

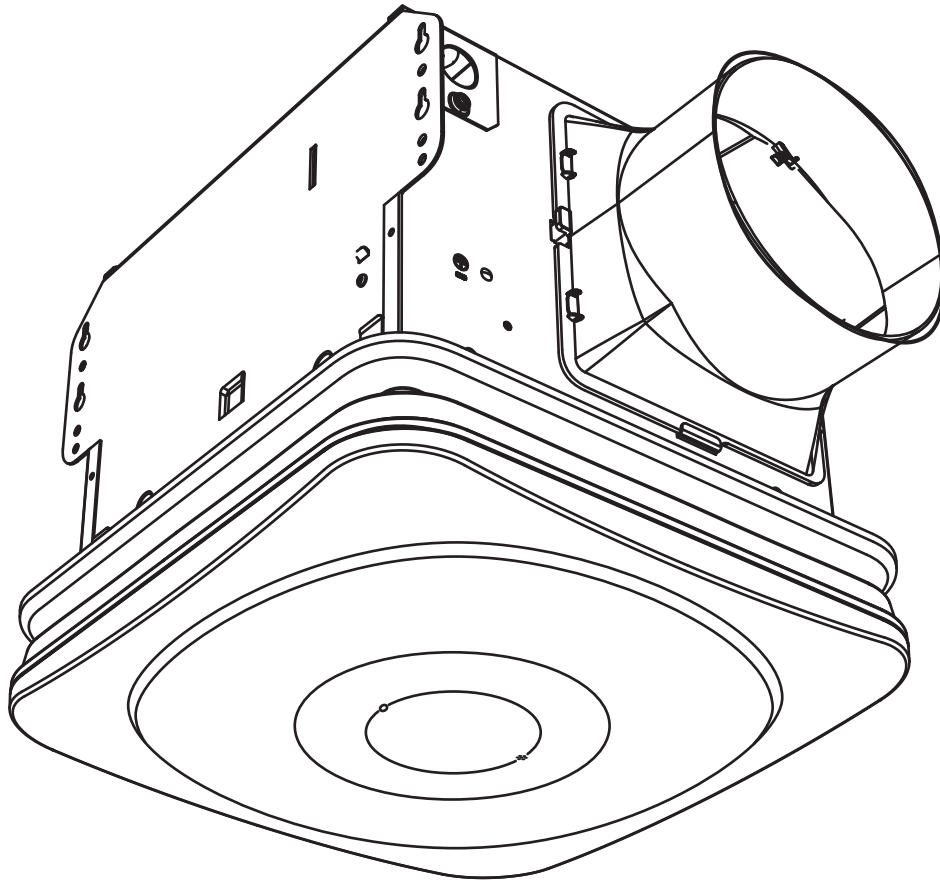
OREiN

*illuminate for a better life*

# 160CFM Bath Fan with Humidity Sensor, 3CCT & Night Light

## Quick User Guide

Model ID : OL1700376



We appreciate the trust and confidence you have placed in OREiN through the purchase of VENTILATION FAN with LED LIGHT. We strive to continually create quality products designed to enhance your home. Visit us online to see our full line of products available for your home improvement needs.

**Thank you for choosing OREiN.♥**

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# ■ Safety Information

**Please read and understand this entire manual before attempting to assemble, operate or install the product.**

1. Always disconnect the power supply prior to servicing the fan, motor or junction box.
2. Follow all local building, safety and electrical codes as well as NEC (National Electrical Code) and OSHA (Occupational Safety and Health Act).
3. Electric Service supply must be 120 volts, 60 hertz.
4. This product must properly connect to the grounding conductor of the supply circuit.
5. Do not bend or kink the power wires.
6. Do not use this fan with any solid state control device, such as a remote control, dimmer switch, or certain timers. Mechanical timers are not solid state devices.
7. Do not install in a ceiling with insulation greater than R50.
8. Duct work should be installed in a straight line with minimal bends.
9. Duct work size must be the same size as the discharge and should not be reduced. Reducing the duct size may increase fan noise.



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

1. Use this unit in the manner intended by the manufacturer. If you have any questions. Please call customer service.
2. Before servicing or cleaning unit, switch power off at 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 wirina must be done by a qualified person(s) in accordance with all aplicable 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 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. FOR USE IN ONE- AND TWO-FAMILY DWELLINGS ONLY.
9. TYPE IC-INHERENTLY PROTECTED
10. FOR USE IN NON FIRE RATED INSTALLATIONS ONLY.
11. SUITABLE FOR DAMP LOCATIONS



**CAUTION:** For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.



**CAUTION:** Not for use in cooking areas.



**CAUTION:** To reduce the risk of injury to persons, install the fan at least 7 feet (2.1m) above the floor.

## Product Specification

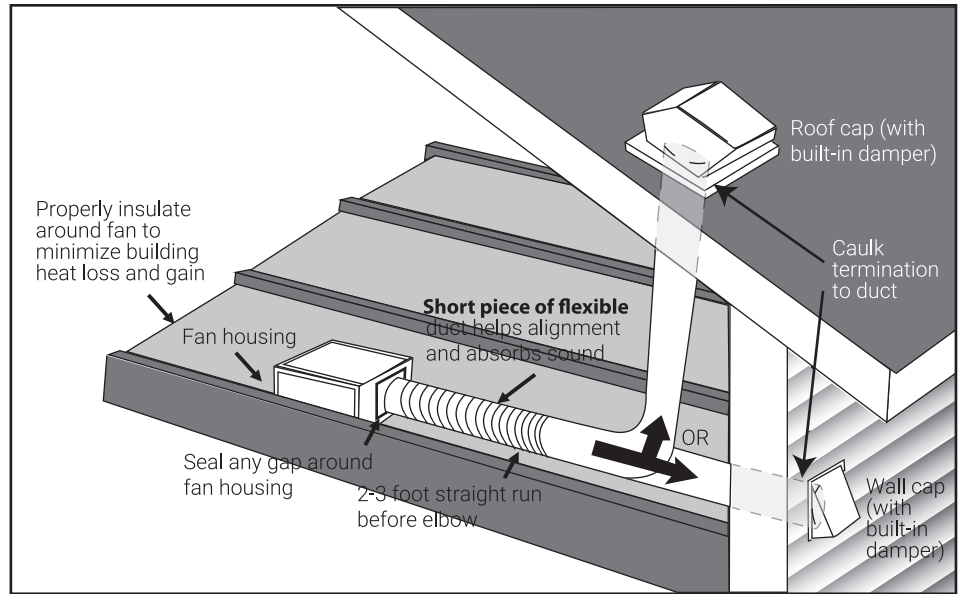
SPECIFICATIONS
Airflow: 160 CFM Main light: 1500lm Night light: 200lm
Voltage: 120 V, 60 Hz
Duct diameter: 6 in.
Sound output: 1.0 Sones

SPECIFICATIONS
Power consumption: Fan 40W, Light 18W
Weight: 13.47 lbs.
Ceiling Opening Dimension Requirements: 11.81 in. (L) x 11.02 in. (W).

