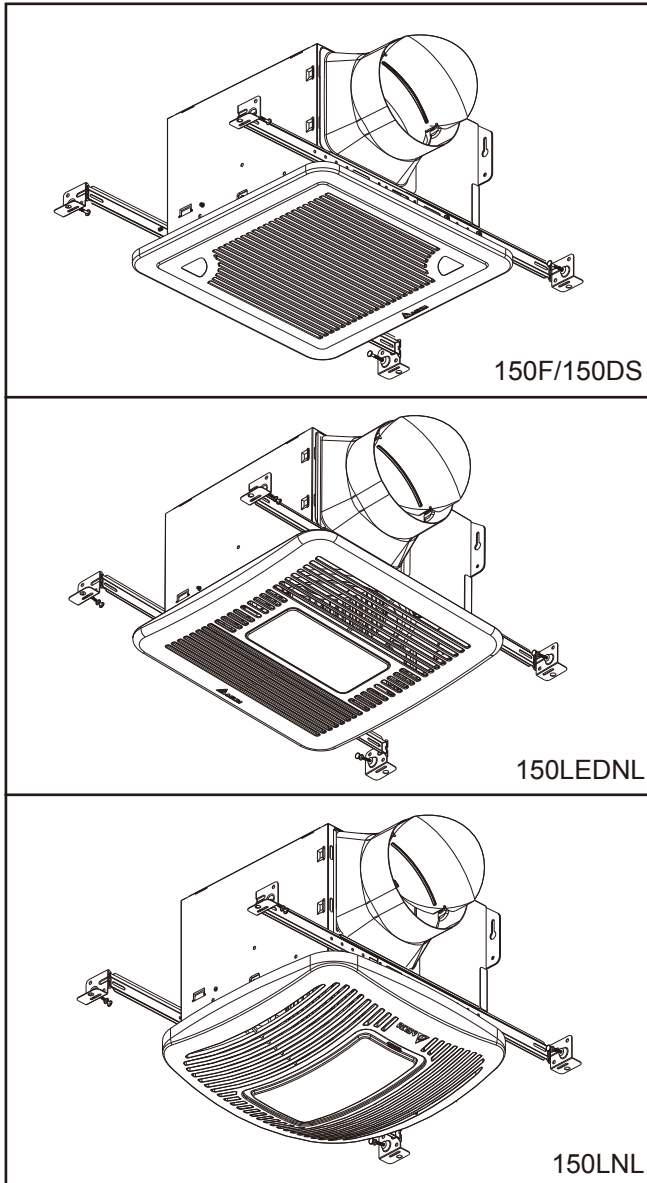


# VENTILATION FAN

MODEL 150F/150LEDNL/150LNL/150DS



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## READ AND SAVE THESE INSTRUCTIONS

Address: 46101 Fremont Boulevard, Fremont, CA 94538

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

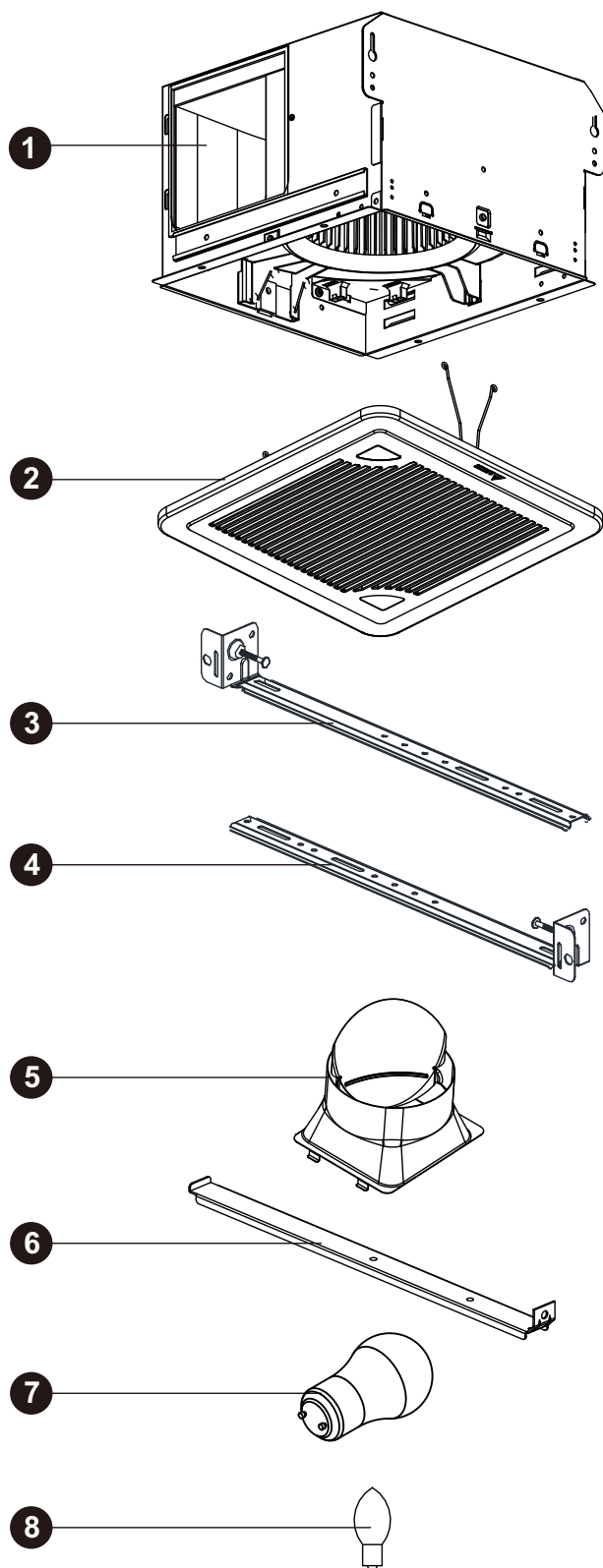
[www.deltabreez.com](http://www.deltabreez.com)




