VENTILATION FAN

MODEL SIG80 / SIG80M / SIG80D / SIG110 / SIG110H / SIG110D

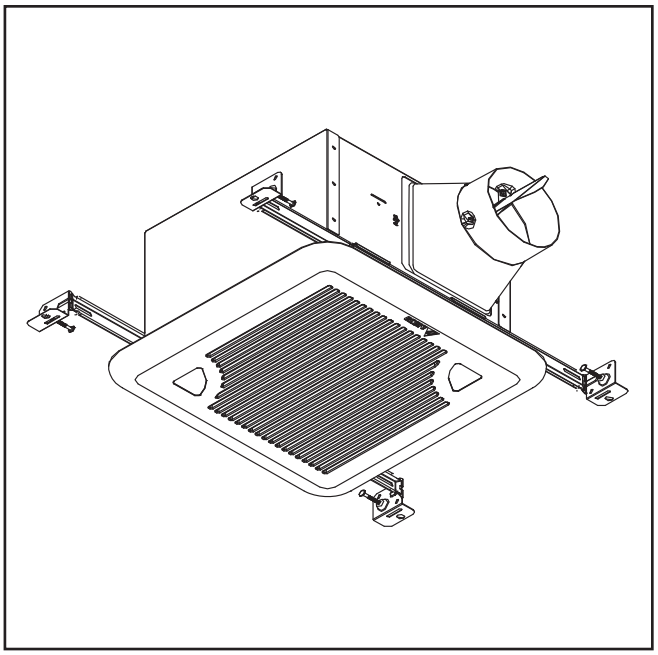


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READ AND SAVE THESE INSTRUCTIONS

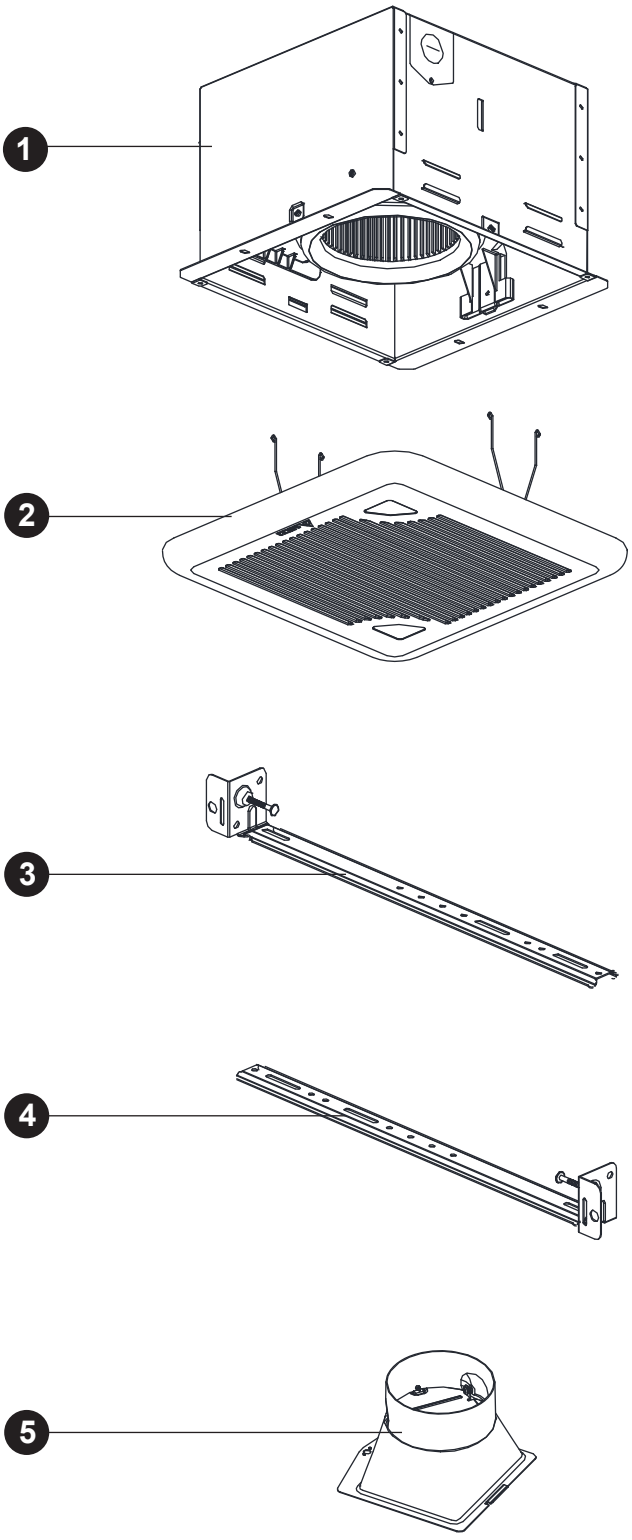
Address: 46101 Fremont Boulevard, Fremont, CA 94538

US Toll Free Number: 1-888-979-9889

www.deltabreez.com

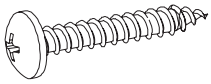
V01

PACKAGE CONTENTS



PART	DESCRIPTION	QTY
❶	Fan Body	1
❷	Grille	1
❸	Suspension bracket Ⅰ 13”(318.5mm)	2
❹	Suspension bracket Ⅱ 13”(318.5mm)	2
❺	Duct Connector	1

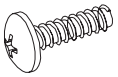
HARDWARE CONTENTS
(Images are to scale)

Ⓐ  X 4

Long Wood Screw (⊘ 4 x 25mm)

Ⓑ  X 4

Short screw (#8-32x1/4”)

Ⓒ  X 1

Duct Screw (M4x12mm)

Model: SIG80 / SIG80M /SIG80D/ SIG110 / SIG110H / SIG110D

GENERAL SAFETY INFORMATION

READ AND SAVE THESE INSTRUCTIONS GENERAL SAFETY INFORMATION

1. Make sure that the electric service supply voltage is AC 120V, 60Hz.
2. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSH Act).
3. Always disconnect the power source before working on or near the ventilating fan, motor or junction box.
4. Protect the power cord from sharp edges, oil, grease, hot surfaces, chemicals or other objects.
5. Do not kink the power cord.
6. Do not install the unit where ducts are configured as shown in Fig.A.
7. Provide suction parts with proper ventilation.
8. This unit is UL Listed for use over a bathtub or shower when installed in a GFCI protected branch circuit.