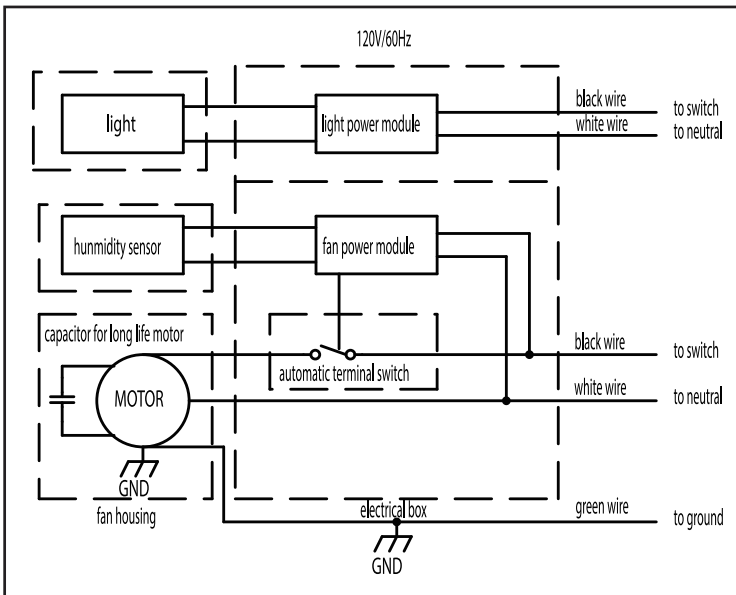
## Typical Installation

The ducting from this fan to the outside of the building has a strong effect on the air flow, 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.

**WARNING:** If you have access to the attic, then you can vent a ceiling mounted exhaust fan through either a gable wall or the roof. Letting the fan exhaust into an open attic will cause moisture buildup on the underside of the roof. Avoid venting through a soffit vent or ridge vent. The warm air will exhaust out the duct and enter back into the attic through the soffit vent or ridge vent.



## Wiring Diagram



**WARNING:** Wiring must comply with all applicable electrical codes. Turn OFF power before removing or installing connectors

**WARNING:** COPPER TO COPPER ONLY. Do not use Aluminum wire.

**WARNING:** This bath fan includes a light that must to be operated separately with an additional switch or double switch.

# ■ Warranty

## LIMITED LIFETIME WARRANTY

### WHAT IS COVERED


If this product fails due to a defect in materials or workmanship at any time during the first FIVE years of ownership, the manufacturer will replace it free of charge, postage-paid at their option. This warranty does not cover products that have been abused, altered, damaged, misused, cut or worn. This warranty does not cover use in commercial applications. Use only manufacturer-supplied genuine warranty repair replacement parts to repair this fan. Use of non-genuine repair parts will void your warranty. The manufacturer DISCLAIMS all other implied or express warranties including all warranties of merchant ability and/or fitness for a particular purpose. As some states do not allow exclusions or limitations on an implied warranty, the above exclusions and limitations may not apply. This warranty gives you specific legal rights, and you may have other rights that vary from state to state. This warranty is limited to the replacement of defective parts only. Labor charges and/or damage incurred during installation, repair, replacement as well as incidental and consequential damages connected with the above are excluded. Any damage to this product as a result of neglect, misuse, accident, improper installation or use other than the purpose SHALL VOID THIS WARRANTY. Shipping costs for return product as part of a claim on the warranty must be paid for by the customer.

Customer Service or visit [www.iorein.com](http://www.iorein.com).

# ■ Pre-installation

## PLANNING INSTALLATION

Before beginning assembly of the product, make sure all parts are present. Compare parts with the package contents list and hardware contents. If any part is missing or damaged, do not attempt to assemble the product.


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

Carefully remove the unit from the carton.

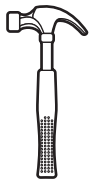
Check area above installation location to be sure that wiring can run to the planned location and that duct work can be run and the area is sufficient for proper ventilation.

Inspect duct work and wiring before proceeding with installation.

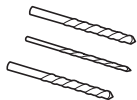
Before installation, provide inspection and future maintenance access at a location that will not interfere with installation work.

 **NOTE:** Installation 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.

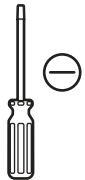
## TOOLS REQUIRED (not included)



