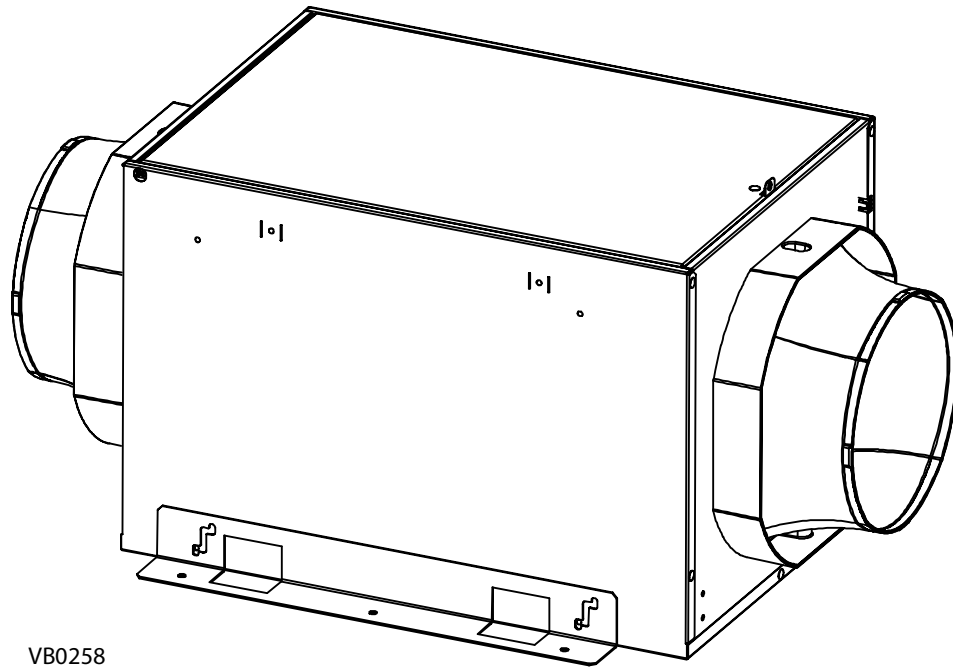


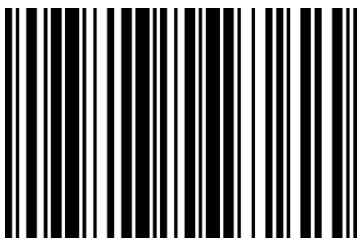
BROAN®

FRESH IN™ PREMIUM FIN-180P INSTALLATION INSTRUCTIONS



⚠ RESIDENTIAL USE ONLY ⚠

READ AND SAVE THESE INSTRUCTIONS



99046020C



Intertek



⚠WARNING

Identifies an instruction which, if not followed, might cause serious personal injuries including possibility of death.

CAUTION

Denotes an instruction which, if not followed, may severely damage the unit and/or its components.

💡 Indicates a supplementary information that may relate to optional parts or simply aim to facilitate a task.

⚠WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSON(S) OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before servicing or cleaning this unit, disconnect the power cord from the electrical outlet.
3. This unit is not designed to provide combustion and/or dilution air for fuel-burning appliances.
4. Do not use this unit with any solid-state speed control device other than the one specified in section 5.
5. Do not operate any fan with a damaged cord or plug. Discard fan or contact your HVAC contractor, or the manufacturer.
6. Do not run cord under carpeting. Do not cover cord with throw rugs, runners or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.
7. Installation work must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
8. When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
9. This unit must be grounded. The power supply cord has a 3-prong grounding plug for your personal safety. It must be plugged into a mating 3-prong grounding receptacle, grounded in accordance with the national electrical code and local codes and ordinances. Do not remove the ground prong. Do not use an extension cord.
10. When servicing, cleaning or performing installation of this unit, it is recommended to wear safety glasses and gloves.
11. When applicable local regulation comprises more restrictive installation and/or certification requirements, the aforementioned requirements prevail on those of this document and the installer agrees to conform to these at his own expenses.
12. The unit must be mounted at least 3.3 feet (1.0 meter) away from any accessible opening of the duct.