MFG Model

VFB150E6A1/VFB150E6LED1/VFB150E6L1

VFB150E6D1

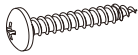

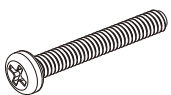

## PACKAGE CONTENTS



PART	DESCRIPTION	QTY
<b>1</b>	Fan Body	1
<b>2</b>	 150F/150DS	1
	 150LEDNL	1
	 150LNL	1
<b>3</b>	Hanger Bar I 13"(318.5mm)	2
<b>4</b>	Hanger Bar II 13"(318.5mm)	2
<b>5</b>	Duct Connector	1
<b>6</b>	Grille Bracket (150LNL Only)	1
<b>7</b>	GU24 Lamp (150LNL Only)	1
<b>8</b>	E12 Lamp (150LNL Only)	1

### HARDWARE CONTENTS

(Images are not to scale)

<b>A</b>		X 5 Tapping Screw (Ø4x25mm)
<b>B</b>		X 6 Screw (#8-32x1/4")
<b>C</b>		X 2 Screw (M4x30mm) (150LNL Only)
<b>D</b>		X 1 Nut (M4) (150LNL Only)

## 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. (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.

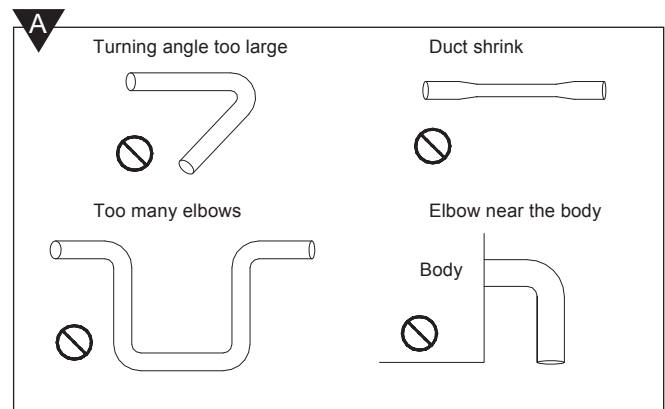
### WARNING

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 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 wiring must be done by 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 back drafting. 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 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

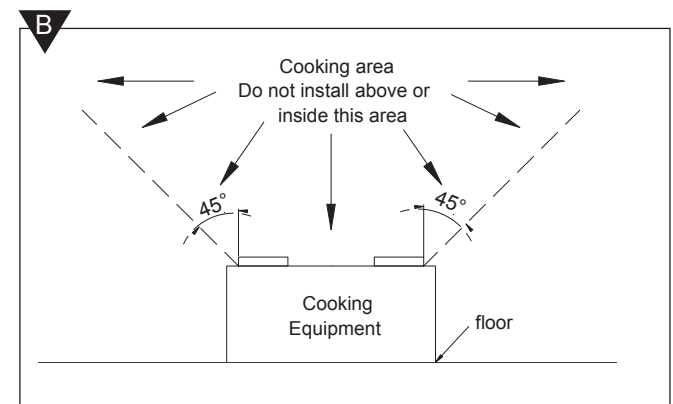
be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.

8. 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 R50. (This is required for installation in Canada only).
11. Do not open/disassemble the LED light engine.