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.
2. Before servicing or cleaning the unit, switch the power off at the service panel and lock the service disconnecting means to prevent the 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.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline 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 local code authorities.
5. When cutting or drilling into the wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted ventilating fans must always be vented to the outdoors.
7. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
8. Do not use this unit with any other solid-state control device. Solid-state controls may cause harmonic distortion, which can cause a motor humming noise.
9. NEVER place a switch where it can be reached from a tub or shower.
10. Not to be installed in a ceiling thermally insulated to a value greater than R40. (This is required for installation in Canada only).

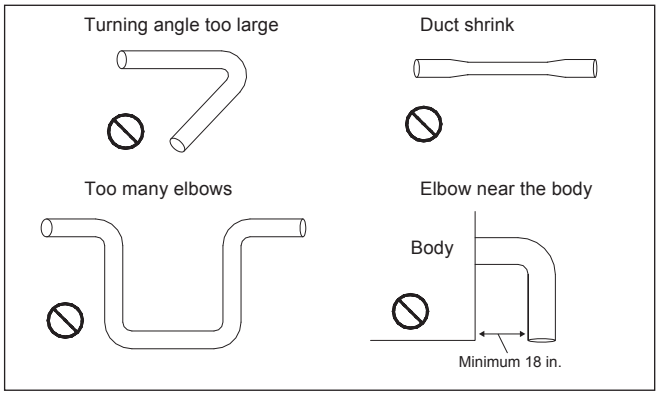


Fig. A

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. Not for use in cooking areas. (Fig.B)
3. This product must properly connect to the grounding conductor of the supply circuit.
4. To reduce the risk of injury to persons, install the fan at least 8.2 feet (2.5m) above the floor.

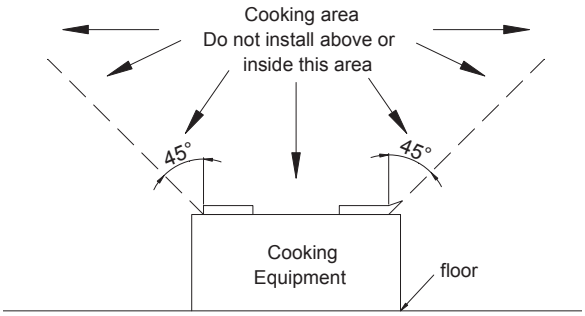


Fig. B

PREPARATION

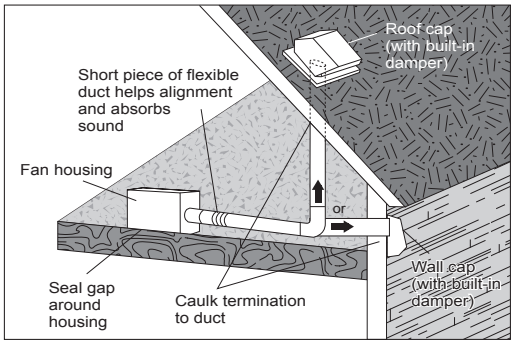
Tools Required for Assembly (not included): Hammer, Flathead Screwdriver, Wire Nuts, Nails, Duct Tape, Phillips Head Screwdriver, Utility Knife

Helpful Tools (not included): Electric Drill, Drill Bits

WARNING: Turn off electricity at breaker box before beginning installation.

- Carefully remove unit from carton.
- Check area above installation location to be sure that wiring can run to the planned location and that duct work can be run. Make sure the area is sufficient for proper ventilation.
- Inspect duct work and wiring before proceeding with installation.
- Before installation, provide inspection and future maintenance access at a location that will not interfere with installation work.
- You may need the help of a second person to install this fan: one person on the attic side and one on the room side.

Note: Installations may vary depending on how the previous bath fan was installed. Supplies necessary for the installation of your bath fan are not all included. However, most are available at your local home improvement or hardware store.

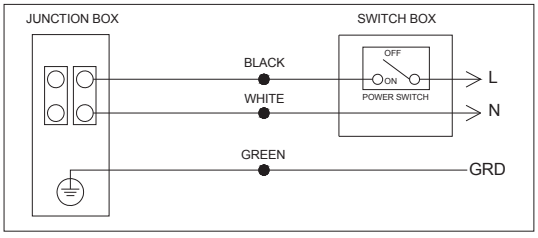


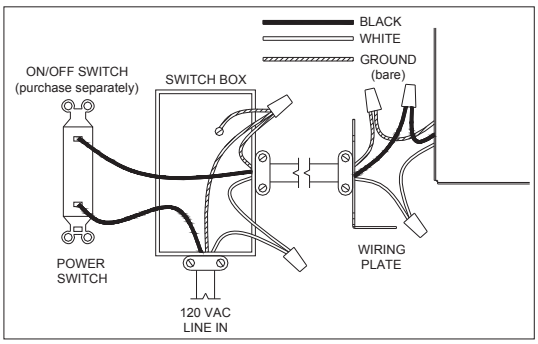
- Properly insulate around the fan to minimize building heat loss and gain.
- Locate unit above (GFCI-protected circuit required) or within 5 feet of the shower head.
- Locate unit away from heating or cooling sources which can affect humidity levels.
- Do not locate near window. Unit may respond to the outdoor humidity level.
- Unit must be installed in ceiling to properly sense moisture.
- Locate unit only on flat ceilings up to 12 feet high for proper sensing.
- The fan will operate most efficiently when located where the shortest possible duct run and minimum number of elbows will be needed.
- Use a roof cap or wall cap that has a built-in damper to reduce backdrafts.