Claw hammer



Drill bits



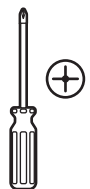
Flathead screwdriver



Duct tape



Pliers



Phillips head screwdriver



Utility knife



Electric drill



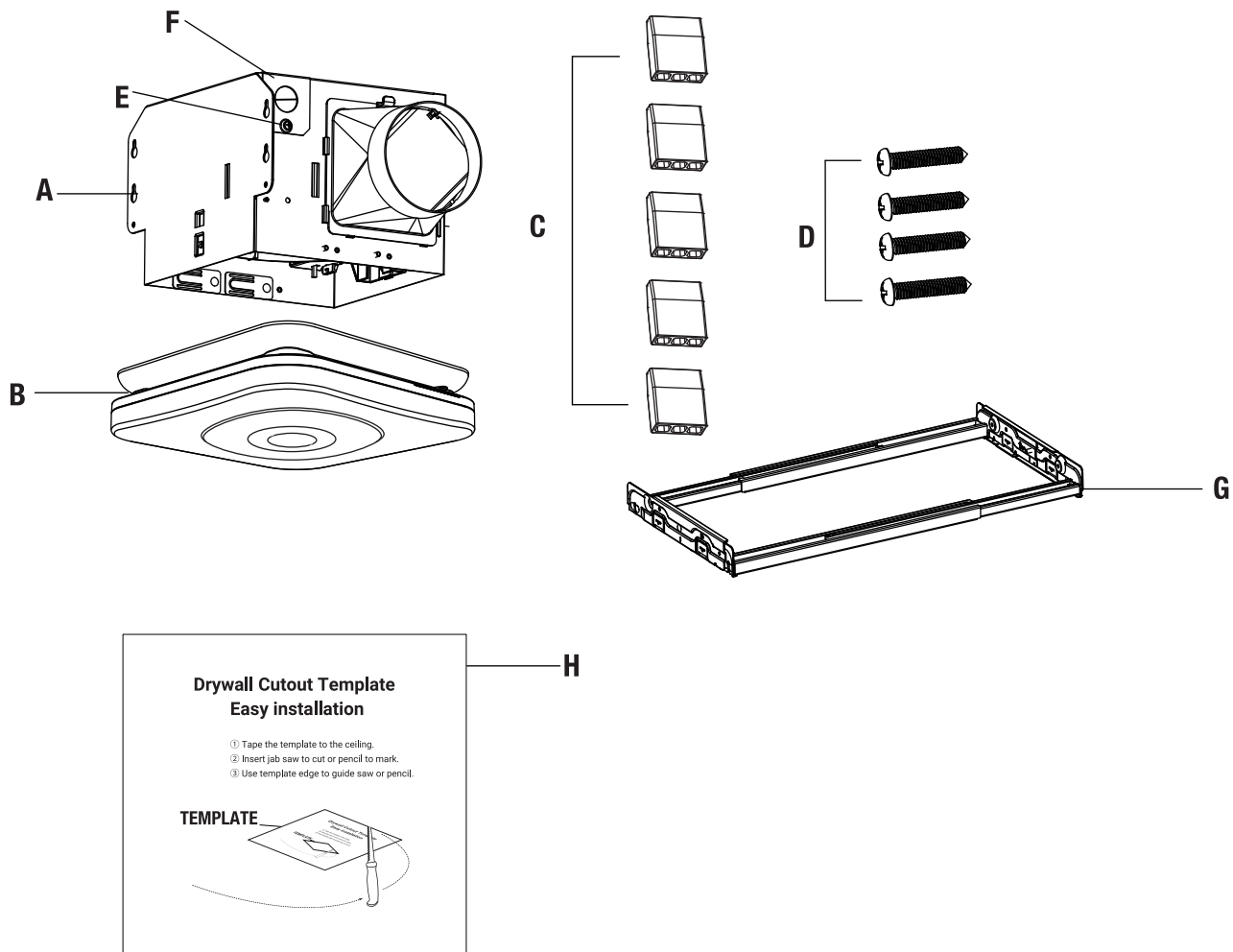
Goggles



Gloves

# ■ Pre-installation (continued)

## PACKAGE CONTENTS



Part	Description	Quantity
A	Fan housing	1
B	Grille with light	1
C	Wire connector	5
D	Joist screw	4
E	Short screw	1
F	Wire cover	1
G	Flex bracket	1
H	Drywall Cutout Template	1

# Installation - New Construction with Flex Bracket



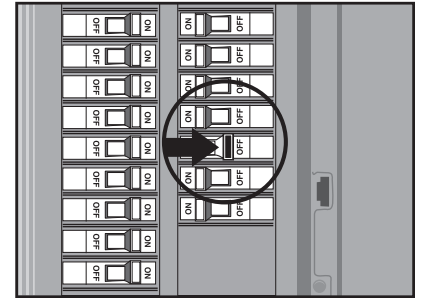
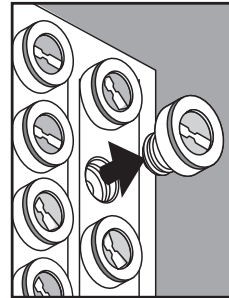
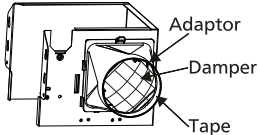
**CAUTION:** □ Make sure power is switched off at service panel before starting installation.  
 □ Wear gloves during installing to help protect your hands from injury.



**NOTE:** Ceiling mount only.

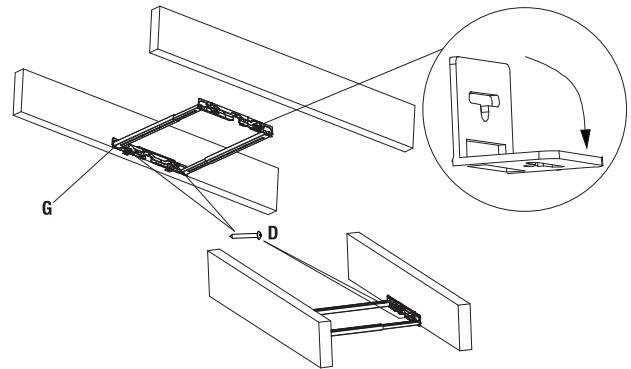
## IMPORTANT:

Please remove the tape, which protects the damper during shipping and installation, from the duct adaptor as shown below.



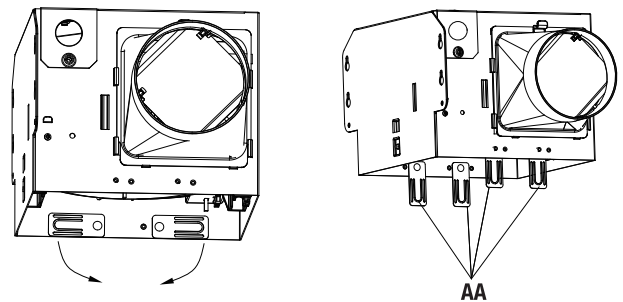
## 1 Install the flex bracket

- Bend down 4 tabs on the side of flex bracket (G) for positioning, pre-install the flex bracket to joists by using 2 screws (D) on one side.
- Adjust the length of flex bracket (G) to fit the spacing between the joists (12in. to 22in.). Attach the flex bracket with the other 2 screws (D).
- Please make sure the bottom of the flex bracket will be flush with the bottom of the joists.