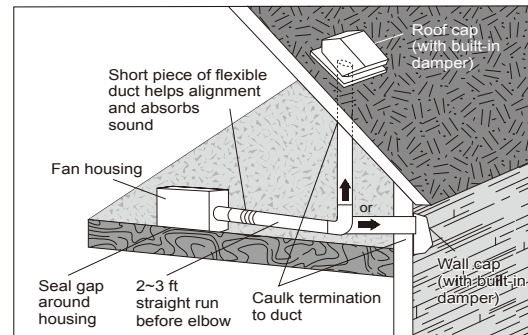
### CAUTION

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.



## PREPARATION AND WIRING DIAGRAMS

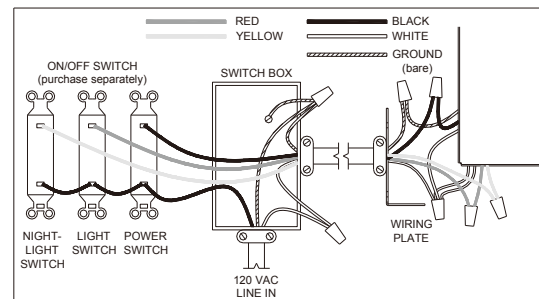
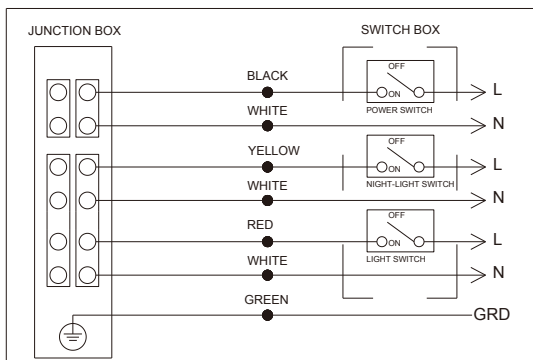
Proper insulation around the fan to minimize building heat loss and gain. The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with



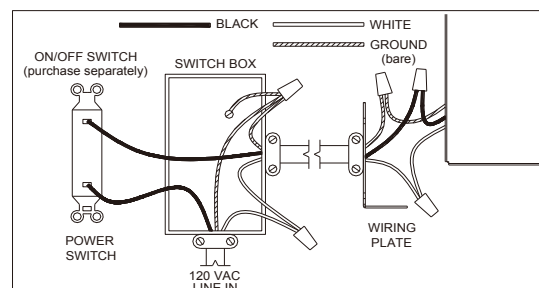
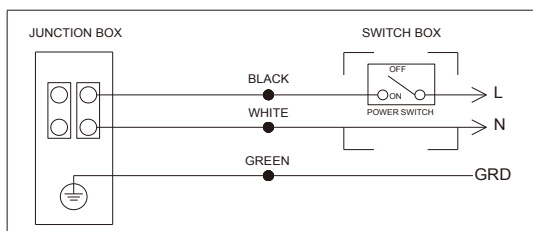
### Connect wiring

1. Follow all local electrical and ANSI/NFPA70.
2. NEVER place a switch where it can be reached from a tub or shower.
3. Using wire nuts (not provided), connect the house power cable and Light cables to the ventilating fan wires.
4. 14 AWG (2.1 mm<sup>2</sup>) is the smallest conductor that shall be used for branch-circuit wiring.
5. External timer/dimmer switch can be used, please contact Delta Breez customer service and consult with a licensed electrician for compability.
6. Connect wires as shown in wiring diagrams.

LED Light Model: 150LEDNL



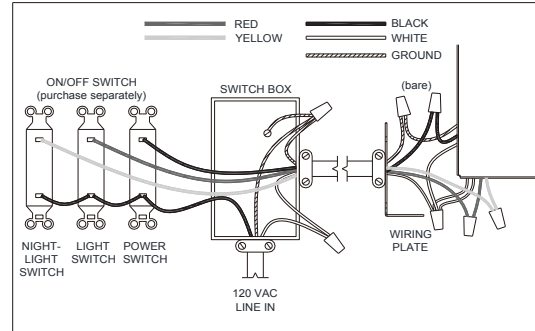
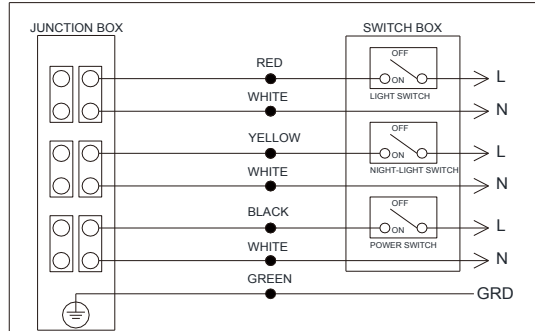
Single Speed Model: 150F