WIRING DIAGRAM

Single Speed Models: SIG80, SIG110

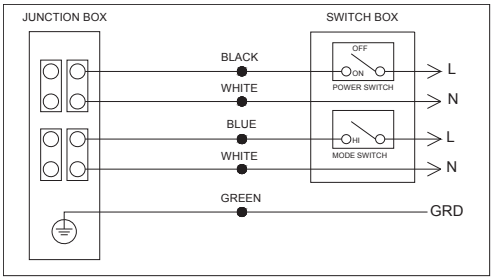
Motion Model: SIG80M

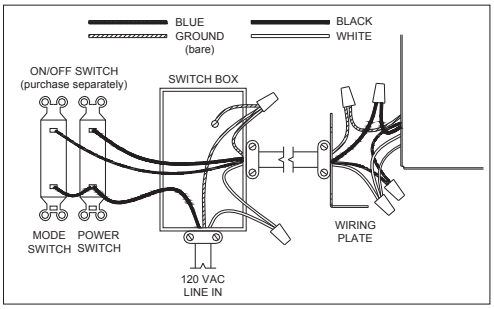




Humidity Model: SIG110H

Dual Speed Model: SIG110D / SIG80D





ASSEMBLY INSTRUCTIONS

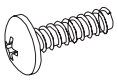
NEW CONSTRUCTION – ATTACHING TO THE JOIST

BEFORE INSTALLATION

Turn off power source. Review all safety precautions.

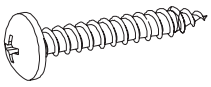
1. Attach the duct connector from the housing can inside, and secure using the duct screw (M4x12).

   Hardware

   Ⓒ Duct Screw 

2. If spacing between joists is 12 in. apart, use four long wood screws (provided) to attach the fan body ❶ to ceiling joists, NO NEED FOR SUSPENSION BRACKETS.

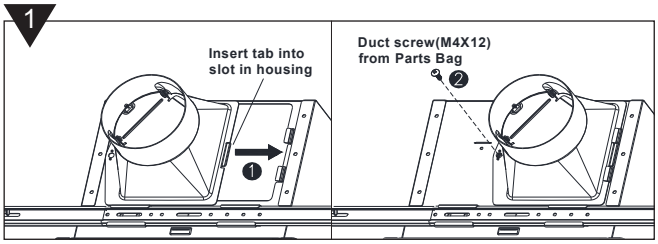
   Hardware

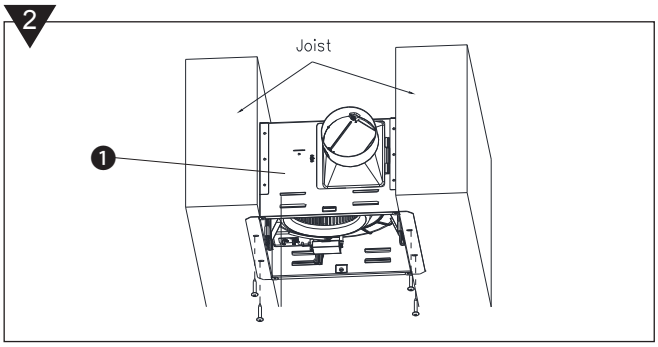
   Ⓐ Long wood screw 

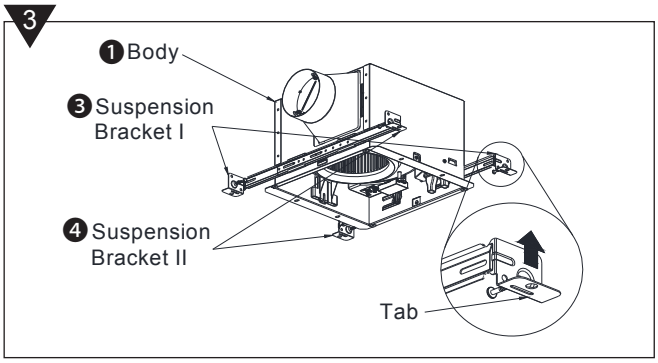
3. For joist spacing 16 in. - 24in., insert suspension bracket I ❸ and suspension bracket II ❹ into the bracket cover on the duct connector side and the back of the fan body ❶ . Install the suspension brackets to the joists with nails, and secure the suspension brackets to the fan body ❶ by using the short screws (provided).

