

INSTALLER'S & OWNER'S MANUAL

Ceiling HEPA Fan Box Manual

P/N##### Serial No. _____ **Install Date:** _____

Sold by: _____

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Read and Save These Instructions

WARNING!— This symbol indicates important instructions. Failure to heed them can result in serious injury or death.

CAUTION!— This symbol indicates important instructions. Failure to heed them can result in injury or material property damage.

1. Specifications

Model: Single Fan Ceiling HEPA Fan Box
Double Fan Ceiling HEPA Fan Box

Electrical Specs: 110-120VAC 60Hz, 1PH Max HACR Type

Circuit Breaker: Single Fan: 3 Amps
Double Fan: 5 Amps

Amperage: Single Fan: 1.7 Amps, 205W
Double Fan: 3.5 Amps, 405W

Capacitor: 250 VAC, 16 MFD, CLASS F

Total system air flow: 500 CFM @ .75" w.c. for two blowers and 330 CFM @ .5" w.c. for one blower.

Refer to Fig 1 for unit dimensions and details.

2. Installation

WARNING! To reduce the risk of fire, electric shock, or injury to persons, observe the following:

A. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.

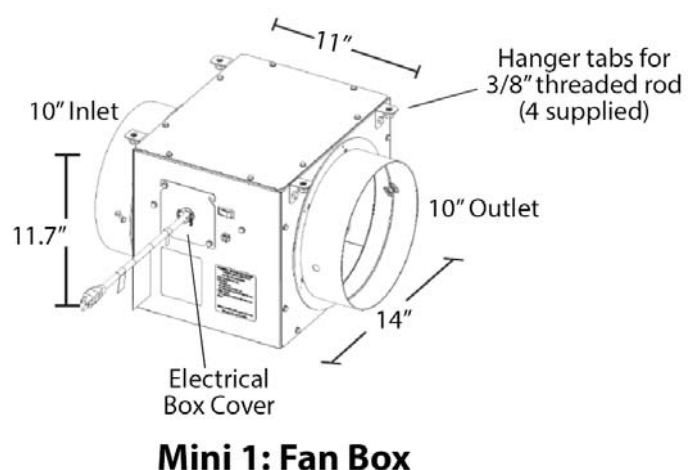
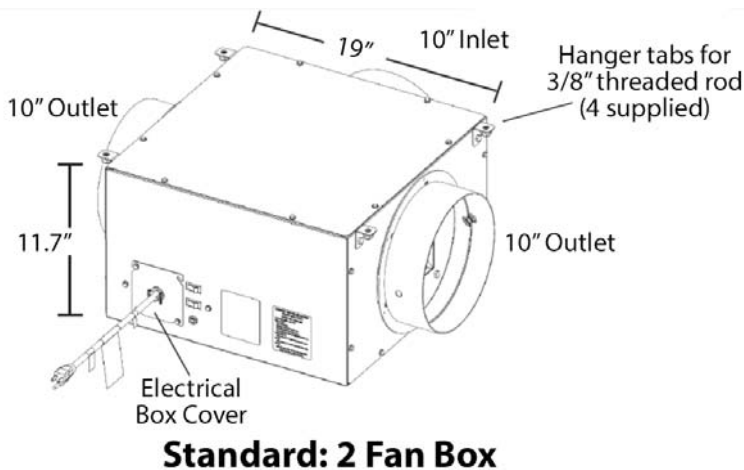
B. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

C. This unit is not approved to be installed over a tub or shower.

2.1 Air ventilation systems

CAUTION! Do not use this device to replace an exhaust ventilation system. This device DOES NOT exhaust to the outside.