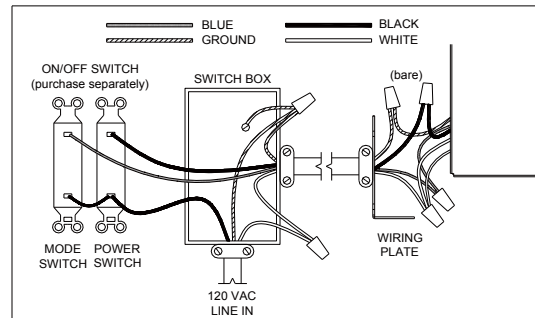
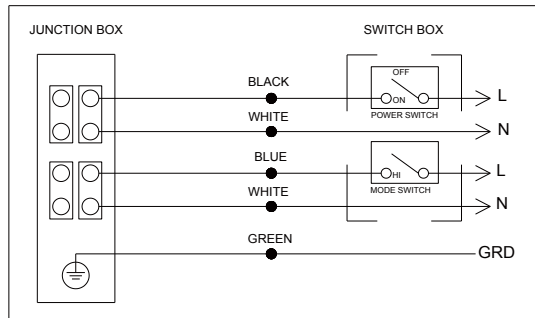


## PREPARATION AND WIRING DIAGRAMS

### CFL Light Model: 150LNL



### Dual Speed Model: 150DS

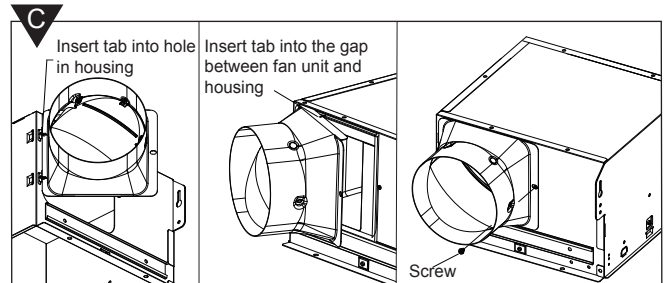


## ASSEMBLY INSTRUCTIONS

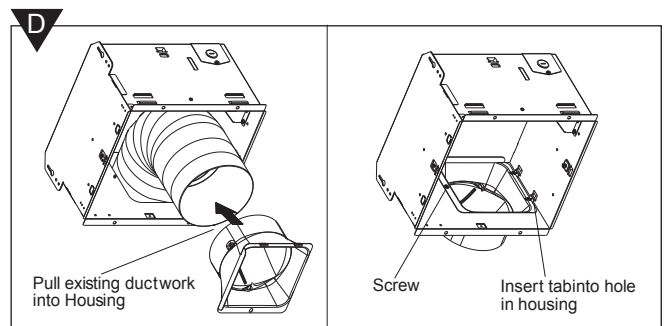
### Attach duct connector

**Note:** Remove the tape from the damper before installation.

1. Attach the duct connector from outside, and secure by using one screw (#8-32x1/4"). (Fig. C).

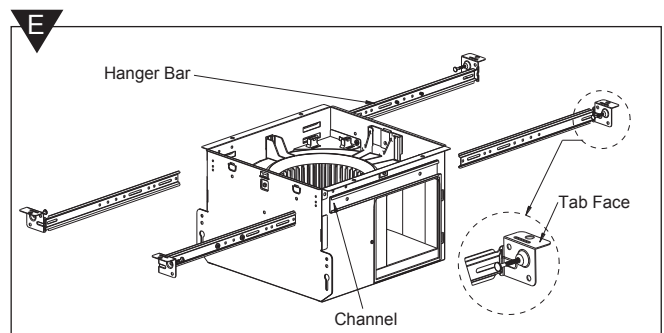


2. Remove the motor assembly, attach the duct connector from the housing can inside, and secure by using one screw (#8-32x1/4"). Insert and secure motor assembly. (Fig. D).