CAUTION

1. Please read specification label on product for further information and requirements.
2. Do not intake air into spaces within walls or ceiling or into attics, crawl spaces, or garage. Do not attempt to recover the exhaust air from a dryer or a range hood.
3. Intended for residential installation only in accordance with the requirements of NFPA 90B.
4. When leaving the house for a long period of time (more than two weeks), a responsible person should regularly check if the unit operates adequately.
5. At least once a year, the unit mechanical and electronic parts should be inspected by qualified service personnel.
6. Since the electronic control system of the unit uses a microprocessor, it may not operate correctly because of external noise or very short power failure. If this happens, unplug the unit's low voltage power source and wait approximately 10 seconds. Then, plug the low voltage in again.
7. Outdoor intake hood must be weather tight and comprise a bird screen.
8. Should you decide to dispose of this unit or of parts of it, do so in accordance with local laws and regulation.
9. Some areas are prone to a higher frequency of lightning-induced power surges. Using a surge protector device to protect units located in these areas is recommended.

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1. USER INFORMATION

1.1 OPTIONAL WALL CONTROL

This unit can be connected to the VT11W wall control.

- Upon startup, the wall control LED will light up during the boot sequence, and remain ON as the unit starts to operate after the boot sequence. Press the push button to turn the unit OFF; the wall control LED will also turn OFF.
- When it is time to perform the filter maintenance, the wall control LED will blink slowly (2 seconds ON, 2 seconds OFF). After the filter maintenance has been performed, press and hold the push button for 5 seconds to reset the filter maintenance reminder.
- Refer to your installer for any other blinking pattern.

1.2 USER SERVICING INSTRUCTIONS

- The metal filter included with this unit should be cleaned every 6 months using water and a mild soap. To remove the filter(s), open the door, release the filter retaining clip and pull filter(s) out. Allow the filter to dry completely before putting it back in the unit; when reinserting it in the unit, make sure that it is standing straight.
- Inspect the outdoor air intake at least once a year.
- During the first year of operation, it is recommended to inspect your unit at a higher frequency, especially if you live near a highway or in an area where there is a lot of construction work, generating lots of dust. Your filter(s) may need more frequent cleaning or replacement in these types of environments.
- Replace the optional MERV filters at least once a year; do not attempt to clean and reuse the optional MERV filters.
- These recommendations may change according to the environmental conditions in your area.

1.3 COMFORT MODE

Should the air inside your house become too humid, or if such conditions want to be prevented, the operation mode of your Supply Fan can be changed from a Code-Compliant one (modes 1 to 3) to a Comfort Mode (modes A to E). Refer to the map in Appendix A to make the right choice.

When making such change, make sure to only change the Mode and to leave the Run time % as it was set by your installer. If in doubt, refer to your HVAC contractor.

Selected mode	Climatic Zones*
1 - Ashrae 2016	Zones 1-4
2 - Ashrae 2010 (factory setting)	Zones 1-4
3 - IRC / IMC 2012-2015	Zones 1-4
A - Comfort mode Hot / Humid #1	Zones 2A and 1
B - Comfort mode Hot / Humid #2	Zones 1 and 2A
C - Comfort mode Hot / Dry	Zone 2B
D - Comfort mode Mixed / Humid	Zones 3A, 4A, 3C and 4C
E - Comfort mode Mixed / Dry	Zones 3B and 4B

*As defined by the Department of Energy. Refer to the map in Appendix A.

2. PLANNING

2.1 INSTALLATION ZONES

The FIN-180P can be installed in climatic zones 1 to 4 as defined by the Department of Energy (refer to Appendix A for the map), whether as a stand alone unit or connected to the ducting of an AHU. Installation in any other climatic zone may cause damage to the house.