Figure 1

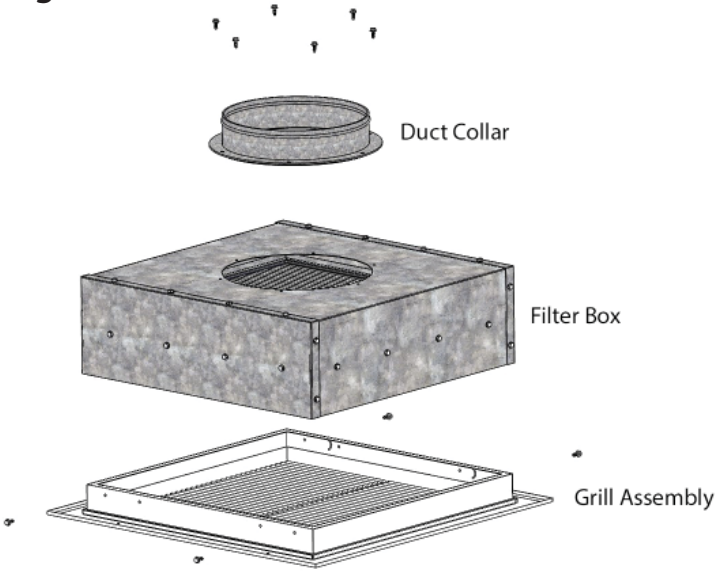


SAFETY PRECAUTIONS

2.2 Location of Ceiling HEPA Fan Boxes

Ceiling HEPA fan boxes must be installed 4 to 15 feet from Ceiling HEPA filter box. The boxes are to be connected with 10" insulated flexible ducting. The fan box should be connected with as straight duct path as possible. Sharp bends and collapsed ducting will affect system performance.

Figure 2



Ceiling HEPA system is ducted above drop ceilings or open ceiling installations. The filter box return and supply diffuser(s) should be positioned approximately 20 feet apart, with the fan box positioned in the middle of the duct run. The supply diffuser(s) should be located to provide balanced coverage no more than 15 feet from the fan box. Ceiling HEPA system must be located in non-plenum rated, conditioned space.

2.3 Filter Media

20"x20"x1" MERV 8 or equivalent pre-filter must be used and maintained in Ceiling HEPA filter box to prevent debris from entering the Ceiling HEPA fan box.

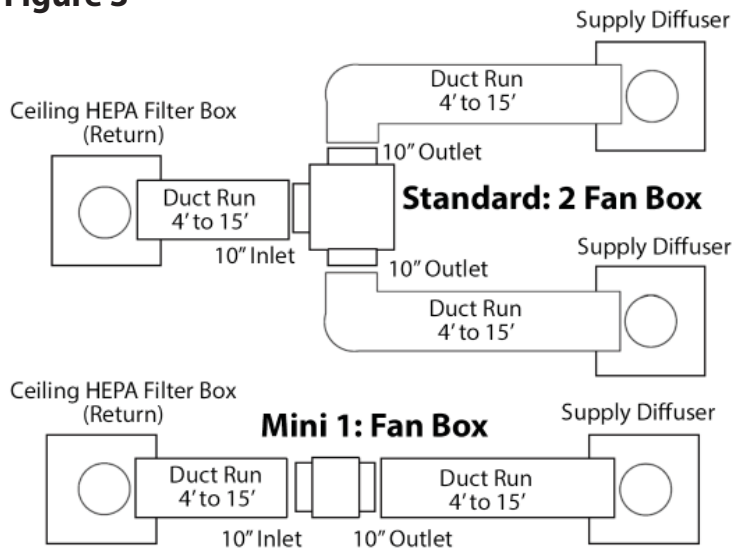
2.4 Assembly

Fan boxes:

HEPA filter box:

- A. Assemble the supplied duct collar as shown in Fig 2 with the supplied self tapping screws (qty 6).
- B. Assemble the grill assembly to the filter box as shown in Fig 2 using the supplied self drilling screws (qty 4).
- C. Remove the HEPA filter and discard the plastic bag. Replace the HEPA filter carefully without damaging the rubber gasket.
- D. Reassemble the HEPA filter box ensuring the prefilter is in place.

Figure 3



To make installation easy, the Ceiling HEPA system uses 10" circular duct collars. Insulated, flexible 10" duct is recommended to minimize device noise.

FOR INSTALLER ONLY

2.5 Hanging Ceiling HEPA Fan Box

Ceiling HEPA fan boxes have four mounting tabs for hanging from joists, rafters, or trusses and uses (4) 3/8" diameter threaded rod or the equivalent. The tabs may also be used to directly mount to ceiling above drop-ceiling. Fasteners and anchoring hardware must be designed to support 200 pounds. Chains may also be used on the tabs to provide additional vibration dampening. The chains and hardware must be designed to support minimum 200 pounds.

2.6 Ducting To and From Ceiling HEPA

All flexible ducting connected to the unit should be UL listed. The preferred method of ducting is to use 10" insulated round duct from the Filter Box collar to the fan box inlet. 10" insulated ducting will connect the fan box exhaust to the supply diffuser(s).

Duct connections should be made to comply with local codes and shall be made substantially air tight. This often requires mechanical fastening utilizing a nylon strap and an approved tape or mastic.

Do not locate the return grill filter box near the supply diffusers. They should be located 8 feet minimum apart. If ceiling geometry does not allow this specification, locate the return and diffusers as far apart as is practical.