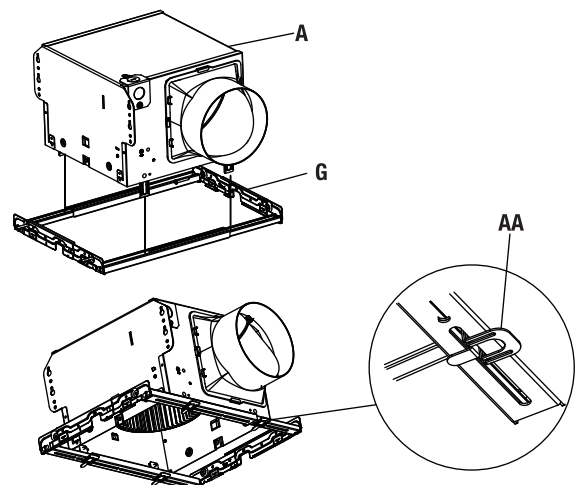
## 2 Adjust the tabs of fan housing

- Pull the 4 tabs (AA) of the fan housing into the vertical position.



## 3 Install the fan housing on bracket

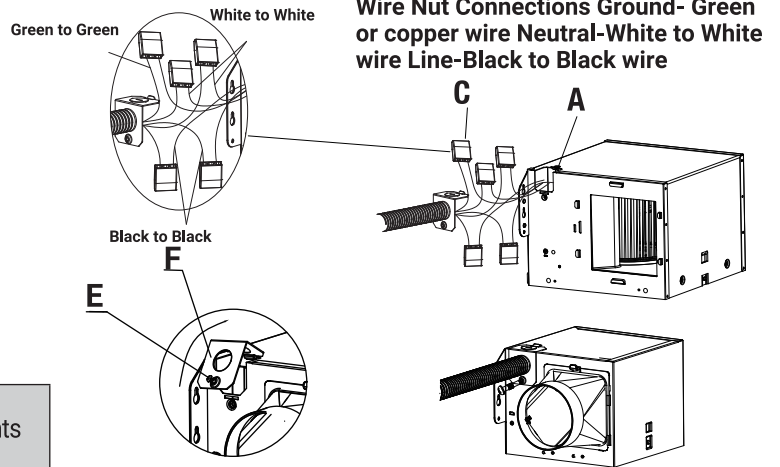
- Align the 4 tabs (AA) on the fan housing through the slots on the flex bracket (G). Then insert the tabs through the slots until the fan housing (A) sitting on the flex bracket (G).
- Then bend the tabs (AA) to both sides to attach the fan housing firmly on the flex bracket (G).



# ■ Installation - New Construction (continued)

## 4 Connect the wire

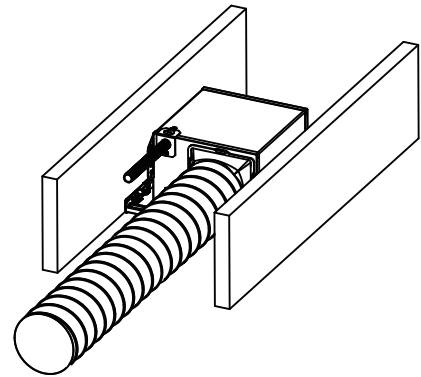
- Loosen the short screw (E) and remove the wire cover (F).
- Pull the house wires through the knockout of wire cover (F). Using the wire connector to connect 120 V AC house wiring from the wall switch to the fan as shown in the wiring diagram on page 3. Please connect the wires with the wire connector.
- Carefully push the connected wires back into the wiring compartment of the fan housing (A). Reattach the wire cover (F) and attach it firmly with the short screw (E).



**CAUTION:** If the electrical wires do not match the colors listed, you must determine what each house wire represents before connecting. You may need to consult an electrical contractor to determine safely.

## 5 Connect the duct

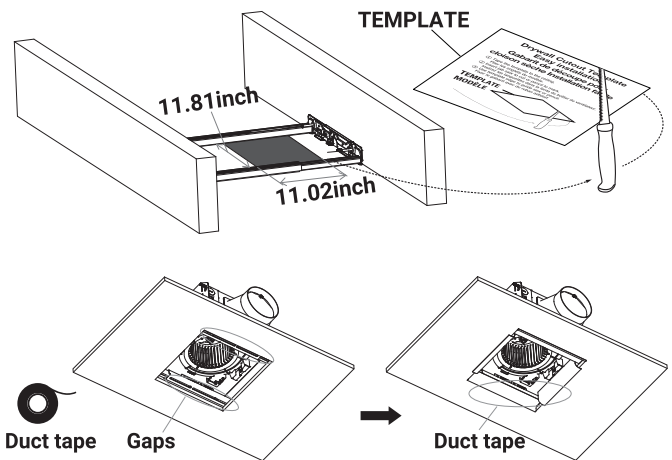
- Connect a 6 in. circular duct (not supplied) and vent to the duct connector. Secure it with duct tape (not supplied) or a clamp (not supplied) to make the connection secure and air tight.
- Turn on the power source. Check the fan for any abnormal sound or vibration.



**CAUTION:** After checking the fan, please remember to turn off the power before next installation step.

## 6 Finish the ceiling work

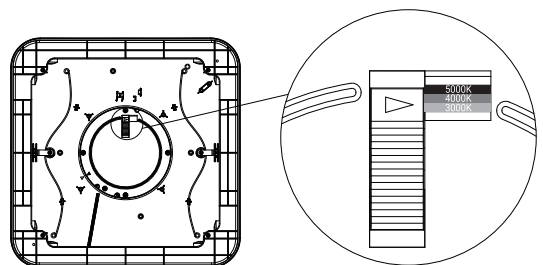
- After electrical and construction inspection is completed, the dry wall ceiling can be installed.
- Cut the ceiling hole with the cut-hole template (H) or the size 11.81\*11.02inch (300\*280mm). Ceiling hole should be aligned with the inside edge of fan housing.
- Important: Cover and seal up all gaps with duct tape



**NOTE:** That it is common practice in heating and ventilation systems using sheet metal ductwork and fittings or flexible duct work tubing to use duct tape or aluminum tape to ensure air tight seals and improve efficiency.

