7 years Limited Warranty

You benefit from a limited 7 year warranty on the motorized impeller and a 3 year limited warranty against manufacturing defects on other components. The limited warranty covers normal usage. It does not apply to malfunctions or failures as a result of improper installation, abuse, mishandling or misapplication or any other circumstances outside the manufacturer’s control or consent.

† Warranty does not cover in any way or form the replaceable Pre-Filter, Carbon Filter or HEPA Filter.

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Box Content
Includes:

- Whole House AC500
- Power cord, 5 FT
- Plenum seal, 7.5 FT
- Screws, (16) 8 x 32 x 1/2”
- Template

1.1 Unpacking and inspection
### 1.2. Technical Data

#### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model AC500</td>
<td></td>
</tr>
<tr>
<td>Filtration Stage 1</td>
<td>Prefilter (100563)</td>
</tr>
<tr>
<td>Filtration Stage 2</td>
<td>Carbon Filter (100512)</td>
</tr>
<tr>
<td>Filtration Stage 3</td>
<td>HEPA filter (100562)</td>
</tr>
<tr>
<td>Weight</td>
<td>28 lbs (12.7 kg)</td>
</tr>
<tr>
<td>Plenum Mount Port Openings</td>
<td>16&quot; x 3.5&quot; (406mm x 89mm)</td>
</tr>
<tr>
<td>Collar Mount Openings</td>
<td>8&quot; (203mm) Round</td>
</tr>
<tr>
<td>Installation Type</td>
<td>Plenum, Wall* or Floor** Mounted</td>
</tr>
<tr>
<td>Electrical Supply</td>
<td>120 VAC @ 60 Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>134 W</td>
</tr>
<tr>
<td>Certification</td>
<td>CSA**</td>
</tr>
<tr>
<td>Airflow data</td>
<td>220-300 CFM</td>
</tr>
</tbody>
</table>

* Installation requires kit No. CMK500

#### Dimensions and Clearance

**Return Air Plenum Installation**

<table>
<thead>
<tr>
<th>View</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front View</td>
<td></td>
</tr>
<tr>
<td>Side View - Clearance</td>
<td>17&quot; (432 mm)</td>
</tr>
<tr>
<td>Back View</td>
<td></td>
</tr>
</tbody>
</table>

**Return Air Plenum and Stand Alone Installations**

<table>
<thead>
<tr>
<th>View</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front View</td>
<td></td>
</tr>
<tr>
<td>Side View - Clearance</td>
<td>17&quot; (432 mm)</td>
</tr>
</tbody>
</table>

---

**IMPORTANT INFORMATION**

The manufacturer reserves the right to modify a product, without prior notice, whether in design, color or specifications, in order to offer at all times a quality product that is highly competitive. Please consult local authorities to find out whether the installation of electrical products requires the services of a certified technician or electrician.
2. Information for the Installer

2.1 Planning the Installation

The Whole House HEPA unit is a versatile appliance with multiple installations configuration. It is recommended to take your time in planning the installation.

Several Installations are illustrated herein for Whole House filtration applications:

- Return to return integrated with the forced air heating/cooling system.
- Central draw points using dedicated duct system
- Consult the manufacturer for other special applications.

2.2 Type of Installation: Return to Return Integrated System

Ducting Flair System
(Hepa Mounted on Duct)

Optional Collar System
(Hepa Mounted on Wall)

INSTALLATION SHOULD BE PERFORMED BY A CERTIFIED PROFESSIONAL.
Consult your HVAC product manufacturer if the usage of this product will affect the performance of your forced air heating / cooling system.
and Alone
Installation

For homes without a forced air cooling system. Allows for air and circulation throughout one.

System must be operated continuously—never a part or all the system cated in an unconditioned space to condensation in the ductwork w freezing (0°C, 32°F).

and Alone
Cement Installation

Unit will usually consist of one return with from one side of the home, one supply with grille at the opposite of the home.
2.4 Installing the unit

Tools required
- Phillips #2 or Robertson #1 screwdriver
- 3/32" drill bit
- Tin snips or metal shear
- Power Drill

Step by step Installation
Steps involved in the preparation of the plenum mount system are as followed:

Step 1: Preparing return air plenum
Find a location that satisfies both service and maintenance requirements and proceed to cut holes as illustrated below.

Step 2: Preparing ducting flairs
Remove the door and filters and proceed to cut the insulation as illustrated below.

Location
Return side connections is to be installed after the last branch on the return air plenum and minimum 2 linear ft distance from furnace.

A 5-ft power cord is supplied with the unit. If not available a 120VAC outlet needs to be supplied.

Note:
Refer to the Owner’s Operation Guide (p,9) for details on how to remove the unit’s door and filters.
Tips to installer

Interlocking the HEPA filtration unit with the forced air heating / cooling system is possible using an auxiliary relay. Refer to page 11 of this guide for example.

Please consult local authorities to find out whether the installation of electrical products requires the services of a certified technician or electrician.

Step 2:(Continued)

Cut the four metal tabs to release the mounting flaps for the inlet and outlet ports.

Figure 2.2d

Figure 2.2h - Apply plenum seal tape all around both openings on the back of the unit.

