

## INSTALLATION GUIDE

### READ AND SAVE THESE INSTRUCTIONS

Installer: leave this guide with homeowner.

Register your product online at [www.broan-nutone.com/register](http://www.broan-nutone.com/register).

For Warranty Statement, Service Parts, Technical Support, or to Register your product, please visit our website or call:

In the United States - Broan-NuTone.com 800-558-1711.

In Canada - Broan-NuTone.ca 800-567-3855.

### PTE511RK:

50-80-110 Selectable CFM  
with Continuous Run Fan

### PTEL511RK:

50-80-110 Selectable CFM  
with Continuous Run Fan/Light

### PTE1115RK:

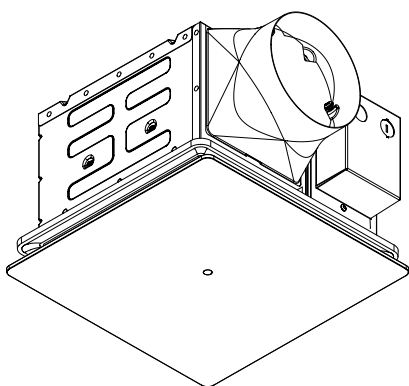
110-130-150 Selectable CFM  
with Continuous Run Fan

### PTEL1115RK:

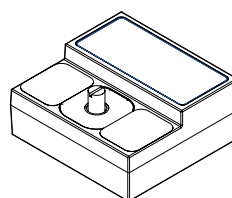
110-130-150 Selectable CFM  
with Continuous Run Fan/Light

**PES:** Humidity Sensing Module

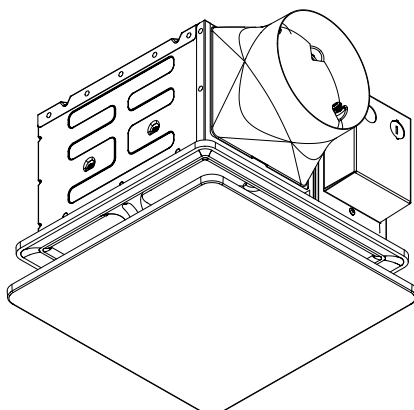
**PEM:** Motion Sensing Module  
(available only with PTE511RK and  
PTE1115RK models)



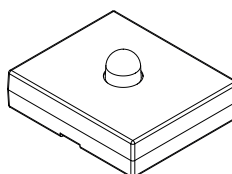
**PTE1115RK**



**PES**



**PTEL1115RK**



**PEM**



Scan this QR code for helpful hints.

**Easy installation in both  
new construction and retrofit**

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## WARNING

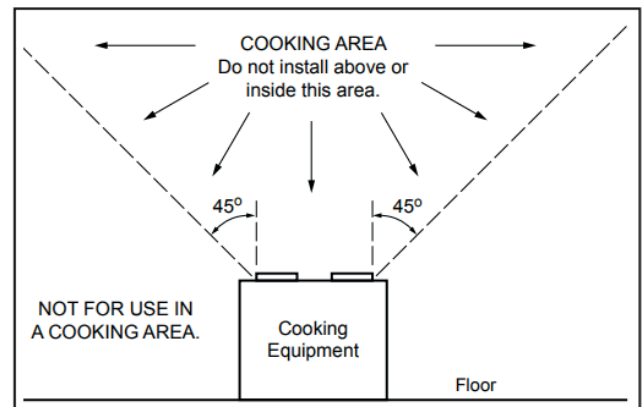
### TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

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. Acceptable for use over a tub or shower (PTE511RK and PTE1115RK models only) when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
3. Ducted fans must always be vented to the outdoors.
4. Use only ON/OFF switch, mechanical timer or relay-switched control.
5. 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.
6. 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.
7. 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 the local code authorities.
8. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
9. This unit must be grounded.
10. Do not use replacement parts that have not been recommended by the manufacturer (e.g. parts made at home using a 3D printer).

11. Monitor your fan for unusual sounds, smells and smoke. If any appear, turn off the fan immediately and replace it.
12. When performing service, maintenance and installation work, gloves and safety glasses are recommended.
13. Do not use this fan with any solid-state speed control device.