2.2 INSTALLATION TYPES

CAUTION

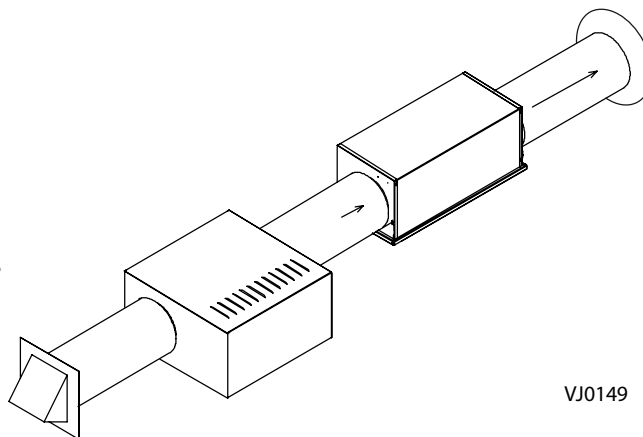
Always use insulated ducting of a minimum R-4 insulation factor.

2.2.1 STAND ALONE INSTALLATION

The installer shall ensure that, if necessary, an in-line heater sized according to required airflow and outside design heating temperature from Manual J or ASHRAE table is installed to avoid condensation on uninsulated duct distribution systems within the house or surfaces near the distribution register. The in-line heater shall have an integrated airflow sensor and an over temperature sensor to prevent heating in no-flow or low-flow conditions.

When deciding if a preheater is required and whether it should be installed BEFORE or AFTER the supply fan, consider the following:

- This supply fan's minimum operating temperature is 14°F.
- The minimum distance between the preheater and the supply fan is 12 inches.
- The temperature distributed in the ducting should not be below 55°F.



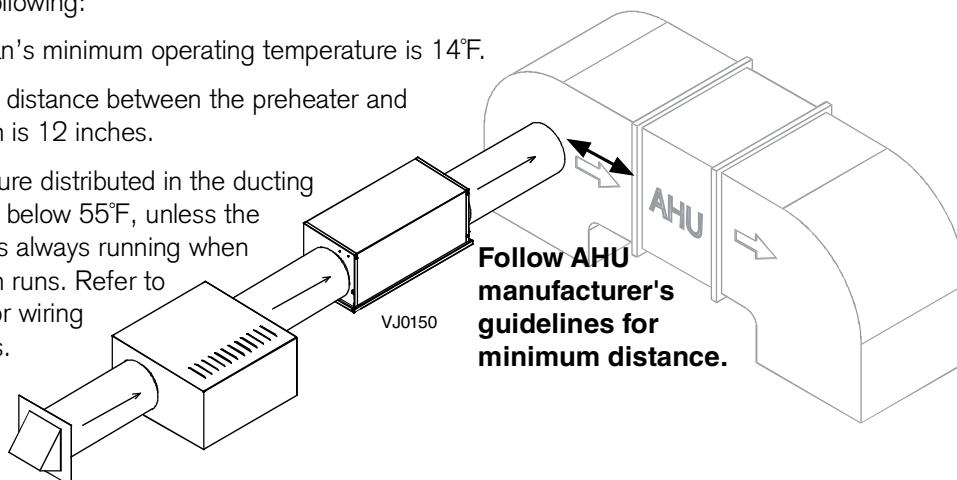
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2.2.2 INSTALLATION WITH AN AHU

The installer shall ensure that, if necessary, an in-line heater sized according to required airflow and outside design heating temperature from Manual J or ASHRAE table is installed to ensure that the air delivered to the AHU is never below the minimum temperature allowed by the manufacturer (generally 55°F). The in-line heater shall have an integrated airflow sensor and an over temperature sensor to prevent heating in no-flow or low-flow conditions.

When deciding if a preheater is required and whether it should be installed BEFORE or AFTER the supply fan, consider the following:

- This supply fan's minimum operating temperature is 14°F.
- The minimum distance between the preheater and the supply fan is 12 inches.
- The temperature distributed in the ducting should not be below 55°F, unless the AHU blower is always running when the supply fan runs. Refer to section 5.2 for wiring configurations.