2.7 Wiring Ceiling HEPA Fan Box

NOTE: All electrical connections must be installed by a qualified electrician. All wiring must conform to the local electric codes and/or the National Electrical Code.

Ceiling HEPA uses a 115 volt, 15 amp circuit which is connected to the black and white wires in the electrical cabinet (see Fig. 3).

Figure 4

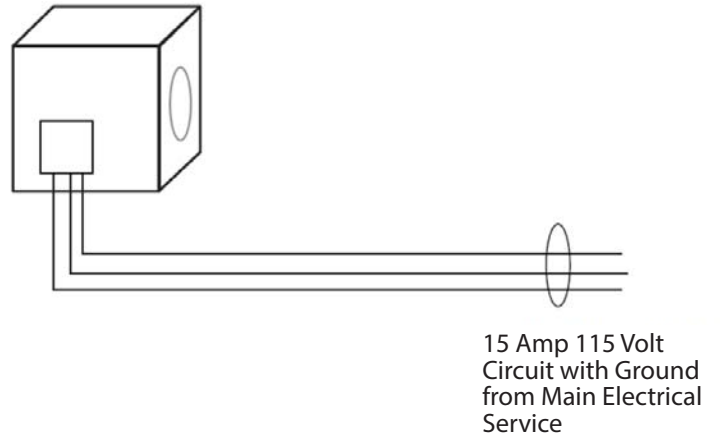


Figure 5

One Fan HEPA Filter Wiring

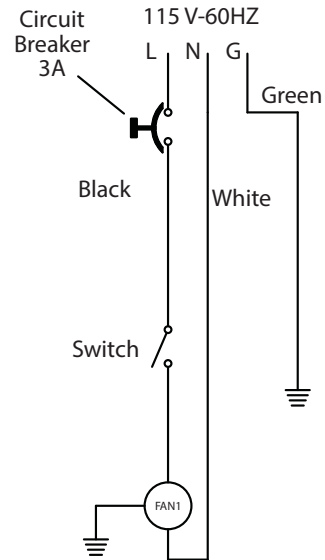
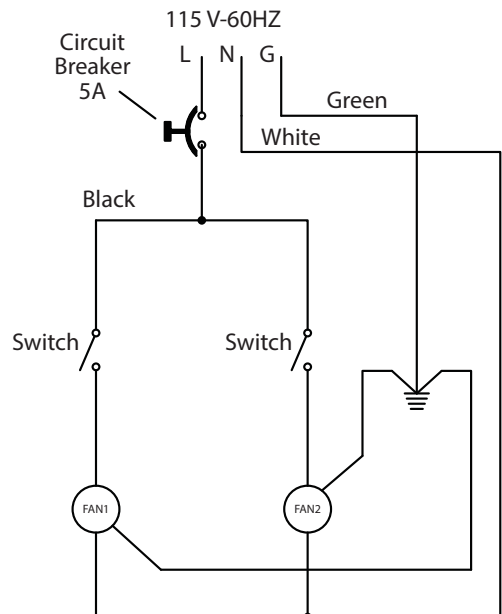


Figure 6

Two Fan HEPA Filter Wiring



FOR INSTALLER ONLY

Switches are provided to turn each fan in the fan box on or off.



WARNING! The fan switches **MUST BE** in the off position during installation. The fan boxes are rated for duct use only and do not provide protection from fan blades until ducting installation is complete.

The single fan boxes include one 3 amp circuit breaker. The double fan boxes include one 5 Amp circuit breaker. If the fan box switch does not activate the fan, reset the circuit breaker by pressing the round button in the center.

A 4" junction box cover is used to cover the internal wiring.

A 10' long power cord is included for installations where a plug in connection is permitted in accordance with the National Electrical Code and local codes and ordinances. A dedicated 15A circuit and GFCI receptacle are recommended. Electrical connections inside the device are made with the included wire nuts. Route the cord through the appropriate knockout and secure with the non-metallic cable clamp.

If not using the included 10' power cord, ensure that the electrical connection and wire size are adequate and in conformance with the National Electrical Code, ANSI/NFPA 70 – latest edition and all local codes and ordinances. Use flexible, armored, or non-metallic sheathed, copper wire with grounding conductor. Use the included non-metallic cable clamp as required.

- Ceiling HEPA system requires 120-volt, 60 Hz, AC-only, 15 amp, fused and grounded electrical supply.
- A visible circuit breaker or disconnect switch near the unit is required for maintenance and service.
- A dedicated circuit is recommended.
- Use of a UL listed or CSA approved strain relief is required.