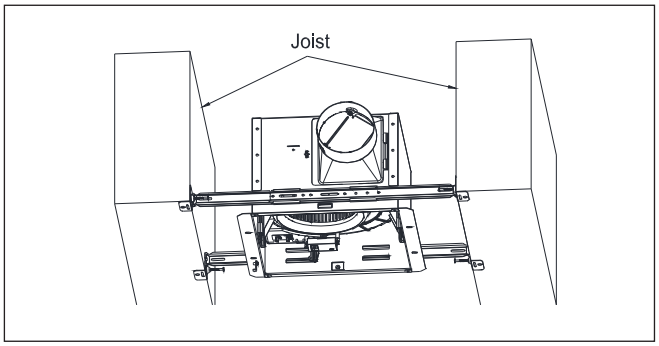
   Hardware

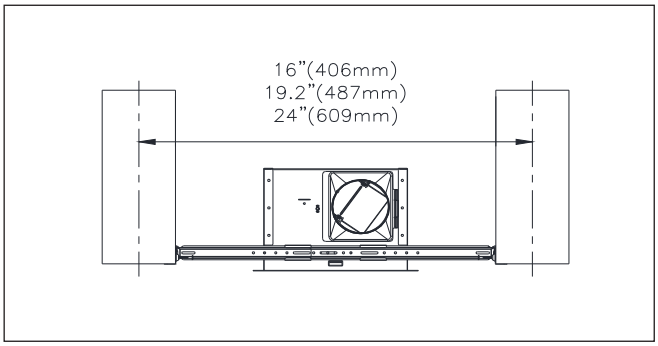
   Ⓑ Short screw 







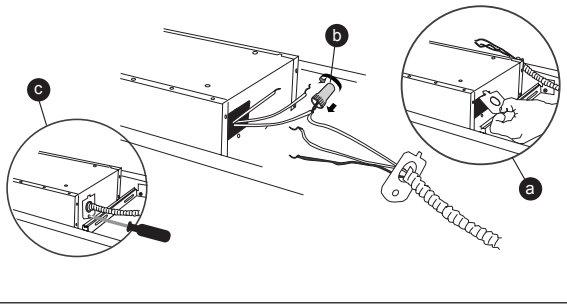




ASSEMBLY INSTRUCTIONS

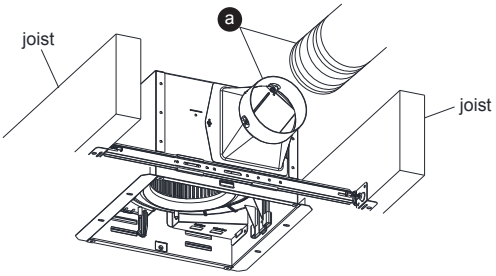
4. Remove the fan junction box cover ⓐ . Using wire nuts (not supplied), connect house wires to fan wires ⓑ as shown in the wiring diagram on page 4. Wire connections are as follows: black to live switch wire, white to neutral, green to ground. Reattach fan junction box cover ⓒ .

4



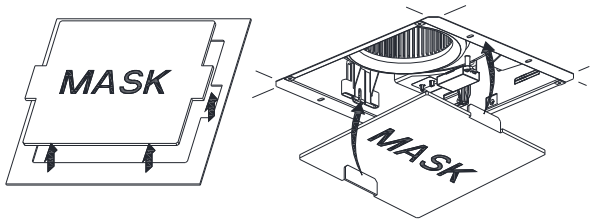
5. Connect a 4 in. circular duct ⓐ (not supplied) and vent to the outside. Secure it with duct tape (not supplied) or clamp (not supplied) to make the connection secure and air tight.

5



6. Punch out Mask from packaging. Insert mask and finish celling.
   Mask protects unit during construction. Remove before installing Grille.

6



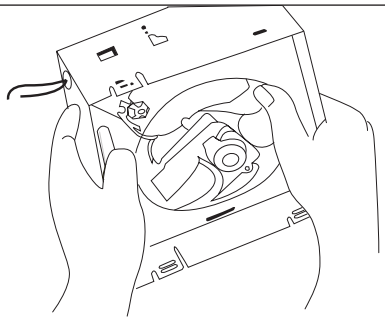
EXISTING CONSTRUCTION – ACCESSIBLE FROM ABOVE

BEFORE INSTALLATION

Turn off power source. Review all safety precautions.

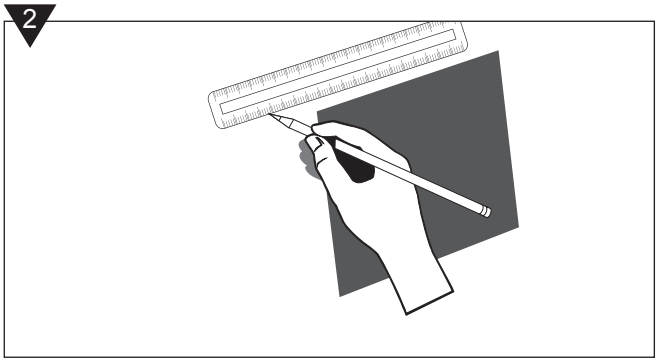
1. Remove existing fan.

1

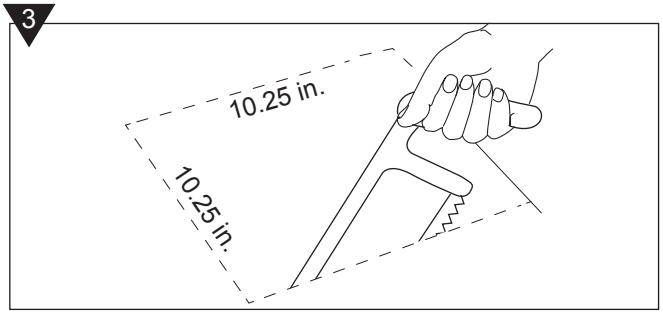


ASSEMBLY INSTRUCTIONS

2. Measure the opening to ensure it is large enough to accommodate the new fan body (10.25 in. x 10.25 in.).

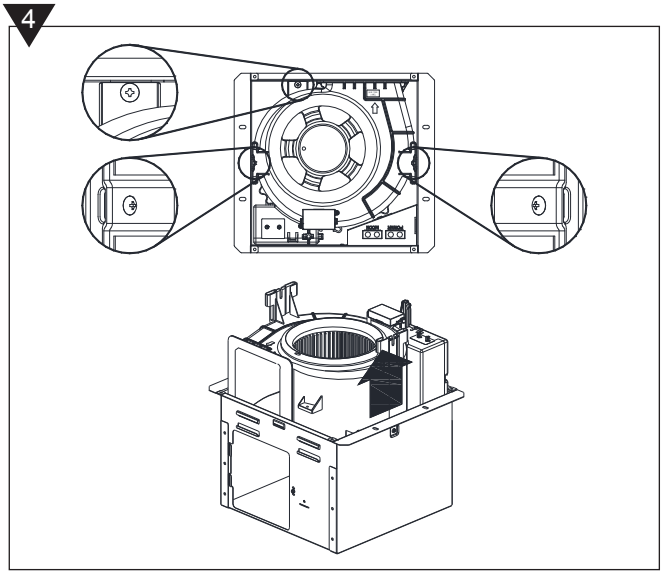


3. If this fan is not replacing an old fan, be sure to cut a 10.25 in. x 10.25 in. opening for the fan body ❶ .

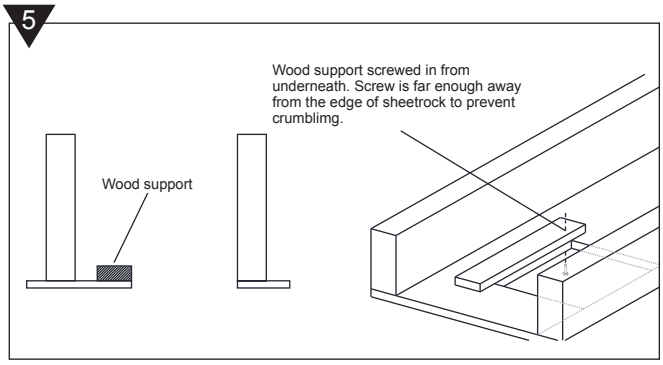


Install from below, no need for suspension brackets (no attic access)