## 7 Select the light color

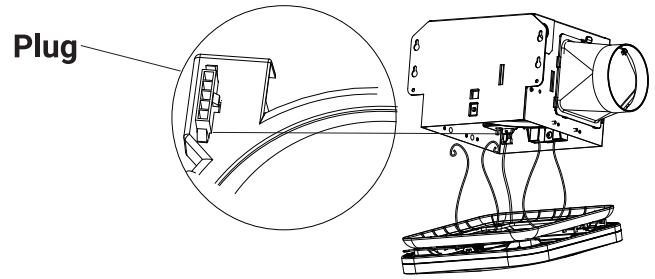
- Select desired LED color temperature by the toggle switch on the back of the shade.



## ■ Installation - New Construction (continued)

### 8 Install the grille with light

- Attach the grille by squeezing one spring together and inserting the springs into the spring guides in the fan housing (A) firstly.
- Connect LED wire to the plug in the fan housing.
- Then insert another spring and push the grille (B) up against the ceiling.
- Check that the installation is secure and safe from falling objects.



## ■ Installation - New Construction without Flex Bracket

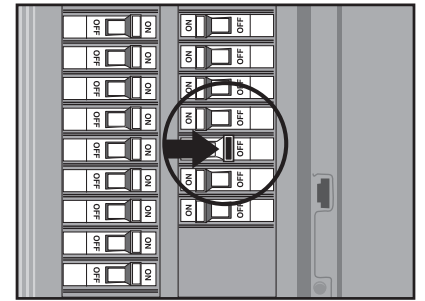
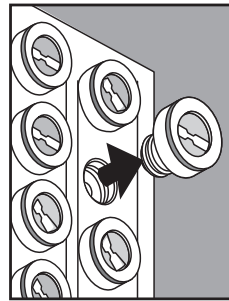
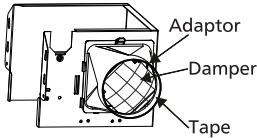


**CAUTION:** ▫ Make sure power is switched off at service panel before starting installation.  
▫ Wear gloves during installing to help protect your hands from injury.



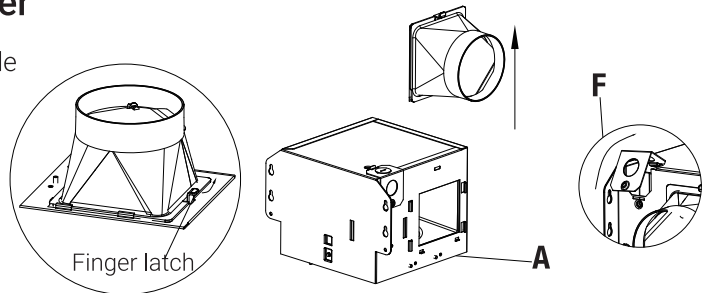
**NOTE:** Ceiling mount only.

**IMPORTANT:**  
Please remove the tape, which protects the damper during shipping and installation, from the duct adaptor as shown below.



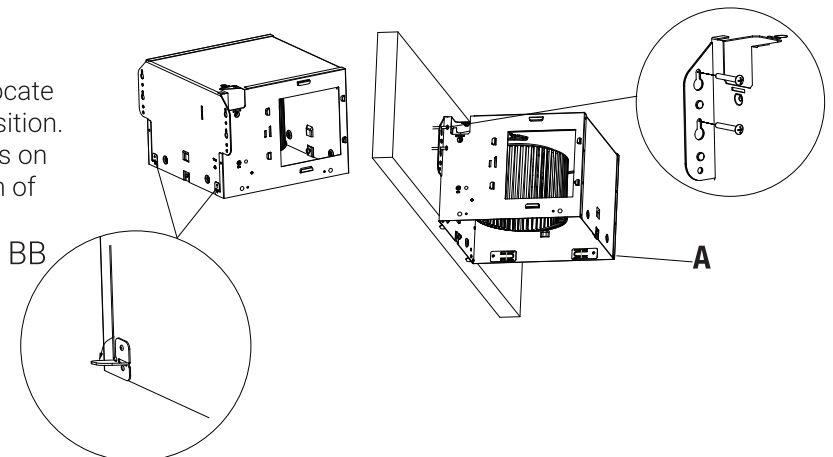
### 1 Remove the duct connector and wire cover

- To remove duct connector, pull up on the finger latch, then slide the duct connector up until it is removed from the fan housing (A).
- Loosen the short screw (E) and remove the wire cover (F).



### 2 Mount the housing to the joist

- Bend down 2 tabs (BB) on outside of housing to locate and position against bottom of joist for proper position.
- Secure fan housing (A) through mounting keyholes on bracket with with 4 screws (D). Make sure bottom of fan housing will be flush with finished ceiling.

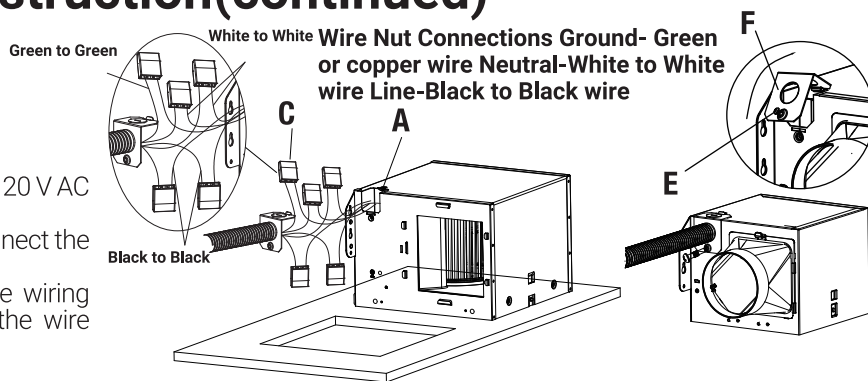




## ■ Installation - New Construction(continued)

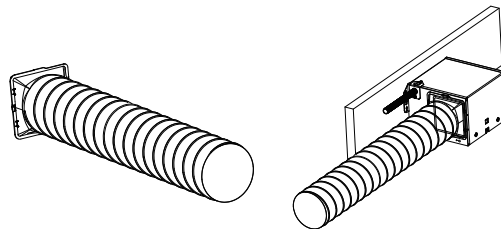
### 3 Connect the wire

- Pull the house wires through the knockout of wire cover (F). Using the wire connector (C) to connect 120 V AC house wiring from the wall switch to the fan as shown in the wiring diagram on page 3. Please connect the wires with the wire connector.
- Carefully push the connected wires back into the wiring compartment of the fan housing (A). Reattach the wire cover (F) and attach it firmly with short screw (E).