3. PREPARATION

CAUTION

This unit has to be provided with a low voltage power source (AHU or other), refer to section 5.2 for wiring.

1. Remove the unit from the box and inspect for damage. Installation hardware is located in a plastic bag along with this guide, on top of the filler.
 2. Put the unit down on a protected surface.
 3. Open the unit's door and remove the filter to allow for more room to work in the electrical compartment.
- 💡 This unit reads temperature and relative humidity every hour and uses this data to choose the best time of the day to ventilate, according to the chosen mode's preset limits.
4. Referring to the table below, choose **the mode** you want the unit to operate in and **note it down** in the space provided for that purpose on the unit's label.

Selected mode*	Climatic Zones**
1 - Ashrae 2016	Zones 1-4
2 - Ashrae 2010 (factory setting)	Zones 1-4
3 - IRC / IMC 2012-2015	Zones 1-4
A - Comfort mode Hot / Humid #1	Zones 2A and 1
B - Comfort mode Hot / Humid #2	Zones 1 and 2A
C - Comfort mode Hot / Dry	Zone 2B
D - Comfort mode Mixed / Humid	Zones 3A, 4A, 3C and 4C
E - Comfort mode Mixed / Dry	Zones 3B and 4B

*Refer to the label on the inlet or to Appendix B for the full limits table.

**As defined by the Department of Energy. Refer to map in Appendix A.

5. Refer to your local building code to **determine the required airflow**.
6. Refer to the tables below. Find out what speed and run time percentage the unit has to be set in to provide the required airflow, and **note down the chosen values** in the space provided for that purpose on the unit's label.

For example: If the required airflow is 90 CFM (circled below), the speed switch should be set to 180 CFM, and the Run time % button, to 50%.

Run time % according to speed setting and required airflow

Speed Setting	Required airflow (CFM)															
	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105
130 CFM	25	30	30	35	40	40	45	50	55	60	60	65	70	75	80	80
180 CFM	20	20	20	25	30	30	35	35	40	40	45	50	50	55	55	60