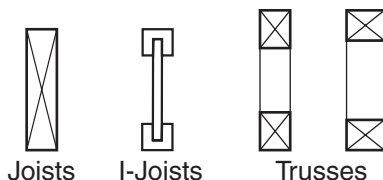
## CAUTION

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 ceilings up to a 12/12 pitch (45 degree angle). Duct connector must point up. **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 power unit.
4. Please read specification label on product for further information and requirements.

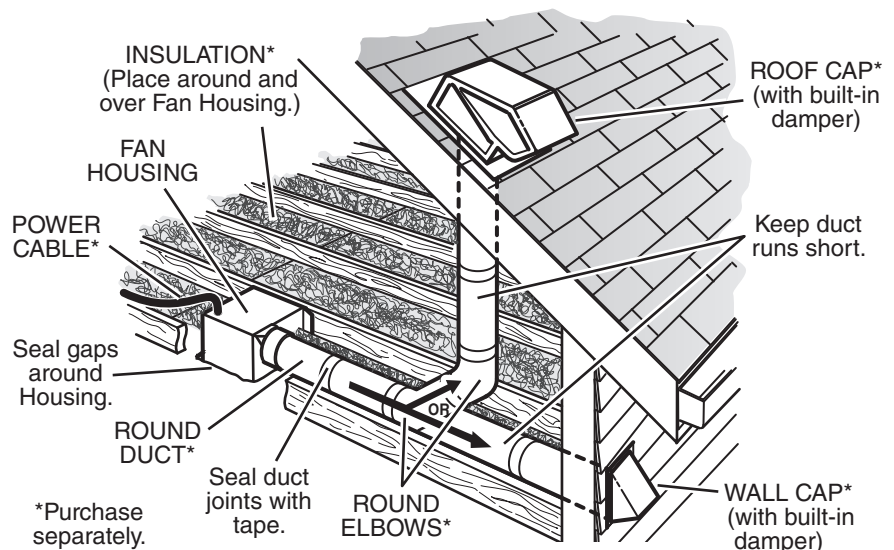


## Typical Installation

- Installation is the same for:



- Fits in 2" x 8" ceiling construction.
- Infinitely adjust the fan position between joists from 14" to 24" on center.
- Can be installed between joists or trusses if the distance between them is 10½".
- Do not install this fan in a ceiling thermally insulated to a value greater than R40.

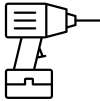
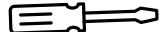
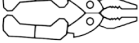


The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

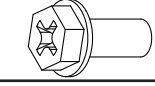
6-inch round rigid metal duct is recommended for best performance.

Preparation

Tools Needed

|                                                                                     |                                       |
|-------------------------------------------------------------------------------------|---------------------------------------|
|    | Power screwdriver with a Phillips bit |
|    | Phillips screwdriver                  |
|    | Flathead screwdriver                  |
|    | Pliers                                |
|    | Wire insulation stripper              |
|    | Wire cutter                           |
|    | Foil tape                             |
|    | Safety glasses                        |
|  | Safety gloves                         |

