BROAN QTXE110S Humidity Sensing Fan User Guide

Contents

BROAN QTXE110S Humidity Sensing Fan

Product Information

The product is a humidity-sensing fan designed for general ventilating use. It is intended to be installed in flat ceilings only and should not be mounted on a wall. The fan is equipped with a humidity sensor that responds to rapid to moderate humidity increases and humidity above a 50%-80% relative humidity set-point. The fan also has a status indicator that provides visual feedback on its operation.

Important safety precautions should be followed when using this product. It should only be used in the manner intended by the manufacturer. Before servicing or cleaning the unit, the power should be switched off at the service panel and the service disconnecting means should be locked to prevent accidental power switch-on. Installation work and electrical wiring must be done by a qualified person following applicable codes and standards. Proper ventilation and compliance with safety standards are essential.

Product Usage Instructions

1. Ensure that the product is properly installed in a flat ceiling.
2. Make sure the unit is grounded for safety.
3. Register the product by visiting the website **www.broan.com**.
4. Read and save the provided instructions for future reference.
5. Follow the manufacturer's guidelines and safety standards for the heating equipment.
6. Avoid damaging electrical wiring or hidden utilities when cutting or drilling into walls or ceilings.
7. Ensure that ducted fans are always vented to the outdoors.
8. Connect the fan to a GFCI-protected branch circuit when using it over a tub or shower.
9. Use a 1 or 2-function wall control to operate the humidity control and fan separately. Do not use a dimmer switch.

10. Refer to the specification label on the product for further information and requirements.
11. Leave the manual with the homeowner after installation.
12. To manually energize the fan for odor or vapor control, follow these steps:
    - If the wall-mounted switch is already on, proceed to Step 2.
    - Turn on the wall-mounted switch to energize the fan.
    - The fan will remain on for the set MINUTES period.

READ AND SAVE THESE INSTRUCTIONS

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch the power off at the service panel and lock the 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.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel-burning equipment to prevent back-drafting. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
8. This unit must be grounded.

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. This product is designed for installation in flat ceilings only. DO NOT MOUNT THIS PRODUCT IN A WALL.
3. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off the power unit.
4. Please read the specification label on the product for further information and requirements.

Installer: Leave this manual with the homeowner.

OPERATION

The humidity control and fan can be operated separately. Use a 1 or 2-function wall control. Do not use a dimmer

switch to operate the humidity control or light. See “Connect Wiring” for details.

SENSOR OPERATION

This humidity-sensing fan responds to: (a) rapid to moderate humidity increases and(b) humidity above a 50%-80% relative humidity (RH) set-point. (a) and (b) are set with “HUMIDITY” adjustment. Fan may occasionally turn on when environmental conditions change. If the fan continuously responds to changing environmental conditions, “HUMIDITY” adjustment may be required (see section below).

STATUS INDICATOR

This indicator can only be seen by looking directly at it. Normal mode is 5-seconds on and off. If it blinks rapidly for 5 seconds and then off, check the sensor connections on the grille and fan housing. MANUAL ON WITH TIMED OFF For odor or vapor control, the fan can be energized by cycling its wall-mounted switch if one is installed. Once the fan has been turned on in this manner, it will remain on for the set “MINUTES” period. To manually energize the fan:

1. Go to Step 2 if switch is already on; otherwise, turn the switch on for more than 1 second.
2. Switch off for less than 1 second.
3. Switch back on and fan will turn on.

HUMIDITY ADJUSTMENT

“HUMIDITY” has been factory set for most shower applications. If the fan is in a tub area or is used for dampness control, the “HUMIDITY” may need to be decreased toward 50% RH. If the control is responding too often to changing environmental conditions, adjustment toward 80% RH may be required. To adjust the “HUMIDITY”:

1. Turn the power off at the electrical service panel.
2. Through the grille, locate the “HUMIDITY” screwdriver slot.
3. Using a small, flat-blade screwdriver, carefully rotate the “HUMIDITY” adjustment toward 50 or 80.
4. Turn power on and check the operation by turning on shower or other humidity source until fan turns on.
5. Repeat above steps if necessary.

TIMER ADJUSTMENT

This humidity-sensing fan has a timer. It is user-adjustable from 5 to 60 minutes and is factory-set at 20 minutes. The timer controls how long the fan remains on (a) after rise in humidity and (b) humidity level are both below the user-adjustable “HUMIDITY” setting or after being energized by the cycling power switch.