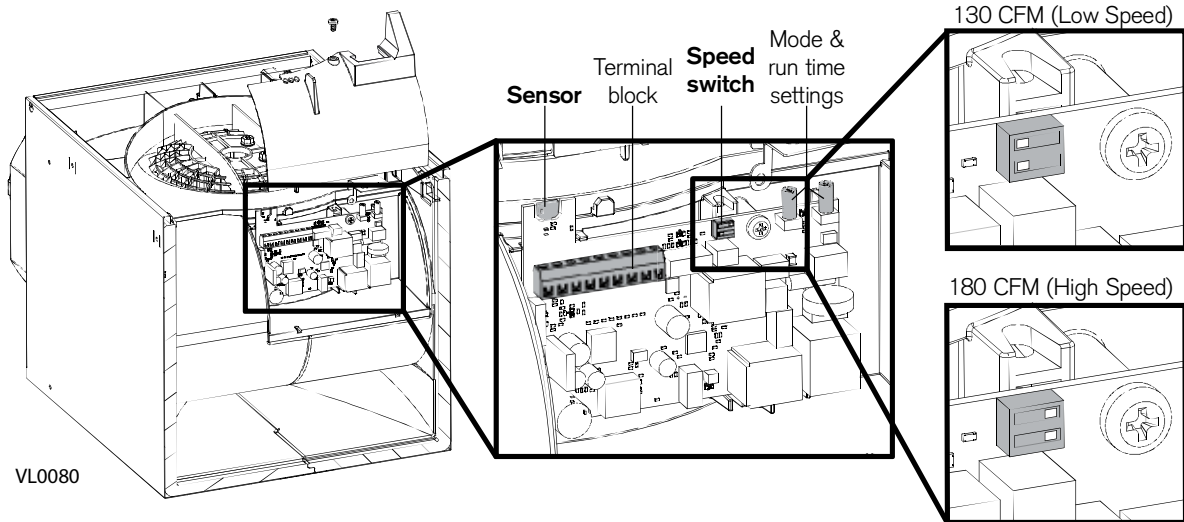
Run time % button value

Speed Setting	Required airflow (CFM)															
	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	
130 CFM	85	90	90	95	100	-	-	-	-	-	-	-	-	-	-	
180 CFM	60	65	70	70	70	75	80	80	85	85	70	90	95	95	100	

Run time % button value

Grayed out values are the recommended settings and should be preferred.

7. Remove the screw holding the electrical compartment cover, as well as the cover itself.
8. Set the **Speed Switch** to 130 CFM or 180 CFM, according to the settings chosen in step 6. The unit is factory set to 130 CFM.



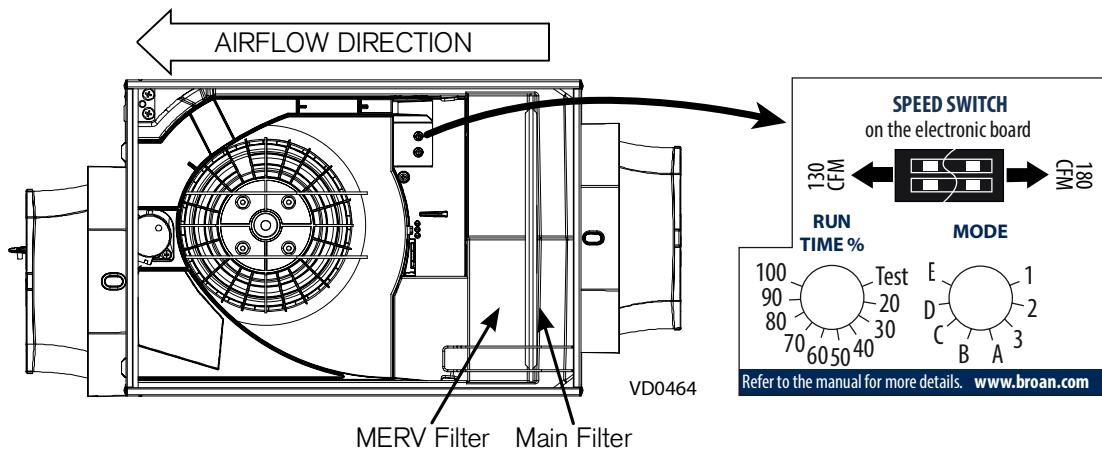
9. Using the terminal block located on the electronic board, perform the low voltage connection; refer to Section 5.2 for the wiring diagrams. Connection to a low voltage power source is mandatory.
 - Make sure that the polarity of the connections is respected.
 - Pay special attention to the sensor located above the terminal block and the potentiometer buttons on the electronic board; they are very fragile, do not damage them while performing the connections.
 - Run the low voltage wires along with the other wires all the way to the hole and grommet in the housing, where the low voltage wires should exit. Make sure that the wire seal foam is reinstalled.

💡 If the unit is to be connected to a VT11W optional wall control, the low voltage wire should be connected to the terminal block now. Refer to Section 5.3 for the wiring diagram.

CAUTION

Make sure that the wire seal foam is put back in place.

10. Reinstall the electrical compartment cover (make sure not to pinch wires), and set the Mode and Run time % buttons according to the settings previously chosen.