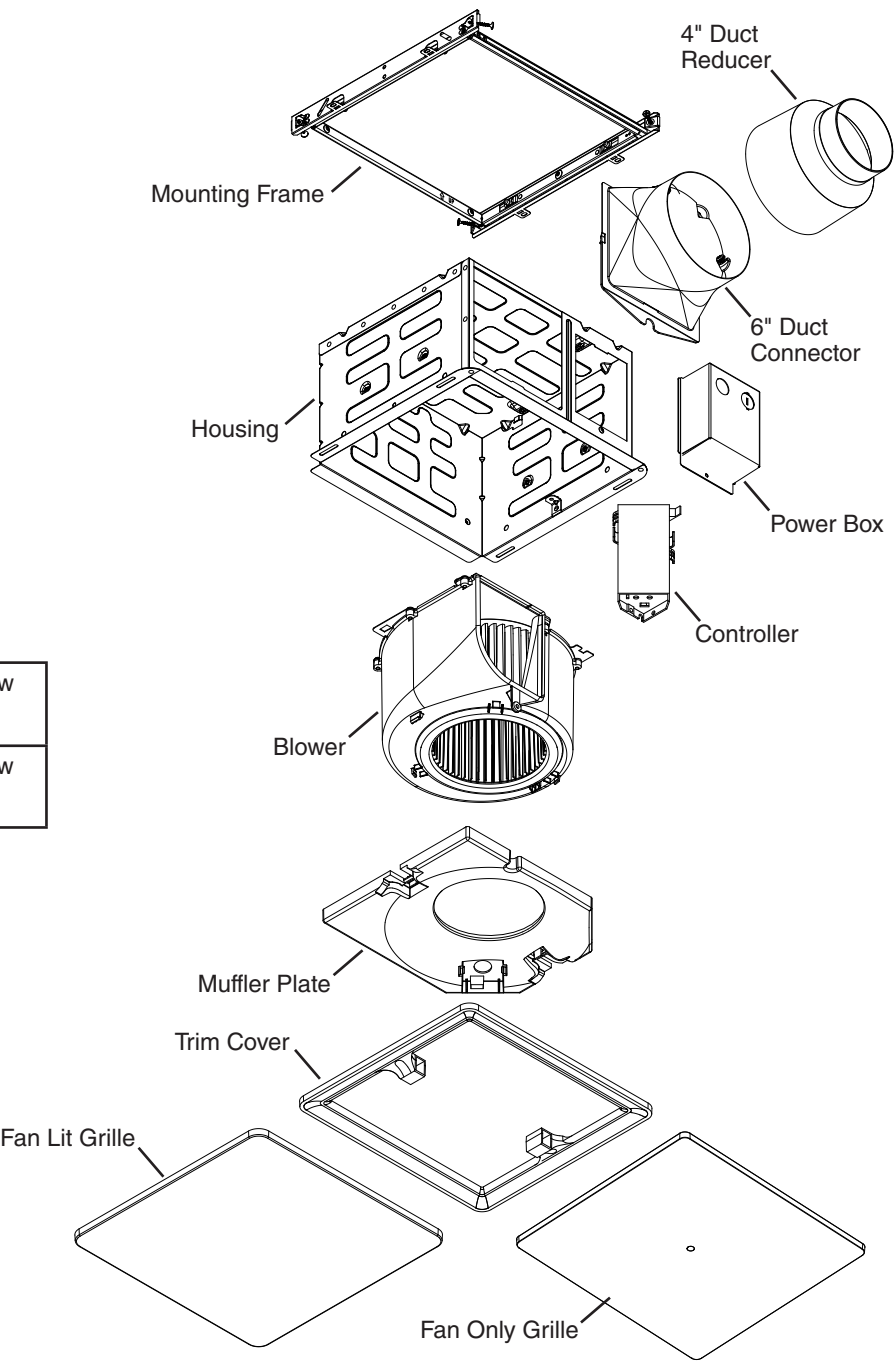
Parts Bag Content

|                                                                                     |                             |
|-------------------------------------------------------------------------------------|-----------------------------|
|  | 5 X Phillips Hex Head Screw |
|  | 2 X Phillips Pan Head Screw |

Materials Needed

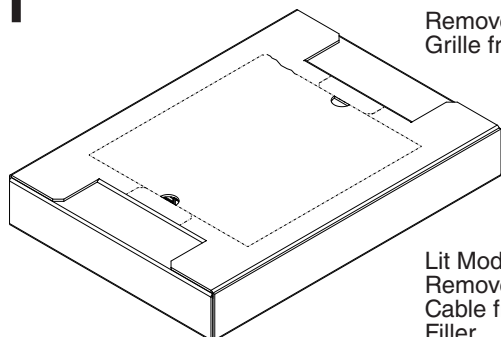
- 6" round metal ducting for PTE1115RK and PTEL1115RK models
- 4" round metal ducting for PTE511RK and PTEL511RK models
- Roof cap or wall cap (built-in damper recommended)
- Electrical wiring and supplies per local code requirements

Fan Main Parts



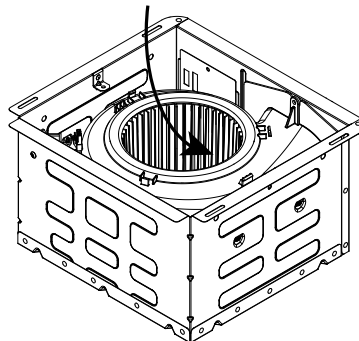
## New Construction/Retrofit Installation

### 1 Remove Packaging



Remove  
Grille from Grille Filler.