4. Remove fan unit by removing 3 screws.



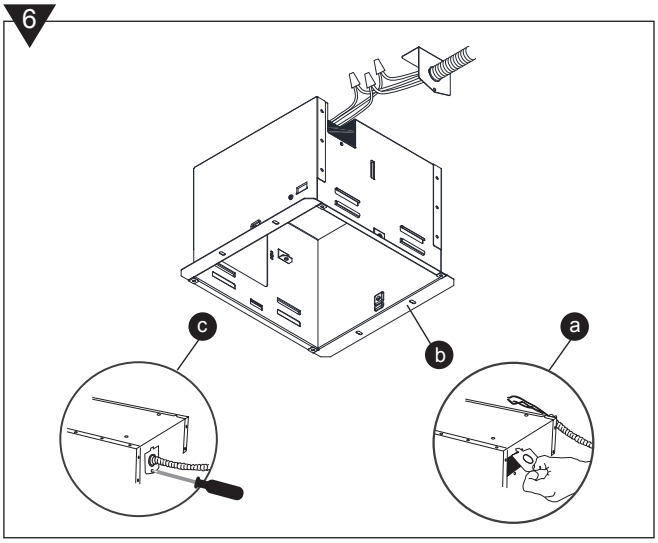
5. A piece of wood (not supplied) is screwed in from below through the ceiling board. Suggested size is 1 in. x 3 in. x 14 in. Position the screws far enough away from the edge of the ceiling board that it does not crumble and give way. Put screws in both ends of wood beyond the 10.25 in. hole. Keep screws in range of grille.



ASSEMBLY INSTRUCTIONS

6. Remove the fan junction box cover ⓐ . Using wire nuts (not supplied), connect house wires to fan wires ⓑ as shown in the wiring diagram on page 4. Wire connections are as follows: black to live switch wire, white to neutral, green to ground. Reattach fan junction box cover ⓒ .

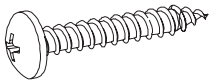
6



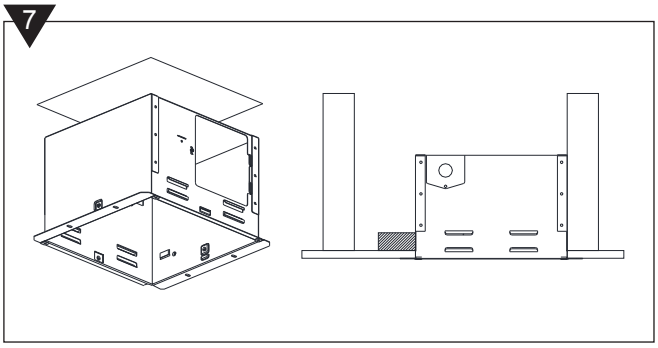
7. Insert housing can into the ceiling cut out. Secure the housing can from below by using 2 long wood screws through the flange into the wood support and 2 long wood screws through the flange into the joist.

Hardware

Ⓐ Long wood screw



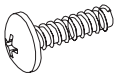
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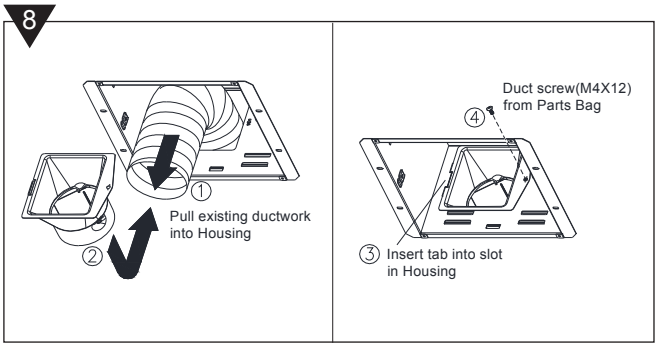
8. Attach the duct connector from the housing can inside, and secure using the duct screw (M4X12).

Hardware

Ⓒ Duct Screw

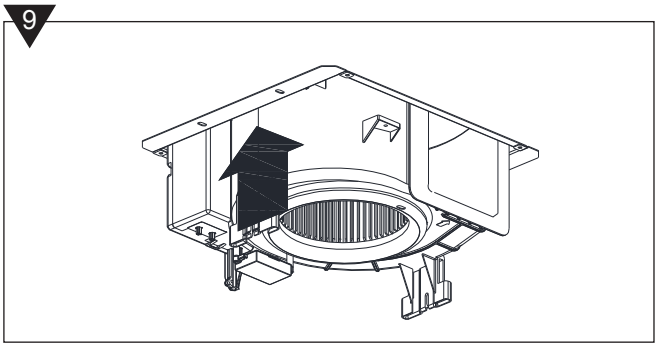


8



9. Insert fan unit and secure by 3 screws.

9



ASSEMBLY INSTRUCTIONS

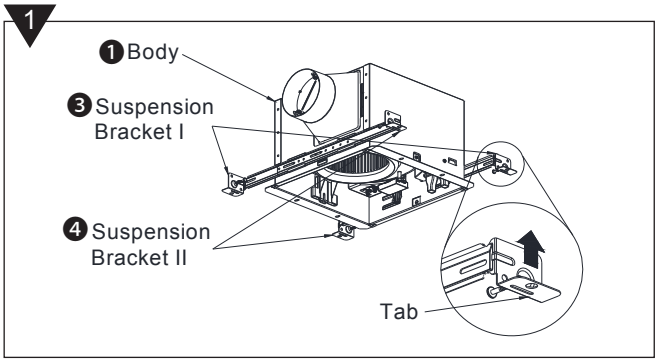
Install from above with suspension brackets (attic accessible)