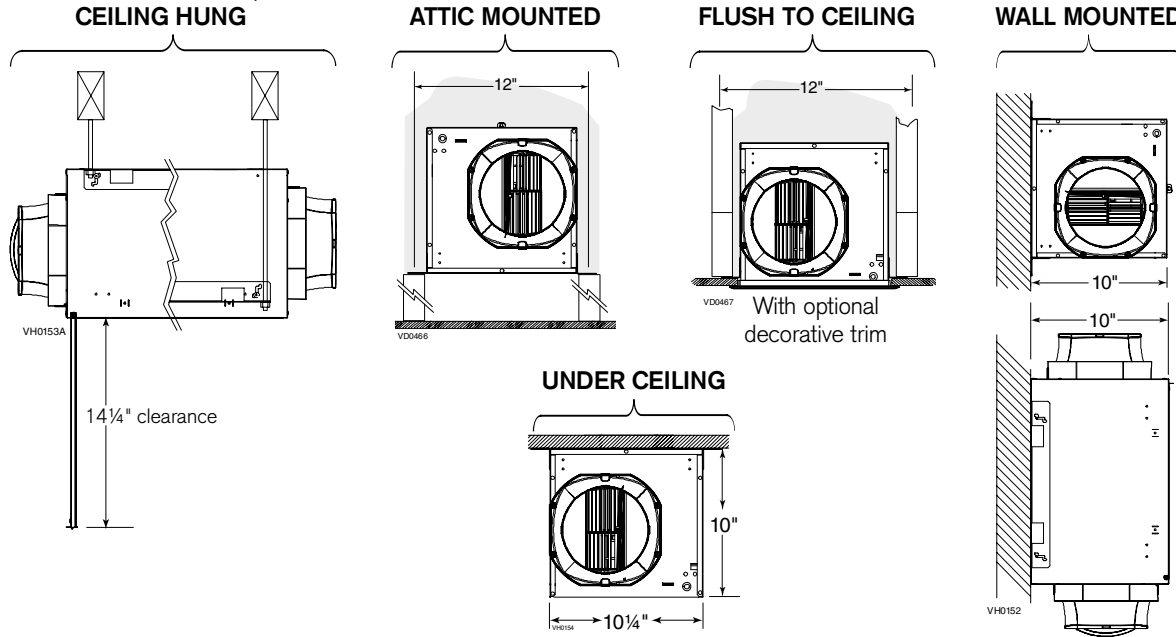


11. Reinstall the main filter in the unit.

💡 An optional MERV filter may be installed now. The main filter should remain as a prefilter, and the MERV filter should be installed as indicated above.

3.1 MOUNTING THE UNIT

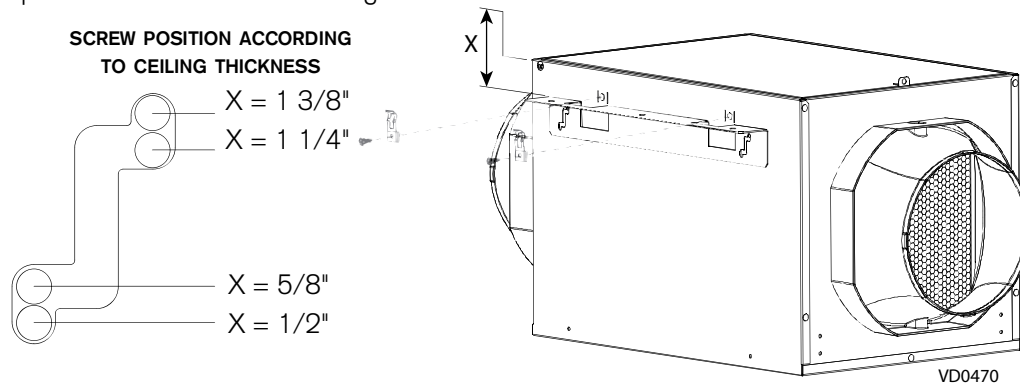
- When choosing a location for this unit, keep in mind that maintenance will have to be performed by the end user on a regular basis. Choose an easily accessible location and plan for a 14-in. clearance for the door to open.