WARNING! To reduce the risk of fire, electric shock, or injury to persons, observe the following:

A. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.

B. Before servicing or cleaning unit, switch power off at service panel and lock service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.



CAUTION! For general air filtration only. This device does not provide external ventilation. Do not use to exhaust hazardous or explosive materials and vapors.

2.8 HEPA Filter Box Installation

A. Locate 2 feet x 2 feet ceiling tile away from HVAC supply or returns.

B. If square tile needs to be created, follow T-bar manufacturer's instructions. Remove tile and put HEPA filter box in place. Add additional support wires if needed.

See page 3 for duct spacing recommendations.

C. After installation, inspect joints inside and outside of filter box. Add foil tape or mastic as necessary if leakage is present.

FOR INSTALLER ONLY

3. Operation

3.1 Use

Ceiling HEPA Fan Boxes are to be used with Ceiling HEPA system only. No other use is allowed.

3.2 Fan Controls

The fan box is controlled with a switch for each blower. After mounting, duct installation is complete, and power is supplied, turn each blower switch to "ON". There is one speed for each blower.

If the blower does not operate, press the button on the circuit breaker to reset.

The air flow rate may not be balanced between each of the supply diffusers, this is normal operation and depends on many variables.

4. Maintenance

4.1 It is recommended to check air flow annually to confirm the system is operating correctly and there are no obstructions.

4.2 The pre-filter should be checked quarterly and replaced if spoiled. Proper replacement of pre-filter will extend the HEPA filter service life.

4.3 Replace the HEPA filter annually. Inspect the HEPA filter during quarterly pre-filter maintenance. Replace HEPA filter if spoiled. Only replace with HEPA filter, other filters are not designed to work with this system.

5. Service



CAUTION! Requires a qualified service person because electrical shock hazard is present.

5.1 Circuit Breaker Trips

Check For Short In Wiring:

If the circuit breaker trips, locate a short in the wiring and reset the circuit breaker. If the circuit breaker then trips, check the blower motor.

5.2 Blower Operates on One Speed Only

If the blower motor fails to operate when voltage is present at its leads, the motor is defective and the blower must be replaced.

6. Service Parts

Item	Part Number	Qty.	Description
1	90700050	1	Blower HEPA Filter 115VAC, 1400 RPM
2	91306406	1	Power Cord 10 Feet
3	90436820	1	Circuit Breaker 5A
4	90436825	1	Circuit Breaker 3A
5	4035825	1	Switch, SPST, On-Off
6	90508010	1	Filter, MERV 8, 20x20x1
7	90508020	1	Filter, HEPA Panel
8	90508010- 12P	1	Filter, MERV 8, 20x20x1, Box of 12
9	90508020-7P	1	Filter, HEPA Panel, Box of 7

**QR Code
to order
filters**

Limited Warranty

Warrantor:

Who Is Covered: This warranty extends only to the original residential end-user of the Ceiling HEPA system, and may not be assigned or transferred.

Warranty: _____ warrants that, for six (6) years from the date of installation, the Ceiling HEPA system will operate free from any defects in materials and workmanship, provided the _____ HEPA system has been installed, operated, and maintained as stated in the installation and operation manual. This warranty is limited to the repair or replacement of the equipment F.O.B. _____

Limitation and Exclusions: If any _____ Ceiling HEPA system part is repaired or replaced, the new part shall be warranted for only the remainder of the original warranty period applicable thereto (but all warranty periods will be extended by the period of time, if any, that the _____ Ceiling HEPA system is out of service while awaiting covered warranty service).

UPON THE EXPIRATION OF THE WRITTEN WARRANTY APPLICABLE TO THE _____ Ceiling HEPA system OR ANY PART THEREOF, ALL OTHER WARRANTIES IMPLIED BY LAW, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL ALSO EXPIRE. ALL WARRANTIES MADE BY _____ ARE SET FORTH HEREIN, AND NO CLAIM MAY BE MADE AGAINST _____ BASED ON ANY ORAL WARRANTY. IN NO EVENT SHALL _____ IN CONNECTION WITH THE SALE, INSTALLATION, USE, REPAIR OR REPLACEMENT OF ANY _____ Ceiling HEPA system OR PART THEREOF BE LIABLE UNDER ANY LEGAL THEORY FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES (THE END-USER SHOULD TAKE PRECAUTIONS AGAINST SAME), OR LOSS OF USE OR DAMAGE TO ANY REAL OR PERSONAL PROPERTY.

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