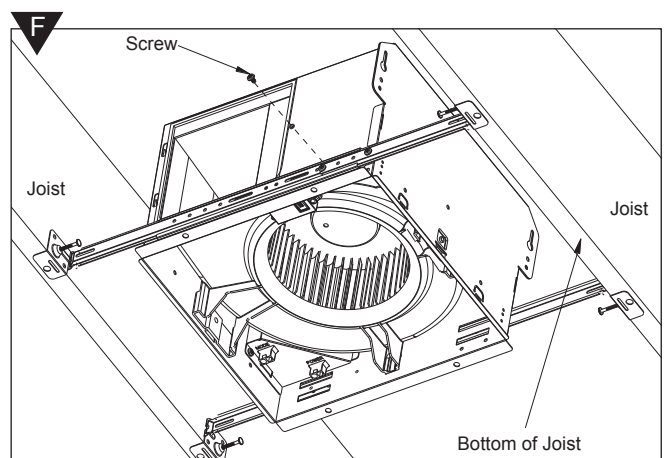


### Install the housing (I)-using hanger bars

1. Sliding hanger bars are available to allow for positioning of the housing anywhere between joists up to a span of 24".
2. Insert the hanger bars into the channels on the housing. Make sure the tabs face up as shown. (Fig. E).



3. Extend the hanger bars to fit the width of the joists. Hold the fan in place by wrapping the hanger bar tabs around the bottom of the joist. Make sure the fan body is level and perpendicular to the joist. (Fig. F).

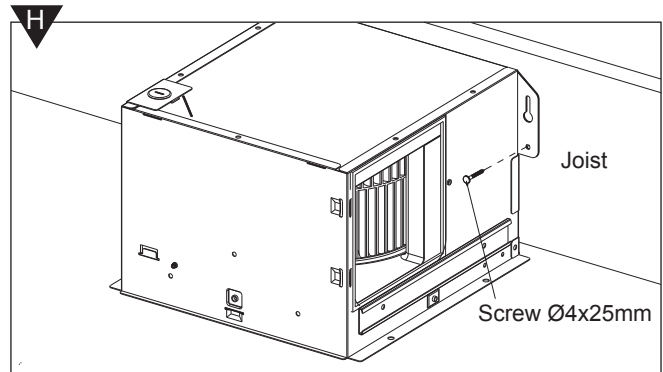
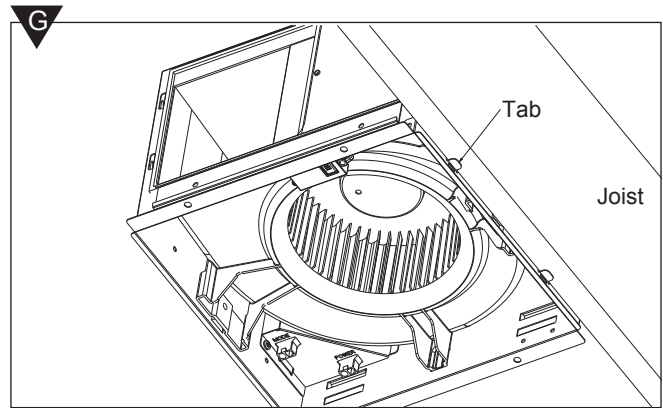


## ASSEMBLY INSTRUCTIONS

4. Ensure that the distance between the ceiling and fan body is appropriate for mounting the grille.
5. Secure the suspension brackets to the joists with nails or by using the tapping screws ( $\varnothing 4 \times 25 \text{ mm}$ ) through holes near nails.
6. Secure the suspension bracket to the fan body using the screws ( $\#8 - 32 \times 1/4''$ ).
7. Follow steps 2 to 6 of the installation instructions to complete the installation work.

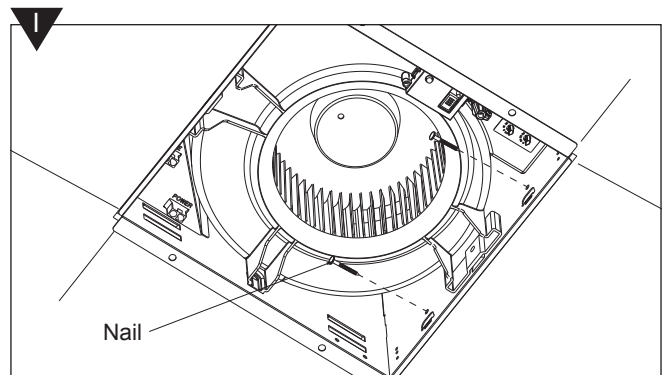
### Install the housing (II)-using mounting tabs

1. Slotted tabs are provided to locate housing flush with  $1/2''$  ceiling material. Bend tabs outwards  $90^\circ$  (Use a screw driver if desired) and position housing so that tabs rest against bottom edge of the joists (or front of the stud). Nail the housing to the joist or stud using four screws to ensure a solid, quiet installation. (Fig. G & H).



