CONSIDERATIONS

Read and follow manufacturer instructions carefully. Improper installation may damage media air cleaner.

Recognize safety information. This is the safety alert symbol . When the safety alert symbol is present on equipment or in the instruction manual, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies a hazard which could result in personal injury or death. CAUTION is used to identify unsafe practices which would result in minor personal injury or property damage.

WARNING

Before beginning any installation or modification, be certain that the main line electrical disconnect switch is in the OFF position. Electric shock could result. Tag disconnect switch with suitable warning labels.

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform the basic maintenance functions of replacing filters. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves.

GENERAL

The Builder's Box Media Air Cleaner is designed to remove atmospheric and household dust, pollen, mold spores, bacteria, fungi, insecticide dust, animal dander, coal dust, mites, cooking smoke and grease, tobacco smoke, and other particles down to 0.3 micron (1/84,000 in.)

Airborne pollutants are carried through the return air ducts of the heating/cooling system to the media air cleaner. The particles are captured by the filter.

The media air cleaner can be easily upgraded to an electronic air cleaner for additional air filtration. Additional clearance above the media air cleaner is required for electronic air cleaner upgrade.

Regular maintenance (replacement of filters) is required by the home owner.

COMPONENTS

See Fig. 1 for a description of the media air cleaner. See Table 1 for media air cleaner specifications.

Cabinet — The cabinet is constructed of heavy gage galvanized steel. Holes are provided in the cabinet for easy mounting in the ductwork or air-handling equipment. See Fig. 2 for cabinet dimensions.

Filter — The filter is constructed of polyolefin fibers that will not shred or absorb moisture. The unique design of the filter includes a structured density gradient with a polarized charge for higher initial and sustained efficiency. The filter media is supported by an open steel mesh and enclosed by a high strength, beverage board. The filters have an Underwriters' Laboratories Class 2 rating.

The efficiency of the filter is based on ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) Standard 52.2P. The maximum velocity is 500 ft/min. An arrow indicates direction of airflow.

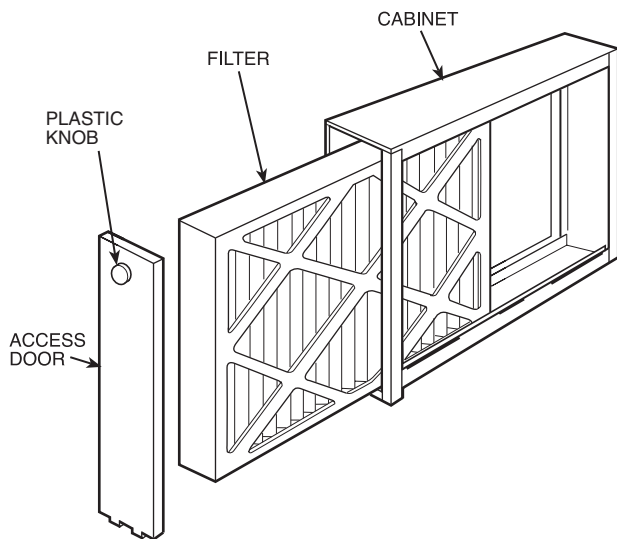


Fig. 1 — Media Air Cleaner

Table 1 — Specifications

PART NUMBER	P102-BB14A	P102-BB20
House Size Area	< 3000 ft ² < 278.70 m ²	> 3000 ft ² > 278.70 m ²
Airflow	up to 1400 CFM up to 2379 m ³ /hr	up to 2000 CFM up to 3398 m ³ /hr
Duct Size	16 x 25 in. 405 x 635 mm	20 x 25 in. 510 x 635 mm

INSTALLATION

Location — The media air cleaner must be installed in the return air duct, as close to the blower compartment as possible. This location provides the most even airflow across the filter and allows the media air cleaner to keep the system motor and blower clean. See Fig. 3. When choosing location, there must be adequate room to remove filters.

NOTE: Be sure to notify home owner not to install any device within 3 ft from the side of the media air cleaner after installation is complete. Regular servicing of the media air cleaner is required. A 3 ft clearance is required to remove filters for maintenance or replacement.

IMPORTANT: The media air cleaner will cause more of a restriction of your heating or cooling system than a regular furnace filter due to its increased efficiency. As the filter collects contaminants, the pressure drop increases. The media air cleaner is not recommended in systems where pressure drop is critical. See Table 2 for pressure drop information.

Table 2 — Media Air Cleaner Pressure Drop (in. wg)

PART NUMBER	CFM	PRESSURE DROP (in. wg)
P102-BB14A	700	0.077
	1400	0.26
P102-BB20	1000	0.079
	2000	0.26

INSTALLATION LOCATION WITH HUMIDIFIER — If a separate humidifier is purchased, it should be installed in the furnace warm air duct. However, a humidifier may be installed in the return air duct without causing problems to the media air cleaner. Care must be taken to ensure that the humidifier does not leak, as this may cause damage to the media air cleaner and mineral deposits on the filter.