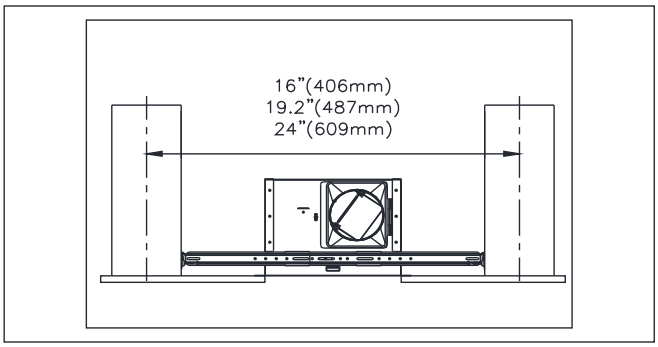
***ONLY IF UNABLE TO ATTACH DIRECTLY TO JOIST(S)**

1. For joist spacing 16 in. - 24in., insert suspension bracket I ❸ and suspension bracket II ❹ into the bracket cover on the duct connector side and the back of the fan body ❶ .Install the suspension brackets to the joists with nails, and secure the suspension brackets to the fan body ❶ by using the short screws (provided).

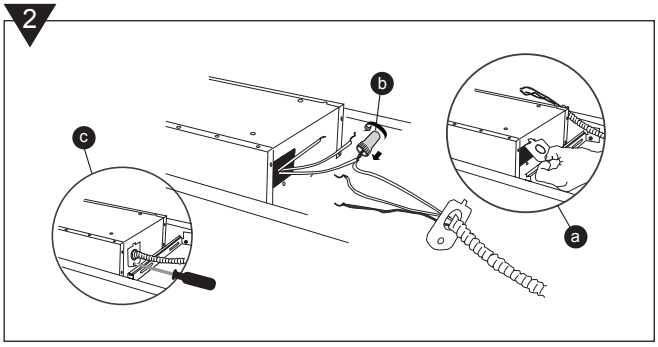
   Hardware

   Ⓑ Short screw 

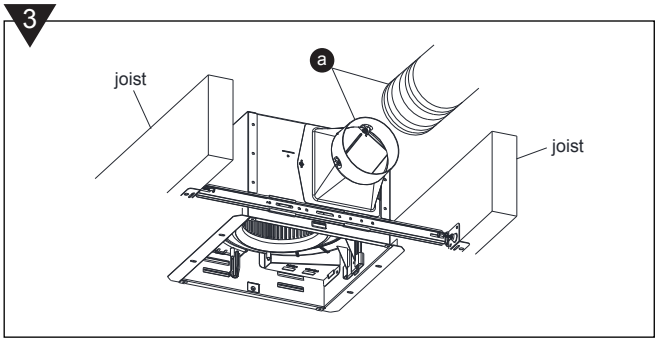




2. Remove the fan junction box cover ⓐ . Using wire nuts (not supplied), connect house wires to fan wires ⓑ as shown in the wiring diagram on page 4. Wire connections are as follows: black to live switch wire, white to neutral, green to ground. Reattach fan junction box cover ⓒ .

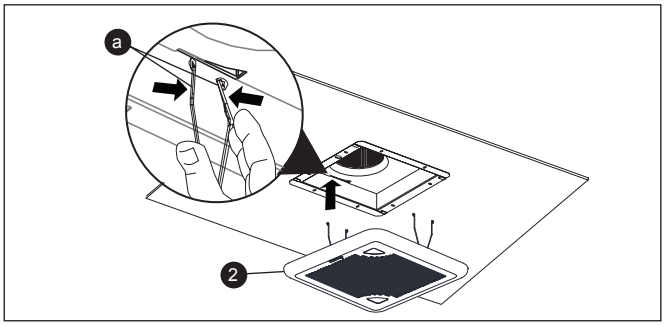


3. Connect a 4 in. circular duct ⓐ (not supplied) and vent to the outside. Secure it with duct tape (not supplied) or clamp (not supplied) to make the connection secure and air tight.

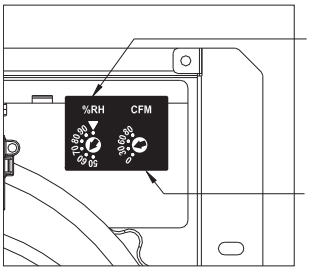


GRILLE INSTALLATION

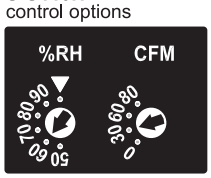
Attach grille ❷ by pinching mounting springs ⓐ and insert into the narrow rectangular slots in fan body.



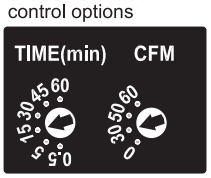
OPERATION



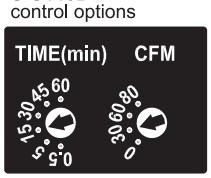
SIG110H control options



SIG80M / SIG80D control options



SIG110D control options

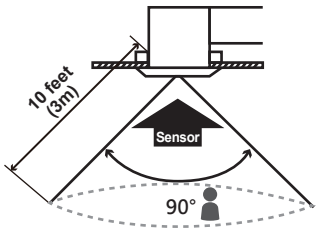


Single Models: SIG80, SIG110

1. Single speed control mode: Turn the POWER switch on to operate at single speed mode - the LED indicator will be green.