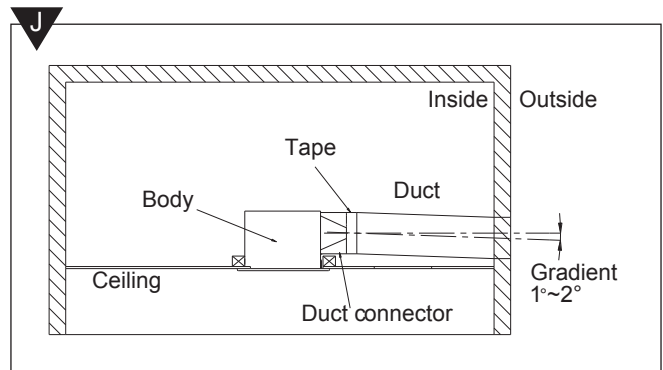
### Install the housing (III)-existing ceiling installation

1. Position the housing so that it is centered in the existing ceiling opening; make sure the housing is flush with the finished ceiling. Nail the housing in place and then drive the nails (not provided) through the housing where indicated by arrows. (Fig. I).



### Duct connection

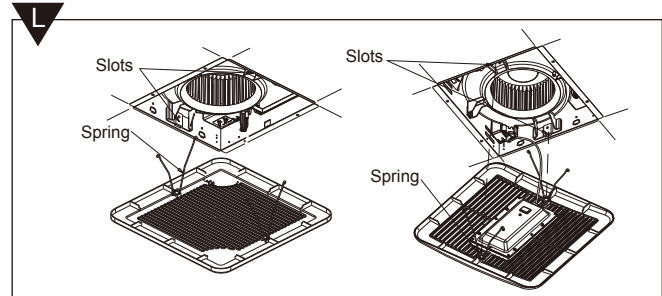
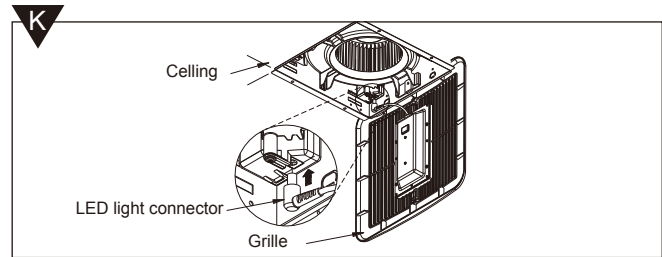
1. Insert the 6" duct (not provided) into the duct connector and tape all ductwork connections to make them secure and airtight. (Fig. J).
2. Install the duct with a gradient  $1^\circ \sim 2^\circ$  to the outside.



## GRILLE INSTALLATION

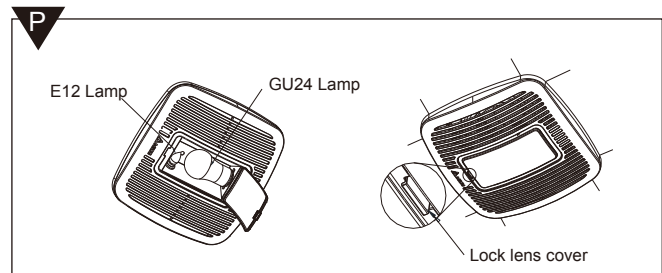
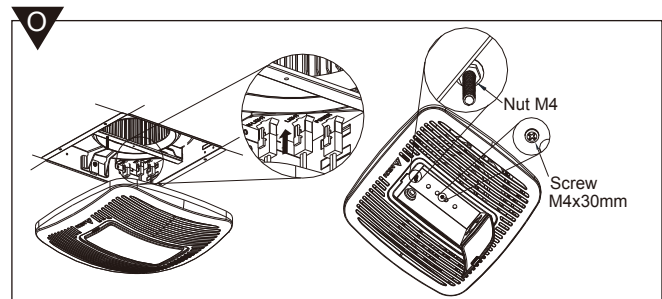
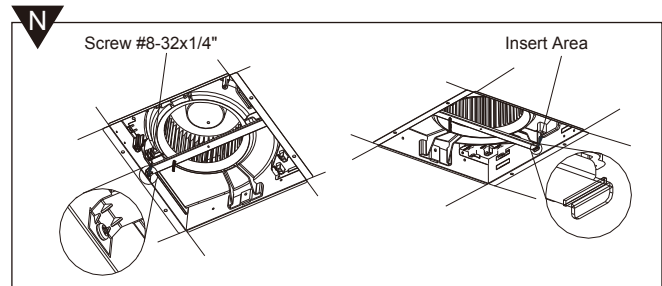
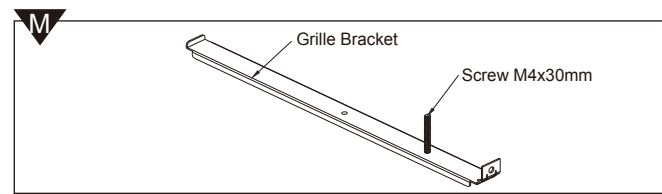
### For 150F/150LEDNL/150DS

1. Insert the LED light connector into the LED socket (150LEDNL Only). (Fig. K).
2. With the power on, check for abnormal vibrations or sounds.
3. Insert the mounting springs into the slots and mount the grille to the fan body. (Fig. L).