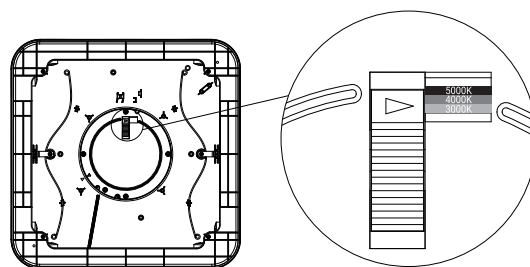
### 4 Connect the duct

- Connect a 6 in. circular duct (not supplied) and vent to the duct connector. Secure it with duct tape (not supplied) or a clamp (not supplied) to make the connection secure and air tight.
- Insert the duct connector back to the fan housing (A) follow the guide slot from up to down. And it will be in place with a “click” sound. Please secure it tightly.



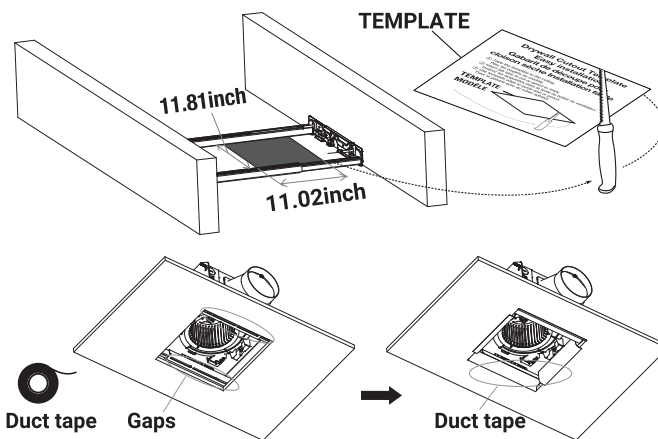
### 5 Select the light color

- Select desired LED color temperature by the toggle switch on the back of the shade.



### 6 Finish the ceiling work

- After electrical and construction inspection is completed, the dry wall ceiling can be installed.
- Cut the ceiling hole with the cut-hole template (H) or the size 11.81\*11.02inch (300\*280mm). Ceiling hole should be aligned with the inside edge of fan housing.
- Important: Cover and seal up all gaps with duct tape



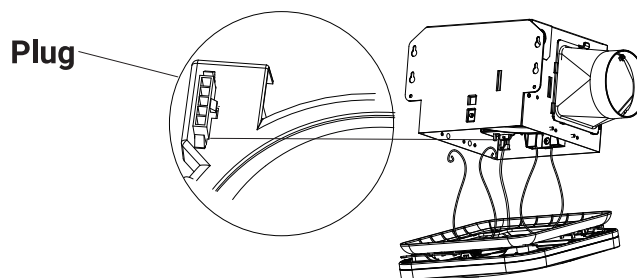
**NOTE:** MAKE SURE ONE EDGE OF THE OPENING IS FLUSH WITH THE JOIST FOR INSTALLATION.



**NOTE:** That it is common practice in heating and ventilation systems using sheet metal ductwork and fittings or flexible duct work tubing to use duct tape or aluminum tape to ensure air tight seals and improve efficiency.

### 7 Install the grille with light

- Attach the grille by squeezing one spring together and inserting the springs into the spring guides in the fan housing (A) firstly.
- Connect LED wire to the plug in the fan housing.
- Then insert another spring and push the grille (B) up against the ceiling.
- Check that the installation is secure and safe from falling objects.



# ■ Installation - Existing Construction

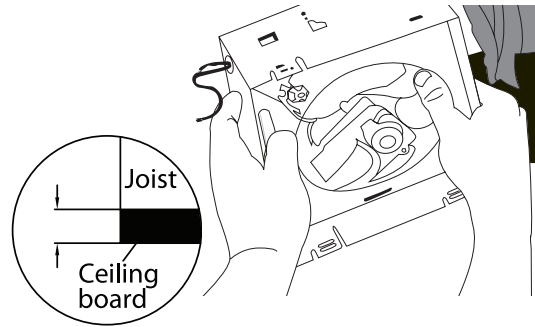
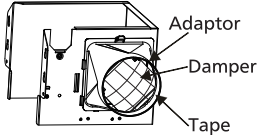
## 1 Remove the existing fan



**CAUTION:** □ Make sure power is switched off at service panel before starting installation.  
 □ Wear gloves during installing to help protect your hands from injury.

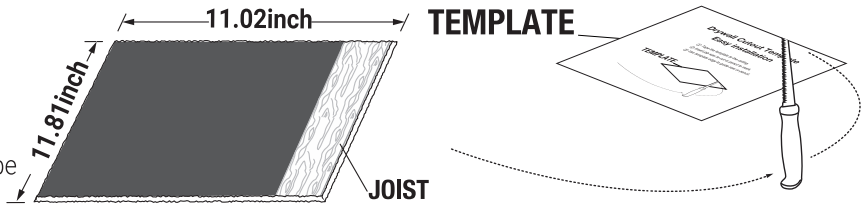
### □ Remove the old fan from the ceiling.

**IMPORTANT:**  
 Please remove the tape, which protects the damper during shipping and installation, from the duct adaptor as shown below.