Motion Model: SIG80M

2. Motion control mode: Turn the POWER switch on to operate at motion control mode. When motion is detected, the fan will run at full speed and the LED indicator will be amber. When motion is not detected, the fan will continue to run at the full speed until the user-adjustable time delay has elapsed, and then will automatically change to the user-adjustable low speed airflow. The LED indicator will be green.
3. Motion sensor detectible range: The distance that motion can be detected is limited to 10 feet (3m). The field of view of the sensor is 90°. (Room temperature is 25°C)



Factory setting: low speed airflow 30CFM, time delay 15 minutes.

Humidity Model: SIG110H

4. Humidity control mode: Turn the POWER switch on to operate at humidity control mode - the LED indicator will be blue. When the ambient humidity is higher than the user-adjustable set-point, the fan will run at full speed, and the LED indicator is blue. When the ambient humidity is lower than the set-point, the fan will continue to run at the full speed until a 10- minute time delay has elapsed, and then will automatically change to the user-adjustable low speed airflow.
5. Full speed mode: Turn the MODE switch on to operate at full speed mode - the LED indicator will be amber.
6. Humidity tolerance is about ±10%. The humidity switch may need to be adjusted regionally. Long-time operation will influence the detecting precision as dust accumlates.

Factory setting: low speed airflow 30CFM, humidity 60%RH.

Dual Speed Model: SIG80D, SIG110D

7. Low speed control mode: Turn the POWER switch on (MODE switch is off) to operate at the user-adjustable low speed airflow - the LED will be green.
8. Full speed control mode: Turn the POWER switch & MODE switch on to operate at full speed mode - the LED indicator will be amber. When the user turns the MODE switch off, the fan will continue to run at the full speed until the user-adjustable time delay has elapsed, and then will automatically change to the user-adjustable low speed airflow. The LED indicator will be green.

Factory setting: low speed airflow 30CFM, time delay 15 minutes.

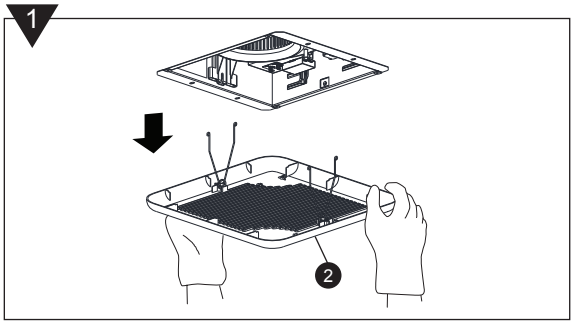
CARE AND MAINTENANCE

See safety information before proceeding. Routine maintenance should be done at least once a year.

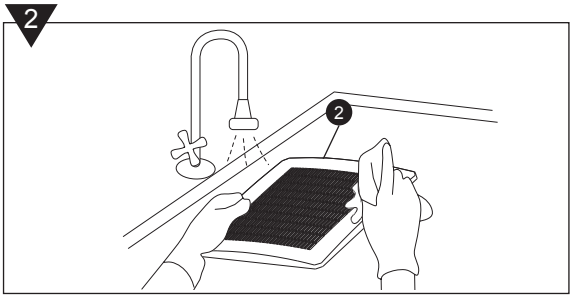
- Never use solvents, thinner or harsh chemicals when cleaning the fan.
- Do not allow water to enter the motor.
- Do not immerse metal parts in water.
- Do not immerse resin parts in water over 140º Fahrenheit.

Turn off power source. Review all safety precautions.

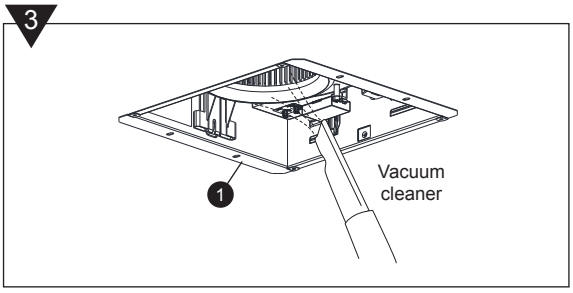
1. To remove grille ❷ , squeeze springs and pull down.



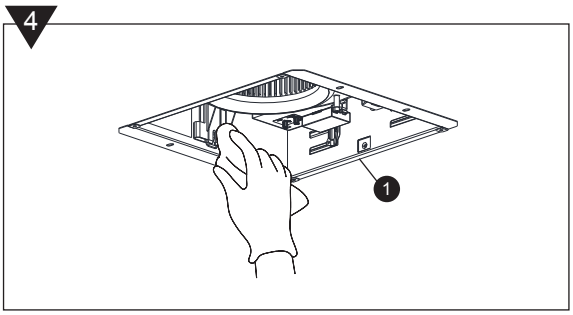
2. Wash and clean the grille ❷ in a sink and dry with a cloth.



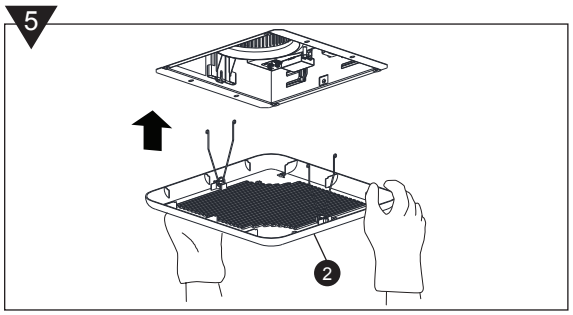
3. Remove dust and dirt from the fan body ❶ with a vacuum cleaner.