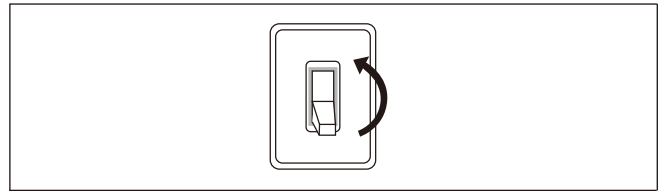
### For 150LNL

1. Secure grille screw (M4x30mm) into the grille bracket. (Fig. M).
2. Insert the grille bracket into the housing can and secure it by screw (#8-32x1/4"). (Fig. N).
3. With power on, check for abnormal vibrations or sounds.
4. Plug the connectors into the receptacles and secure the grille on the fan body by screw (M4x30mm) and nut (M4). (Fig. O).
5. Install light bulbs and attach the cover. (Fig. P).



## OPERATION

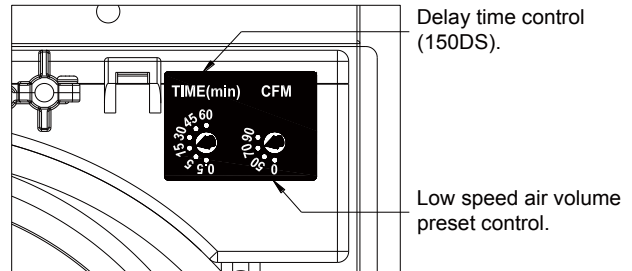
Turn the switches on/off to operate the fan/light /night light.



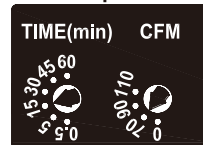
### Dual Speed Model: 150DS

1. Low speed control mode: Turn the POWER switch on (MODE switch is off) to operate at the user-adjustable low speed airflow - the LED indicator will be green.
2. 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 70CFM, time delay 15 minutes.



### 150DS control options



## CARE AND MAINTENANCE

### TURN OFF POWER SOURCE. REVIEW ALL SAFETY PRECAUTION.

See safety information before proceeding. Routine maintenance must be done every year.

#### CAUTION

- Never use gasoline, benzene, thinner or any other such chemicals to clean the ventilating fan.
- Do not allow water to enter the motor.
- Do not soak resin parts in water over 140°F (60°C).

#### CLEANING

1. To remove grille, unplug the LED light connector (150LEDNL only), squeeze springs and pull down. Wash and clean grille with non-abrasive kitchen detergent. Then wipe dry with a new cloth.
2. For 150LNL only, open lens cover and remove the lamps carefully. Disassemble the machine screw on the grille bracket and unplug the light connectors. Wash and clean grille with non-abrasive kitchen detergent. Then wipe dry with a new cloth.

Caution: Do not let water into the LED light engine.