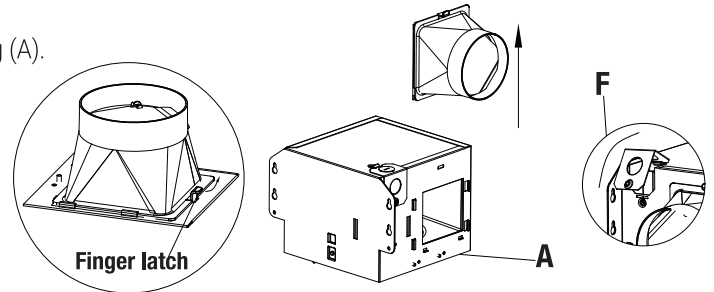
## 2 Finish the ceiling work

- After electrical and construction inspection is completed, the dry wall ceiling can be installed.
- Cut the ceiling hole with the cut-hole template (H) or the size 11.81\*11.02inch (300\*280mm). Ceiling hole should be aligned with the inside edge of fan housing.



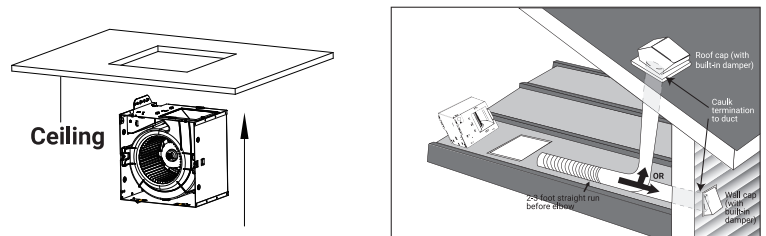
## 3 Remove the duct connector and wire cover

- To remove duct connector, pull up on the finger latch, then slide the duct connector up to down until it is removed from the fan housing (A).
- Loosen the short screw (E) and remove the wire cover (F).



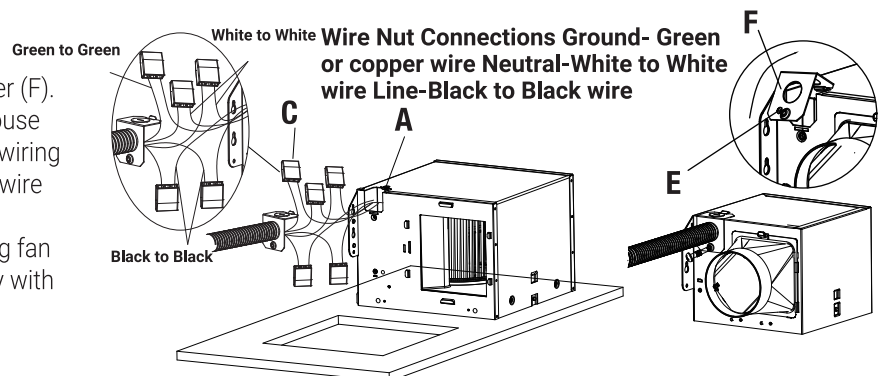
## 4 Place the fan housing

- Place the fan housing (A) inside the ceiling through the hole. And then place on the side. Shown as in picture.



## 5 Connect the wire

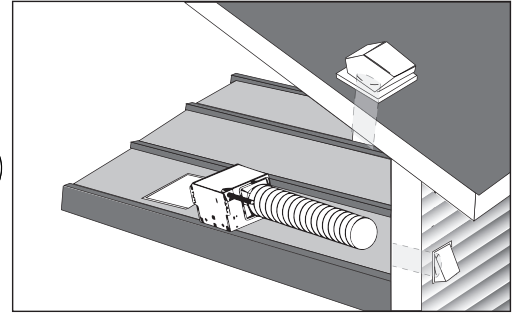
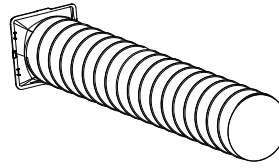
- Pull the house wires through the knockout of wire cover (F). Using the wire connector (C) to connect 120 V AC house wiring from the wall switch to the fan as shown in the wiring diagram on page 3. Please connect the wires with the wire connector.
- Carefully push the connected wires back into the wiring fan housing (A). Reattach the wire cover (F) attach it firmly with the short screw (E).



## ■ Installation - Existing Construction(continued)

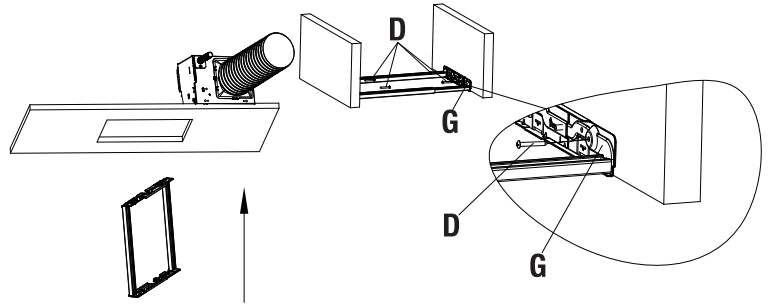
### 6 Connect the duct

- Connect a 6 in. circular duct (not supplied) and vent to the duct connector. Secure it with duct tape (not supplied) or a clamp (not supplied) to make the connection secure and air tight.
- Insert the duct connector back to the fan housing (A) follow the guide slot from up to down. And it will be in place with a "click" sound. Please secure it tightly.



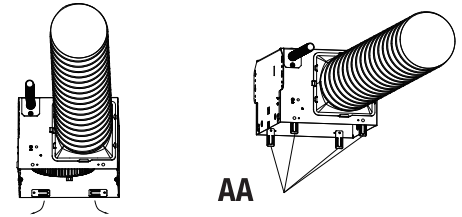
### 7 Install the flex bracket

- Put the flex bracket (G) inside the ceiling through hole.
- Fix the flex bracket (G) onto the joists with 4 screws (D). The flex bracket is adjustable to fit different space (12~22inches) between the joists.
- Please make sure the bottom of the flex bracket will be flush with the bottom of the joists.