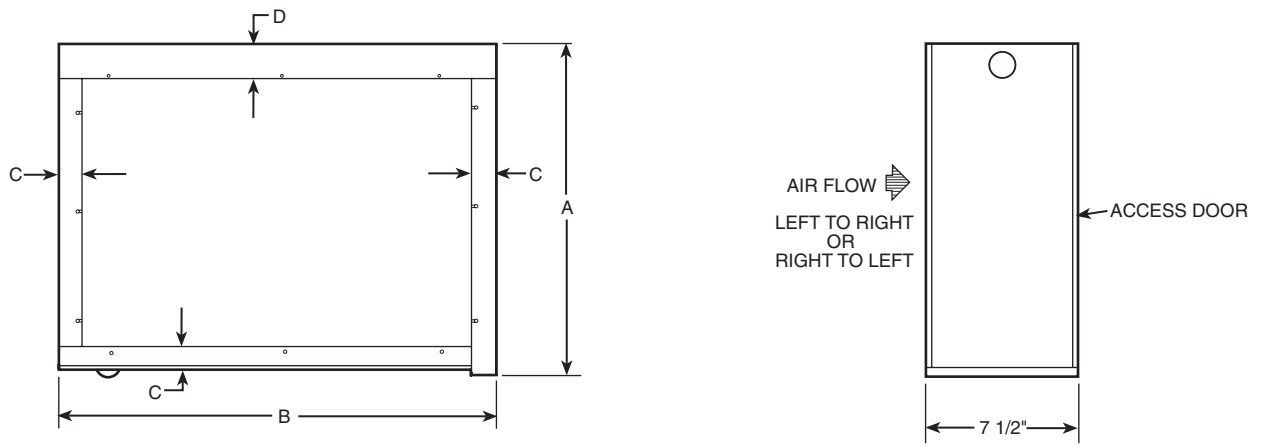
An atomizing-type humidifier should only be installed downstream of the media air cleaner. If the atomizing-type humidifier is installed upstream, high humidity, salts, and minerals may damage the filter and cause service problems.

If the atomizing-type humidifier must be installed upstream, the atomizing-type humidifier must be installed as far from the media air cleaner as possible.

INSTALLATION LOCATION WITH AIR CONDITIONER — Whenever possible, the media air cleaner should be installed upstream of the cooling coil. This location will clean the air before it reaches the evaporator coil.

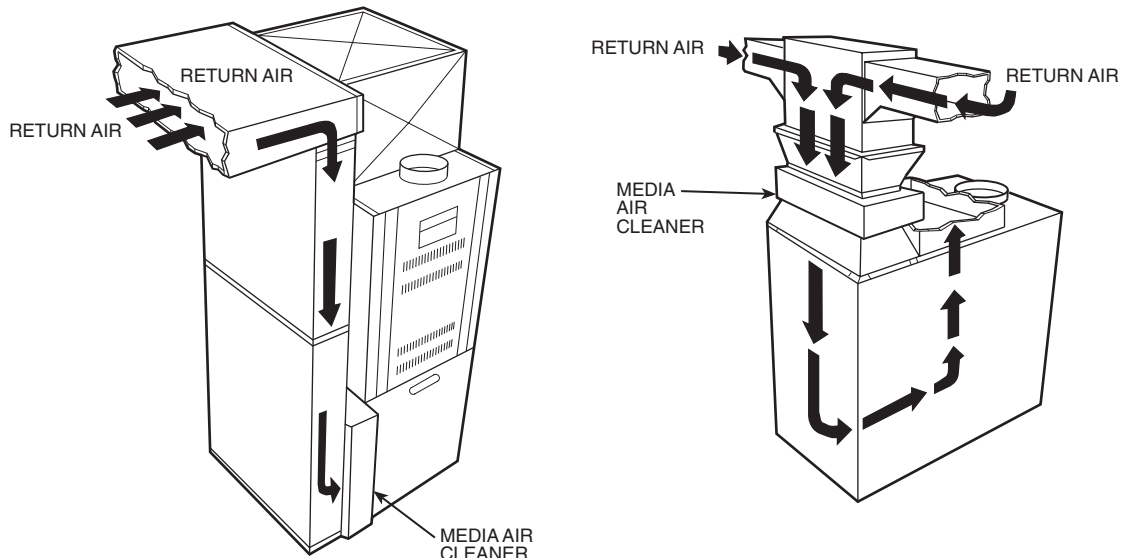
Media Air Cleaner Installation — Perform the following to install the media air cleaner.