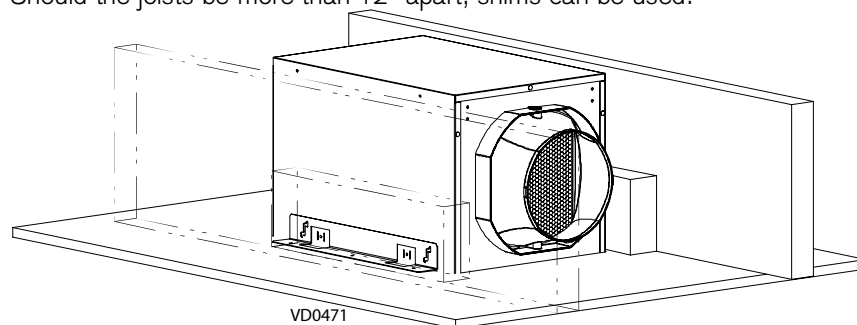
3.1.1 FLUSH-TO-CEILING

- If the finishing will be done using the optional decorative finishing ring (part no. FIN-R1015), the springs included in the optional kit should be installed before installing the brackets.

- Using 4 screws no. 8-18 x 0.375 in., install the brackets on the unit following the diagram below to adapt to the thickness of the ceiling.



- Using 4 screws no. 10-12 x 0.625 in., install the unit between the joists. This unit is designed to fit between 12-in. cc joists. If the joists are closer, do not force the unit in, choose an other installation method. Should the joists be more than 12" apart, shims can be used.



- Prior to painting, clean the metal housing using solvent and the plastic decorative liner using water.

3.1.2 UNDER CEILING OR WALL MOUNTED

1. Using 4 screws no. 8-18 x 0.375 in., install the brackets on the unit as illustrated in Figure A.
2. Using 4 screws no. 10-12 x 0.625 in. or longer screws if necessary, secure the unit to the wall or ceiling, into the studs, joists or other solid material.

💡 When wall mounted, the unit can be positioned in any orientation to suit your need.

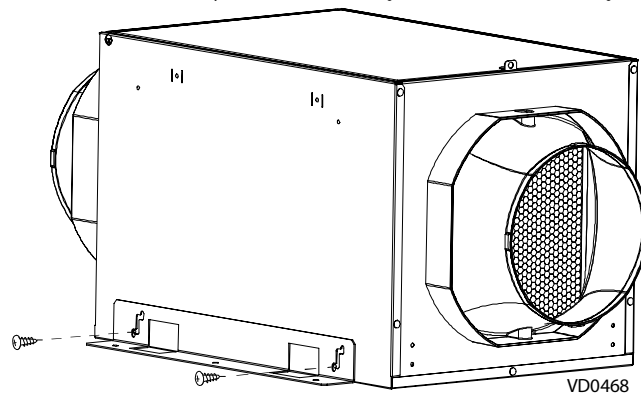
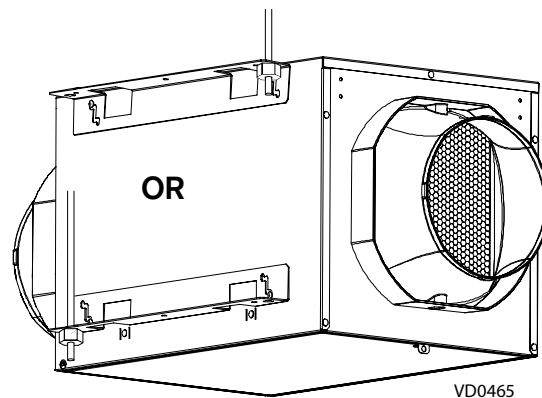


Figure A : Bracket installation

3.1.3 CEILING HUNG

The brackets have been designed to allow that the unit be hung using threaded rods.

1. Using 4 screws no. 8-18 x 0.375 in., install the brackets in one of both ways illustrated below. Use nuts to secure the unit.