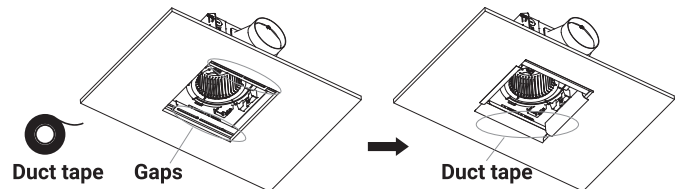
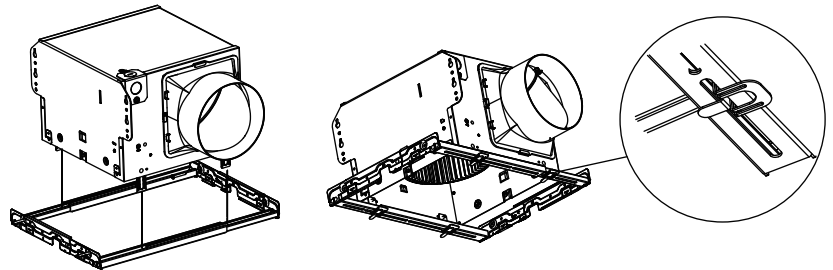
### 8 Adjust the inserts of fan housing

- Pull the 4 tabs (AA) of the fan housing into the vertical position.



### 9 Install the fan housing on bracket

- Align the 4 tabs (AA) on the fan housing through the slots on the flex bracket (G). Then insert the tabs through the slots until the fan housing (A) sitting on the flex bracket (G).
- Then bend the tabs (AA) to both sides to attach the fan housing firmly on the flex bracket (G).
- Important: Cover and seal up all gaps with duct tape

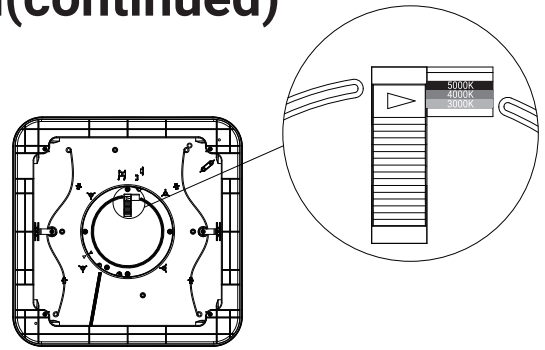


**NOTE:** That it is common practice in heating and ventilation systems using sheet metal ductwork and fittings or flexible duct work tubing to use duct tape or aluminum tape to ensure air tight seals and improve efficiency.

## ■ Installation - Existing Construction(continued)

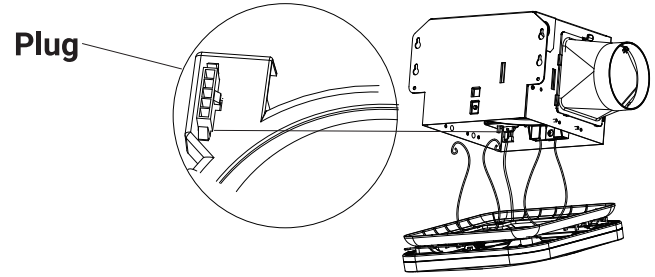
### 10 Select the light color

- Select desired LED color temperature by the toggle switch on the back of the shade.



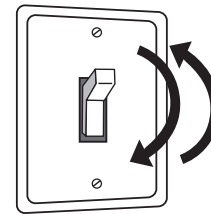
### 11 Install the grille with light

- Attach the grille by squeezing one spring together and inserting the springs into the spring guides in the fan housing (A) firstly.
- Connect LED wire to the plug in the fan housing.
- Then insert another spring and push the grille (B) up against the ceiling.
- Check that the installation is secure and safe from falling objects.



## Light Mode Operation

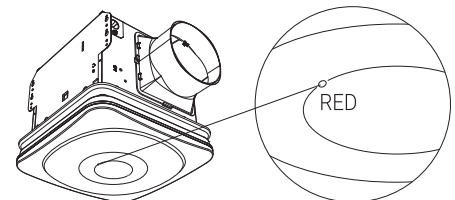
- To change to night light mode while using the main light, switch the wall switch off then back on again within 2 seconds.
- To change to main light mode while using night light mode, switch the wall switch off then back on again within 2 seconds.



## Humidity sensor two operation options

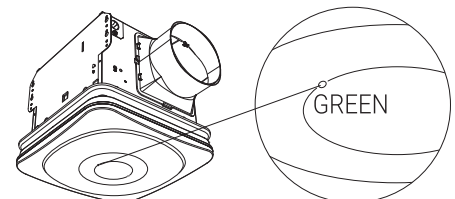
### 1. Using full speed mode

Move the wall switch to the "ON" position. The LED indicator light in the fan is RED.



### 2. Activating humidity sensing mode

Cycle the wall switch to the "OFF" position, then back to the "ON" position. The LED Indicator light in the fan is GREEN. The fan will automatically turn on when the humidity level in the room reaches 60%. If the humidity level is below 60%, the fan will stop automatically.




## ■ Care and Maintenance



WARNING: Disconnect power supply before servicing.

- See SAFETY INFORMATION before proceeding. Routine maintenance should be done at least once a year.
- Never use solvents, thinner or harsh chemicals for cleaning the fan.
- Do not allow water to enter the motor.
- Do not immerse metal parts in water.

## ■ Troubleshooting

Problem	Possible Cause	Solution
The fan seems louder than it should.	The CFM is too great.	Be sure the CFM rating on the fan matches the square footage of your room.
	The damper is damaged or not working properly.	Check the damper to ensure it is opening and closing properly. If the damper has become damaged, please contact Customer Service.
	The bend in the duct is too close to the fan discharge.	Be sure you do not have any sharp bends in the duct closer than 18 in. to the fan discharge.
	The fan discharge is reduced to fit a smaller duct.	Use the recommended size ducting to reduce fan noise.
	The fan body is not attached securely.	Be sure the fan is securely attached to the ceiling joists.
The fan is not clearing the room.	There is insufficient airflow intake in the room.	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 from.
	There is insufficient CFM.	Be sure the CFM rating on the fan matches the requirements for your room size.
		 NOTE: Using a tissue is not the correct method for determining if the fan is operating properly. If the fan clears steam from the room within approximately 15 minutes of completing your shower, then the fan is operating properly.
The fan keeps running even though the house humidity level is lower than 60% RH.	Sensor tolerance is +/- 10%	Operating this fan requires minimal electricity so feel free to run the unit for continuous ventilation in your home.
	Outdoor humidity is back drafting into the fan.	
	Built-in 10 minute delay time after humidity level is lower than 60% RH.	Turn the fan off when not in use.

## ■ WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: —Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/TV technician for help.



Made in China

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