4. Dampen cloth with dust detergent and wipe the fan body ❶ . Then wipe dry with a clean cloth.



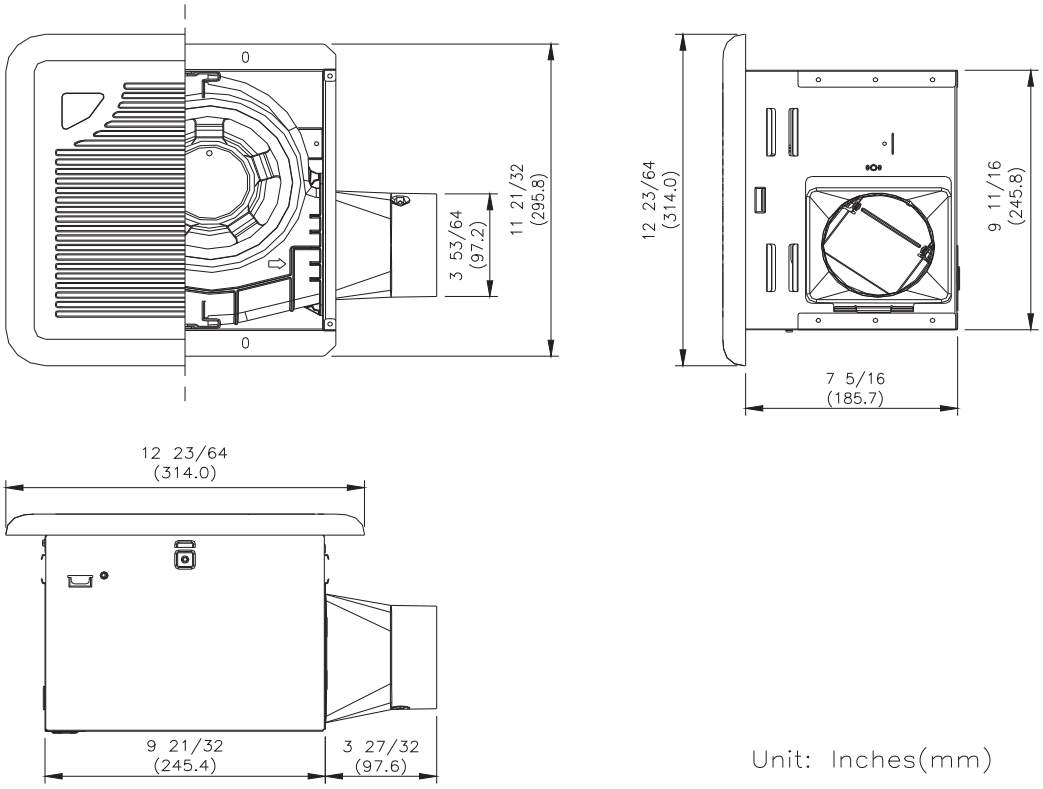
5. Replace grille ❷ back onto fan body ❶ .
6. Turn on power source to operate fan again.



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
The fan is not turning on	1. Power off 2. Faulty switch 3. Faulty wire connection	1. Make sure power supply is on. 2. Test or replace switch. 3. Check wire in switch box.
The fan seems louder than it should	1. CFM too great 2. Damper not working properly or damaged 3. Bend in duct too close to fan discharge 4. Fan discharge reduced to fit smaller duct 5. Fan body not securely attached	1. Be sure the CFM rating on the fan matches the size of your room. 2. Check damper to ensure it is opening and closing properly. If the damper has become damaged, please call Customer Service. 3. Be sure you do not have any sharp bends in duct closer than 18 in. to the fan discharge. 4. Use recommended size ducting to reduce fan noise. 5. Be sure the fan is securely attached to your ceiling joists.
The fan is not clearing the room	1. Insufficient intake airfow within room 2. Insufficient CFM	1. Be sure a door or window is slightly ajar or opened to allow airflow. The fan is not able to draw air out of the room without enough airflow to draw in from. 2. Be sure the CFM rating on the fan matches the requirements for your room size.

DIMENSIONS



Unit: Inches(mm)

PRODUCT SPECIFICATIONS

SPECIFICATIONS							
Model No.	Voltage(V)	Frequency (Hz)	Power @ 0.1"SP (W)	Air Flow @ 0.1"SP (CFM)	Weight (lb.)	Max.Current (amps)	Note
SIG80	120	60	8.7	80	10	0.30	Single Speed
SIG80M	120	60	8.7	80	10	0.30	Motion Sensor
SIG80D	120	60	8.7	80	10	0.30	Dual Speed
SIG110	120	60	13.6	110	10	0.38	Single Speed
SIG110H	120	60	13.6	110	10	0.38	Humidity Sensor
SIG110D	120	60	13.6	110	10	0.38	Dual Speed

Note: Design and specifications subject to change without notice.

WARRANTY

DELTA ELECTRONICS THREE YEAR LIMITED WARRANTY

Delta Electronics Inc. (“Delta Electronics”) warrants to the original consumer purchaser in the USA that the Breez ventilation fan products will be free from defects in material or workmanship. This warranty is limited to three (3) years from the original date of purchase.

Limitations and Exclusions

1. During the warranty period, a replacement for any defective product will be supplied free of charge for installation by the consumer. The warranty provided herein does not cover charges for labor or other costs incurred in the troubleshooting, repair, removal, and installation service.
2. All returns of defective parts or products must include the product model number, and must be made through an authorized Delta Electronics distributor. Authorized returns must be shipped prepaid. Repaired or replacement products will be shipped by Delta Electronics F.O.B. shipping point.
3. Delta Electronics shall not be liable for any indirect, incidental, consequential, punitive, or special damages arising out of or in connection with products use or performance, regardless of the form of action whether in contract, tort (including negligence), strict product liability or otherwise.
4. This warranty does not extend to fluorescent lamp starters and tubes.
5. The warranty does not cover if user does not comply with manufacturer’s installation manual.
6. To qualify for warranty service, you must notify Delta Electronics at the address or telephone number below.
7. Delta Electronics shall have no liability to the original owner-user with respect to any defect caused by abuse, misuse, neglect, improper transportation or storage, improper testing, improper installation, improper operation, improper use, improper maintenance, improper repair, improper alteration, improper modification, tampering or accident of products or parts thereof, or unusual deterioration or degradation of products or parts thereof due to a physical environment beyond the requirements of products’ specifications.

Address: 46101 Fremont Boulevard, Fremont, CA 94538

US Toll Free Number: 1-888-979-9889

www.deltabreez.com