To adjust the timer:

1. Disconnect power at the electrical service panel.
2. Through the grille, locate the “MINUTES” screwdriver slot.
3. Using a small, flat-blade screwdriver, carefully rotate the “MINUTES” adjustment to the desired setting (5 to 60 minutes).
4. Check operation by cycling power switch as instructed under “MANUAL ON WITH TIMED OFF” or by turning on a humidity source until fan turns on.
5. Check timer setting with the watch or clock after turning the humidity source off if it was turned on it Step 4.
6. Repeat above steps if necessary.

CLEANING & MAINTENANCE

For quiet and efficient operation, long life, and attractive appearance – lower or remove the grille and vacuum the interior of unit with the dusting brush attachment.

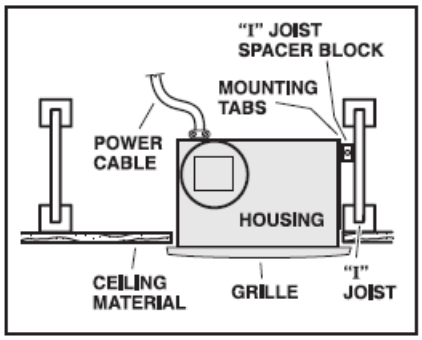
The motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noises, replace the motor/blower wheel assembly.

SENSOR CLEANING

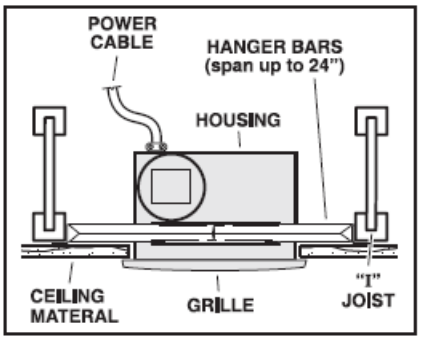
The humidity sensor is mounted in the grille. The sensor will operate most reliably when cleaned occasionally as follows:

1. Disconnect power at the service entrance.
2. Remove the grille. Use a dry dustcloth, clean toothbrush, or lightly vacuum to clean sensor and grille. DO NOT USE ABRASIVE CLOTH, STEEL WOOL PADS, OR SCOURING POWDERS.
3. DO NOT USE cleaning sprays, solvents, or water on or near the sensor!

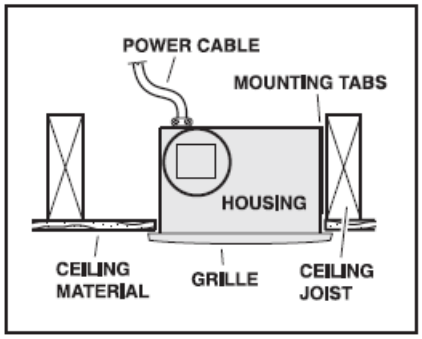
TYPICAL INSTALLATIONS



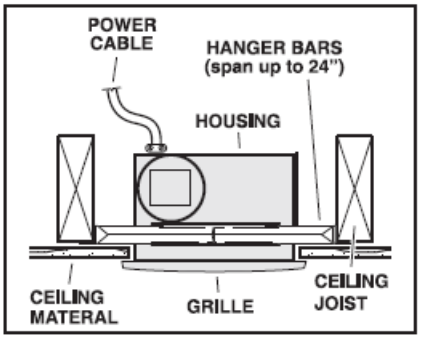
Housing mounted to I-joists.



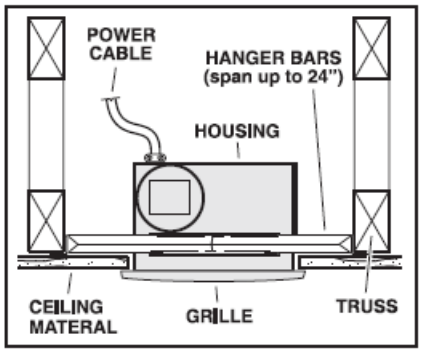
Housing mounted anywhere between I-joists using hanger bars.