1. Remove the existing furnace filter. Thoroughly clean the blower compartment and ductwork where the media air cleaner is to be installed.
 2. Remove access door by unscrewing plastic knob. Slide the filter out of the cabinet.
 3. Place cabinet in ductwork. Holes are provided to attach cabinet to ductwork or equipment. If the adjoining ductwork is flanged, install the screws so that the screw heads are inside the cabinet. This will help prevent damage to filters during removal for cleaning.
- When the air duct does not fit the media air cleaner opening, a gradual transition is recommended to reduce air turbulence through the media air cleaner and to increase its efficiency. There should not be more than 20 degrees of expansion used on each side of the transition fitting. Do not reduce ductwork to a smaller media air cleaner or it will increase the velocity of airflow.
4. If the media air cleaner is installed adjacent to an elbow or angel fitting, turning vanes are recommended to improve air distribution across the filter.
 5. After media air cleaner has been secured, seal seams airtight with duct tape or caulking to prevent dust from entering the system.
 6. Replace filter. Make sure arrow on filter is pointing towards the fan. Replace the access door.



UNIT	A	B	C	D
P102-BB14A	17 ¹ / ₁₆ (435)	26 (660)	1 (25)	2 ¹ / ₈ (55)
P102-BB20	22 (560)	26 (660)	1 ¹ / ₄ (30)	2 ³ / ₈ (60)

Fig. 2 — Dimensions



NOTE: Provide a 3 ft (.914 m) clearance for filter removal.

Fig. 3 — Media Air Cleaner Installation Location

OPERATION

For maximum performance of the media air cleaner, these steps should be followed:

- run your heating/cooling system fan continuously
- remove furniture or carpets which block return air grilles throughout your house, so that air moves freely to the furnace
- check for proper operation of the blower fan on the furnace
- ensure that the filter is not clogged.

After installation of the media air cleaner, you may notice some white dust on table tops and shelves. Most heavy particles (such as lint) settle quickly and do not get filtered through the media air cleaner. To reduce lint and dust, use continuous fan operation and keep return vents unrestricted to create an efficient airflow.

MAINTENANCE

It is very important that the scheduled maintenance be done by the home owner. If the filter is not changed on a regular basis, the media air cleaner will not operate effectively.

⚠ CAUTION

Make sure to turn furnace off before performing any maintenance or removing air components.

Filter Replacement — The filter will need to be replaced once or twice a year, depending on the amount of contaminants in the air. See Table 2. If the filter becomes clogged, airflow through the system may be restricted. This may cause service problems with the furnace or air conditioner.

To replace the filter:

1. Turn off furnace fan.
2. Open media air cleaner access door by unscrewing plastic knob.
3. Remove filter from cabinet and discard.
4. Install new filter. Make sure arrow points toward the furnace fan.
5. Replace access door.
6. Turn on furnace fan.

Table 2 — Replacement Filters

PART NUMBER	REPLACEMENT FILTER PART NO.	FILTER SIZE (in.)
P102-BB14A	P102-1625BB	15 ³ / ₈ x 25 ¹ / ₂ x 5 ¹ / ₄
P102-BB20	P102-2025BB	20 ¹ / ₄ x 25 ³ / ₈ x 5 ¹ / ₄

**MEDIA AIR CLEANER
LIMITED ONE-YEAR WARRANTY**

LIMITED ONE-YEAR WARRANTY — This CARRIER CORPORATION product is warranted to be free from defects in material and workmanship under normal use and maintenance for one year. The warranty does not apply to replacement of the disposable media filter, which will need to be replaced once or twice a year depending on usage. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through a qualified servicing CARRIER CORPORATION dealer or service PROVIDED the defective part is returned to our distributor.

THIS WARRANTY DOES NOT INCLUDE ANY ADDITIONAL LABOR ALLOWANCE, or other costs incurred for diagnosis, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts. SUCH COSTS MAY BE COVERED BY a separate warranty provided by the installer.

LIMITATIONS OF WARRANTIES — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

CARRIER WILL NOT BE REponsible FOR:

1. Normal maintenance as outlined in the installation instructions including replacement of media filters.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Damage or repair needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration or improper operations
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of CARRIER CORPORATION.
5. Parts not supplied or designated by CARRIER CORPORATION.
6. CARRIER CORPORATION products installed outside the continental U.S.A., Alaska, Hawaii and Canada.
7. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

Model No.

Unit Serial No.

Date of Installation

Installed by

Name of Owner

Address of Installation

TOTALINE[®]

Replacement Components Division • Carrier Corporation
Syracuse, New York



Your Assurance of Quality

ALL Totaline® products are backed with a one-year warranty by Carrier Corporation, the world's largest manufacturer of air conditioning, heating, and refrigeration products.