Figure 2.2e

Figure 2.2i

Figure 2.2f

Figure 2.2g

Figure 2.2j: Bend tabs outward approximately 90 degrees.
Installation GUIDE

2.4 Installing the unit (Continued)

Step 3: Mount Hepa

Step 3: (Continued)

Check for this symbol on each filters and it is located on the unit’s motor plate.

**Tips to installer**

It is recommended that the filtration unit have a devoted receptacle with 115V. It is not recommended to connect unit with an extension cord. If no receptacle is available please call an electrical contractor to have one installed.

MAKE SURE TO INSTALL FILTER ACCORDING TO AIR FLOW DIRECTION FOR MAXIMUM PERFORMANCE

**Figure 2.3a** - Align unit into place.

**Figure 2.3b** - Unfold the ducting flares completely to sandwich the return air plenum between the ducting flare and the filtration unit.

**Figure 2.3c** - Install unit as usual using all supplied fastening hardware.

**Figure 2.4a** - Remove protective plastic covers from all filters and replace them in their proper location (Stage 1, 2 and 3).

**Figure 2.4b** - Replace door and insert power cord into the receptacle of the filter units and the other end into wall outlet.

Stage 1: Pre-Filter

Stage 2: Carbon filter

Stage 3: HEPA Filter
3. General Operating Information

Function

The Whole House HEPA system is comprised of a ventilator, speed selection switch, 3 stages of filtration and the cabinet enclosure system. The ventilator pulls air through the pre-filter and pushes the same air through the impregnated carbon pad for odor control and finally the last stage of filtration is the HEPA filter which removes 99.97% of particles 0.3μm in size.

Operation Mode Options

The unit features two speeds of operation for your convenience. The speed selection switch is located on the front of the motor assembly. At lowest speed the unit will provide 220 CFM of clean air while at highest speed, the unit will provide 300 CFM of clean air. It is recommended that the unit be operated on highest speed at all times to maximize the benefits of the HEPA filtration system. If for some reason the filtration needs are not as important then one might operate the unit at low speed.

An access door is provided at the front of the unit to permit access to the filters and speed selection switch. Opening the latch on the right side of the unit will permit the door to swing open. A safety door interlock switch cuts the power to the motors for your safety. If needed the door can be removed from the cabinet hinges by holding the top part of the door with one hand and gently tapping on the bottom edge of the door with the other hand to release the door from its hinges.

Recommended Operation

The return plenum mount model operates in conjunction with your forced air heating/cooling system. A forced air distribution system continuously circulates the same air inside your home. The whole house HEPA filtration system operates on the principal of bypass filtration, which means that a portion of the air being returned into the furnace is filtered on each pass. Over time all the air in the home gets cleaned. It is recommended that the furnace blower be in operation whenever the filtration system is in operation.

For stand-alone attic installation, the HEPA filtration system must be operated continuously whenever a part of all the system is located in an unconditioned space to avoid condensation in the ductwork below freezing (32°F, 0°C).

Maintenance of the unit should be performed at regular interval to keep the benefits of the HEPA filtration unit.
4. General Maintenance Information

4.1 Changing Filters
After opening the unit's door, grasp both edges of filter and pull with equal force to slide out the filter.

4.2 Cleaning
Once a year or as needed, clean the interior of the unit (Wall and motor plates) using mild non-abrasive soap and water. It is recommended to use products that are environmentally friendly.

4.3 Troubleshooting

<table>
<thead>
<tr>
<th>Troubleshooting</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit does not operate</td>
<td>• Is power cord fully inserted in the unit's connector?</td>
</tr>
<tr>
<td></td>
<td>• Is outlet powered?</td>
</tr>
<tr>
<td></td>
<td>• Is door interlock switch operating?</td>
</tr>
<tr>
<td>Unit operates only on one speed.</td>
<td>Possible loose wire inside electrical box, contact your local contractor.</td>
</tr>
<tr>
<td>Unit vibrates</td>
<td>Check for excessive dust buildup or missing balancing weight on the impeller wheel.</td>
</tr>
</tbody>
</table>

4.4 Electrical Wiring Diagram

Note to installer
IMPORTANT: ALWAYS UNPLUG UNIT BEFORE SERVICING
Optional Interlock

Contact
For Technical Support
• Toll Free: 1-248-476-5100

Warning:
Instructions listed for interlocking the filtration unit to a furnace is an example only. Actual wiring of interlock connection may vary depending on the system.

Wiring the AC500 Air Cleaner to an ICP 80% or 90 % +% Furnace

The wiring together of the GeneralAire AC500 Air cleaner onto an ICP electronic fan control (EFC) board is as simple as 1-2-3. Control boards on different brands of furnaces vary but in principal are all quite similar.

Step 1:
Turn-off electric power to furnace and use a 120V coil SPST N/O relay (such as the Relay In-Box #RBL1 C L39-103). Mount relay to a _ knockout.

Step 2:
Wire the HOT EAC terminal on the furnace’s EFC board to one side of the 120V coil on the relay. Wire the other side of the 120V coil back to a spare common terminal on the EFC board.

Step 3:
Wire 120V HOT from blower door safety switch (use a spade terminal splitter similar to Johnstone #G21-414) to one side of the open contact on the relay (red wires on L38-180). Wire from the relay to a receptacle you mount in a 2x4 handy-box on the outside of the furnace. Wire the common side of the receptacle to the common terminal on the furnace EFC board.