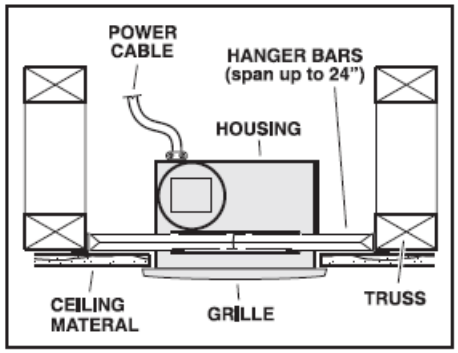
Housing mounted to joists.



Housing mounted anywhere between joists using hanger bars.



Housing mounted anywhere between trusses using hanger bars.

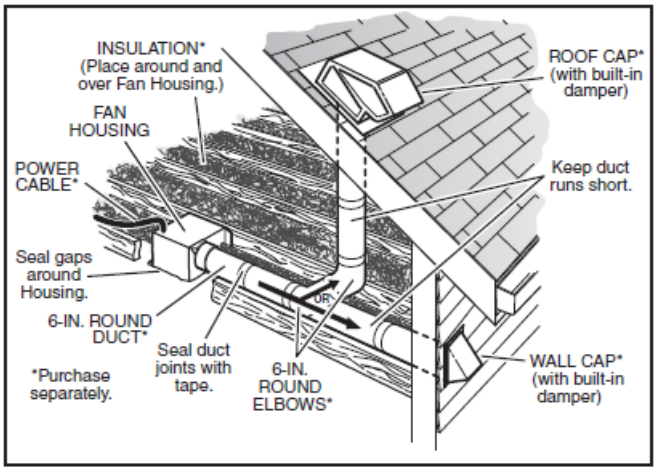


Housing mounted anywhere between trusses using hanger bars.

PLAN THE INSTALLATION

1. **Choose the installation location.**
    - The location of your humidity-sensing fan is very important. Use the following guidelines for best

operation:

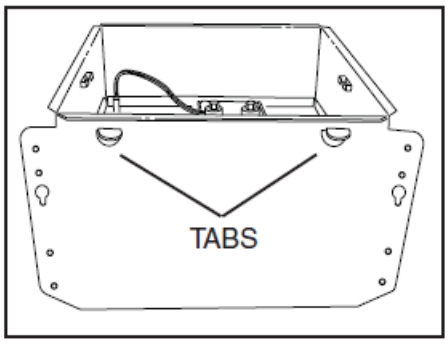


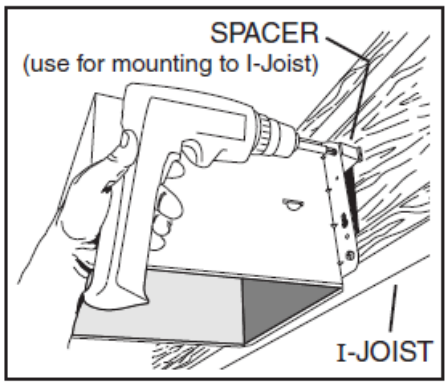
- Locate unit above (GFCI-protected circuit required) or within 5 feet of the shower head.
- Locate unit away from heating or cooling sources which can affect humidity levels.
- Do not locate near the window. Unit may respond to the outdoor humidity level.
- Unit must be installed in the ceiling to properly sense moisture.
- Locate the unit only on flat ceilings up to 12 feet high for proper sensing.
- The ducting from this fan to the outside of the building has a strong effect on the airflow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

2. **Plan the wiring.**
   - Plan to supply the unit with proper line voltage and appropriate power cable. Power cable should be routed to the switch box first and then to the unit (See “CONNECT WIRING” on page 3).
   - Do not operate this unit with a speed control. Damage to the sensor unit will result.

INSTALL HOUSING & DUCT

1. Mount housing to joist or I-joist. Use pliers to bend housing TABS out to 900. Hold housing in place so that the housing tabs contact the bottom of the joist. The housing mounts with four (4) screws or nails. Screw or nail housing to the joist through the lowest holes in each mounting flange, then through the highest holes.