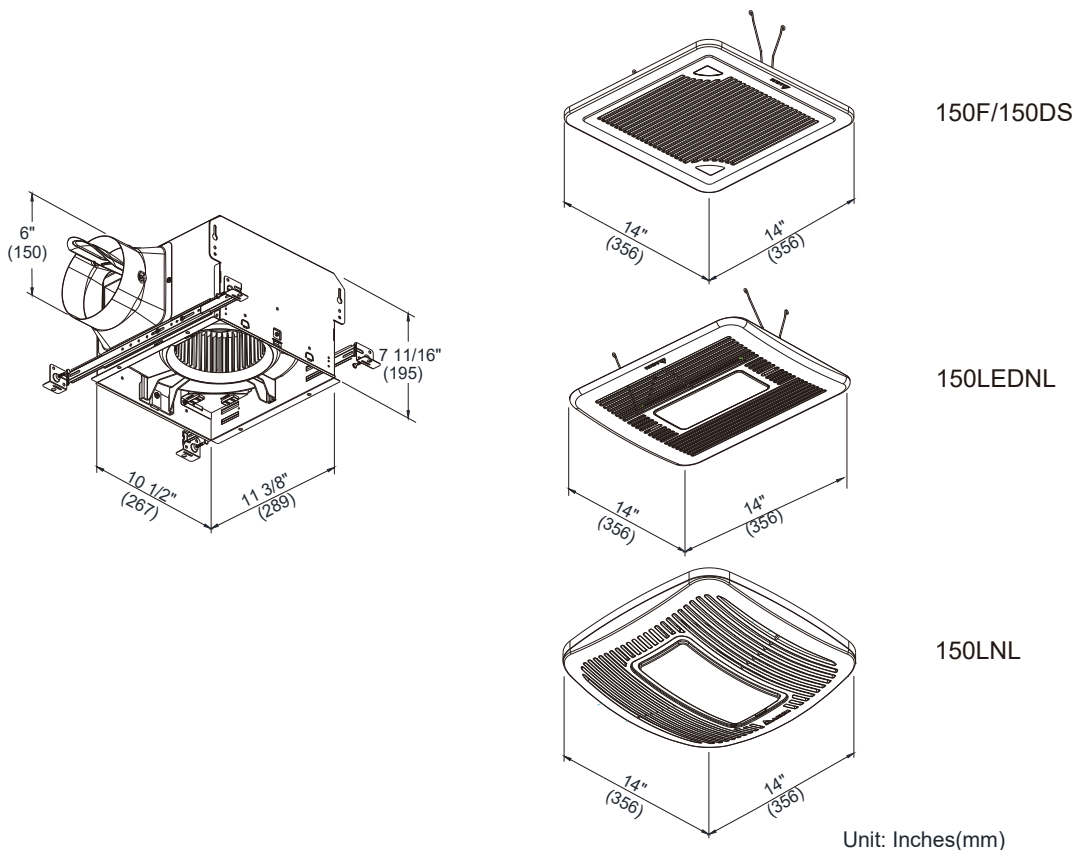
Caution: Do not let water into the lamp base.

3. Remove dust and dirt from the fan body with a vacuum cleaner.
4. Using a cloth dampened with non-abrasive kitchen detergent, remove dust and dirt from the fan body. Then wipe dry with new cloth.
5. Replace the grille back onto the fan body. Plug the light and fan power into the junction box of housing. Turn the switches on/off to operate the fan/light/night light again.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
The fan is not turning on	<ol style="list-style-type: none"> <li>1. Power off</li> <li>2. Faulty switch</li> <li>3. Faulty wire connection</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure power supply is on.</li> <li>2. Test or replace switch.</li> <li>3. Check wire in switch box.</li> </ol>
The fan seems louder than it should	<ol style="list-style-type: none"> <li>1. CFM too great</li> <li>2. Damper not working properly or damaged</li> <li>3. Bend in duct too close to fan discharge</li> <li>4. Fan discharge reduced to fit smaller duct</li> <li>5. Fan body not securely attached</li> </ol>	<ol style="list-style-type: none"> <li>1. Be sure the CFM rating on the fan matches the size of your room.</li> <li>2. Check damper to ensure it is opening and closing properly. If the damper has become damaged, please call Customer Service.</li> <li>3. Be sure you do not have any sharp bends in duct closer than 18 in. to the fan discharge.</li> <li>4. Use recommended size ducting to reduce fan noise.</li> <li>5. Be sure the fan is securely attached to your ceiling joists.</li> </ol>
The fan is not clearing the room	<ol style="list-style-type: none"> <li>1. Insufficient intake airflow within room</li> <li>2. Insufficient CFM</li> </ol>	<ol style="list-style-type: none"> <li>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.</li> <li>2. Be sure the CFM rating on the fan matches the requirements for your room size.</li> </ol>
The light is not turning ON	<ol style="list-style-type: none"> <li>1. Power Off</li> <li>2. Faulty switch</li> <li>3. Faulty wire connection</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure power supply is on.</li> <li>2. Test or replace switch.</li> <li>3. Check wire in switch box.</li> </ol>

## DIMENSIONS



## PRODUCT SPECIFICATIONS

SPECIFICATIONS								
Model No.	Voltage (V)	Frequency (Hz)	Power @ 0.1"SP (Watt)	Air Flow @ 0.1"SP (CFM)	Weight (lb.)	Max. Power (Watt)	Light Spec	Note
150F/ VFB150E6A1	120	60	16.9	150	10.4	30		Single Speed
150LEDNL/ VFB150E6LED1	120	60	17.6	150	10.7	50	13 Watt LED 800 Lumens 3000K	Single Speed
150LNL/ VFB150E6L1	120	60	17.2	150	10.8	56	15 Watt LED 1600 Lumens 2700K	Single Speed
150DS/ VFB150E6D1	120	60	16.9	150	10.4	30		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 and Canada 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 LED 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](http://www.deltabreez.com)