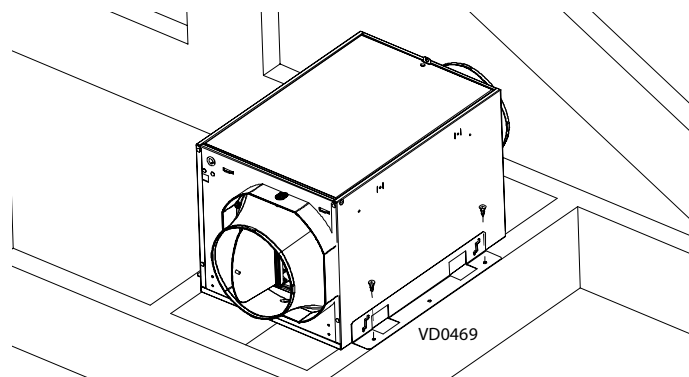


3.1.4 IN THE ATTIC

CAUTION

Do not install in an attic where the temperature may exceed 160°F.

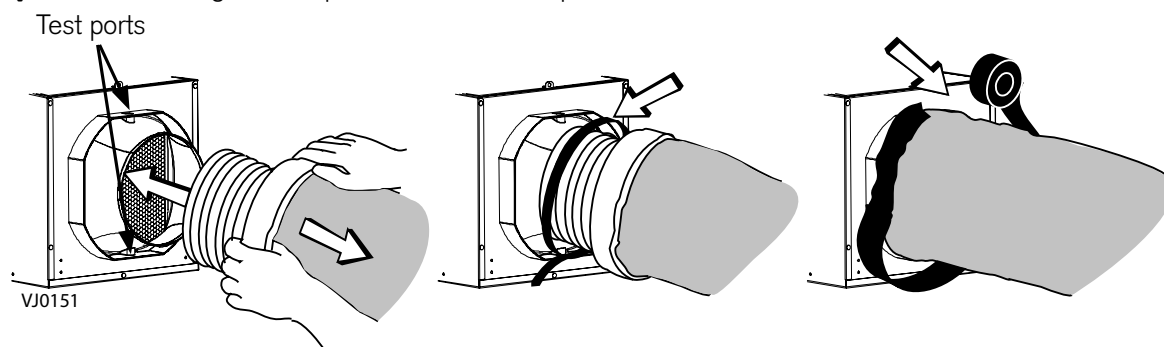
1. Using 4 screws no. 8-18 x 0.375 in., install the brackets on the unit as illustrated above in Figure A.
2. Using 4 screws no. 10-12 x 0.625 in., secure the unit to the joists or cross framing.



3.2 CONNECTING THE INSULATED DUCTS TO THE UNIT

1. Slide the inner flexible duct over the port and tie it using a tie-wrap.
2. Pull the insulation over the outer ring of the port without compressing it.
3. Use duct tape to seal the outer membrane of the insulated duct to the outer ring of the port.

💡 Avoid blocking the test ports with the duct tape.



⚠ WARNING

Make sure the outdoor intake hood is at least 12 inches above the ground and 6 feet away from any of the following: Dryer exhaust, high-efficiency furnace vent, central vacuum vent, gas meter exhaust, gas barbecue-grill, any exhaust from a combustion source, garbage bin and any other source of contamination.

💡 Make sure that the outdoor intake hood is easily accessible for annual maintenance. If located above the first floor, place it close to a window or balcony to allow ease of access.

4. HOW TO TEST THE UNIT

After the unit has been installed, the low voltage connection has been made, the ducts and hoods have been installed, and the power cord has been connected, the airflow can be tested. To do so:

1. Open the unit's door and take note of the unit's Run time % setting.
2. If connected to the ducting of an AHU, turn the AHU OFF while measuring the airflow.
3. Turn the Run time % button in the "Test" position and close the door.
4. Wait until the booting sequence is done (at least 45 seconds).
5. Remove the test port cap located on the port on the intake side of the unit (closest to the filter).
6. Test the airflow using a Pitot tube. The distance between the test port and the center of the duct is 3.75 inches.
7. Put the cap back on the test port.
8. Set the Run time % button back to its previous setting.