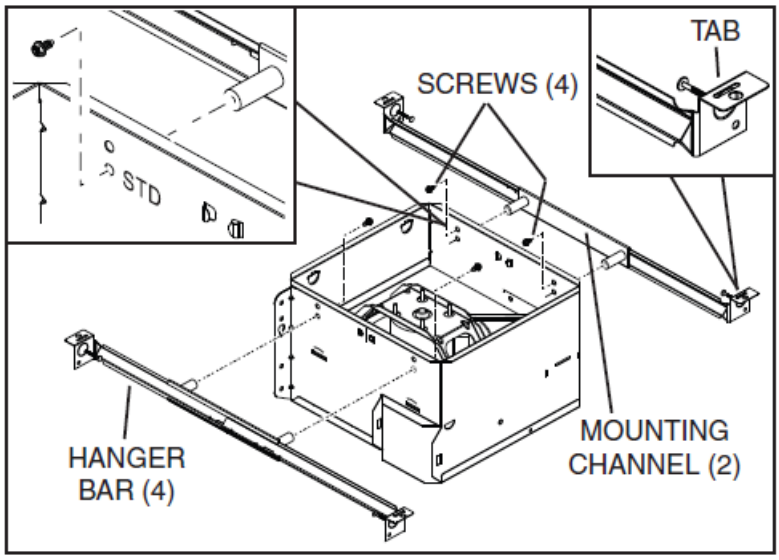




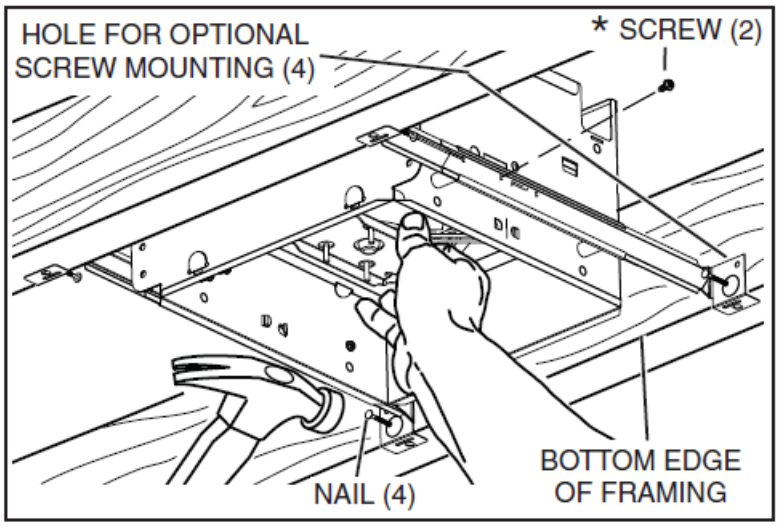
NOTE: Mounting to I-JOIST (shown) requires use of SPACERS (included) between the highest hole of each mounting flange and the I-joist.

1. Mount housing anywhere between trusses, joists, or I-joists using hanger bars.

   Sliding hanger bars are provided to allow for accurate positioning of housing anywhere between framing. They can be used on all types of framing (I-joist, standard joist, and truss construction) and span up to 24”



Attach the MOUNTING CHANNELS to the housing using the SCREWS supplied. Make sure TABS face “up” as shown. Use the set of channel mounting holes (marked “STD”) to mount the housing flush with the bottom of the drywall. Use the other set of holes (not marked) to mount the housing flush with the top of the drywall.

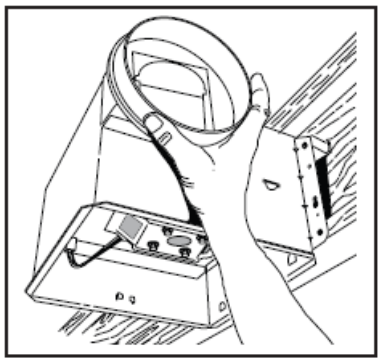


Extend HANGER BARS to the width of the framing. Hold the ventilator in place with the hanger bar tabs wrapping around the BOTTOM EDGE OF THE FRAMING. NAIL ventilator to framing or fasten with screws (not provided)

through HOLES near nails.

- To ensure a noise-free mount: Secure hanger bars together with SCREWS or use pliers to crimp mounting channels tightly around hanger bars.

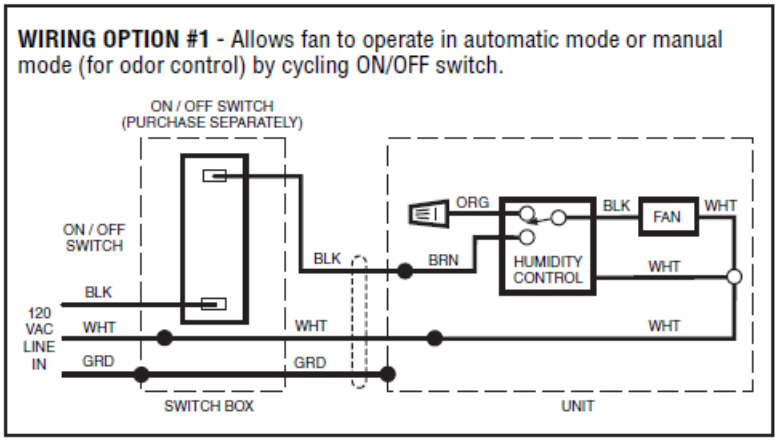
Attach damper/ duct connector. Snap damper/duct connector onto housing. Make sure the connector is flush with top of the housing and the damper flap falls closed.

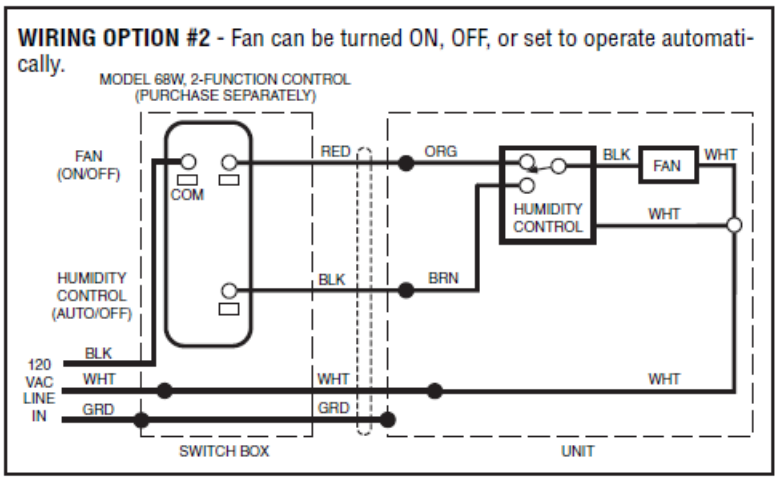


Install 6-inch round ductwork.

Connect 6-inch round ductwork to the damper/duct connector. Run ductwork to a roof cap or wall cap. Tape all ductwork connections to make them secure and air tight.

CONNECT WIRING



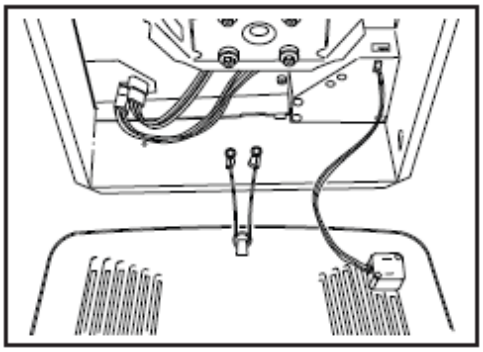


Connect electrical wiring.
Run 120 VAC house wiring to the installation location. Use proper UL-approved connector to secure house wiring towering plate. Connect wires as shown in wiring diagrams.

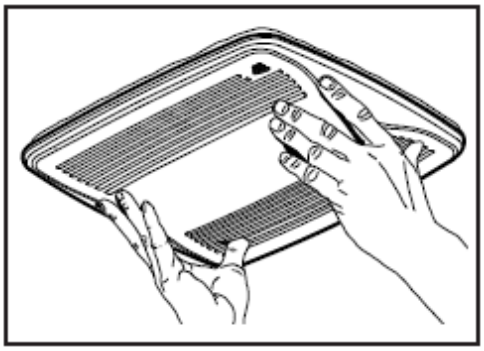
Finish ceiling.
Install ceiling material. Cut out around housing.

Plug in wiring.
Plug wiring into the proper receptacles.

Attach grille to housing.
Squeeze grille springs and insert them into slots on each side of the housing.



Push the grille against ceiling.



- To register this product visit: www.broan.com.

Documents / Resources

	BROAN QTXE110S Humidity Sensing Fan [pdf] User Guide QTXE110S Humidity Sensing Fan, QTXE110S, Humidity Sensing Fan, Sensing Fan

References

- Broan-NuTone - Better Air. Better Life.
- Search - Manual-Hub.com