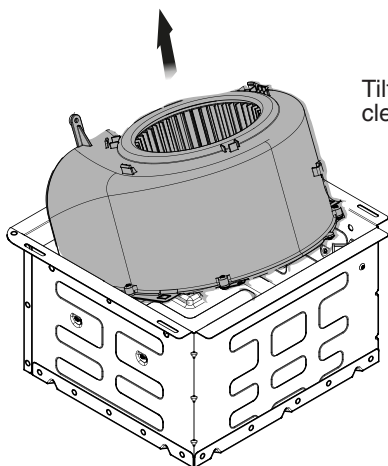
Lit Models Only:  
Remove Jumper  
Cable from Grille  
Filler.



Remove  
Parts Bag from  
Blower.

### 2 Remove Blower Assembly

- Slide the Blower Assembly. Tilt the Blower Assembly.
- Remove and set aside the Blower Assembly.



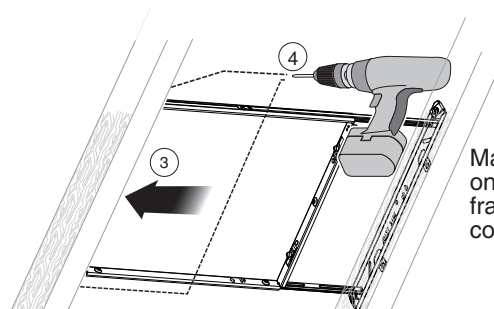
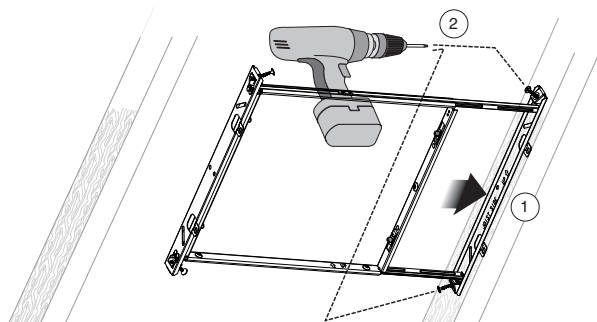
Tilt blower to  
clear metal tabs.

## New Construction Installation

### 3 Mount Housing

#### Using Mounting Frame (Recommended Installation)

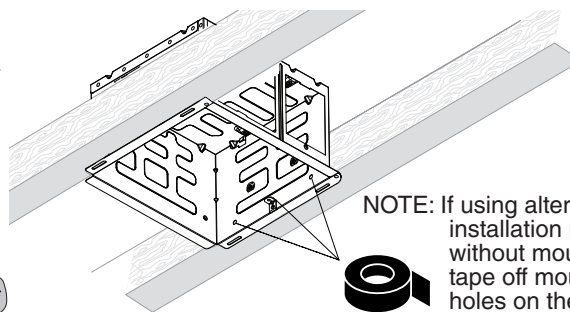
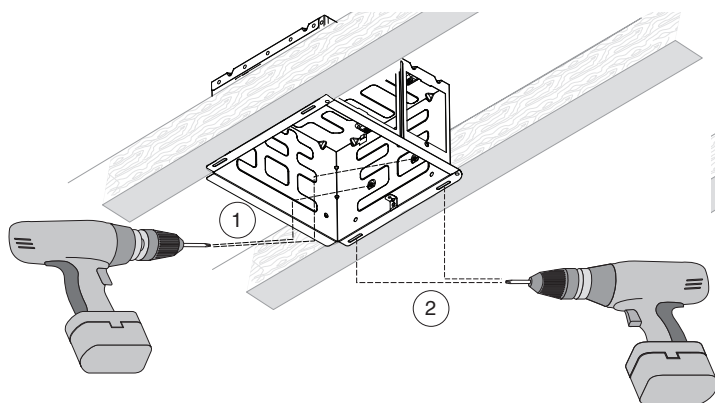
Mount the frame 1/2" above the bottom of the joist. Housing flange should be level with the joist when installed.



Make sure UP  
on the mounting  
frame is oriented  
correctly.

NOTE: Use 4 screws preattached to mounting frame to mount to joist.

#### Directly to Joist (Alternate Installation)

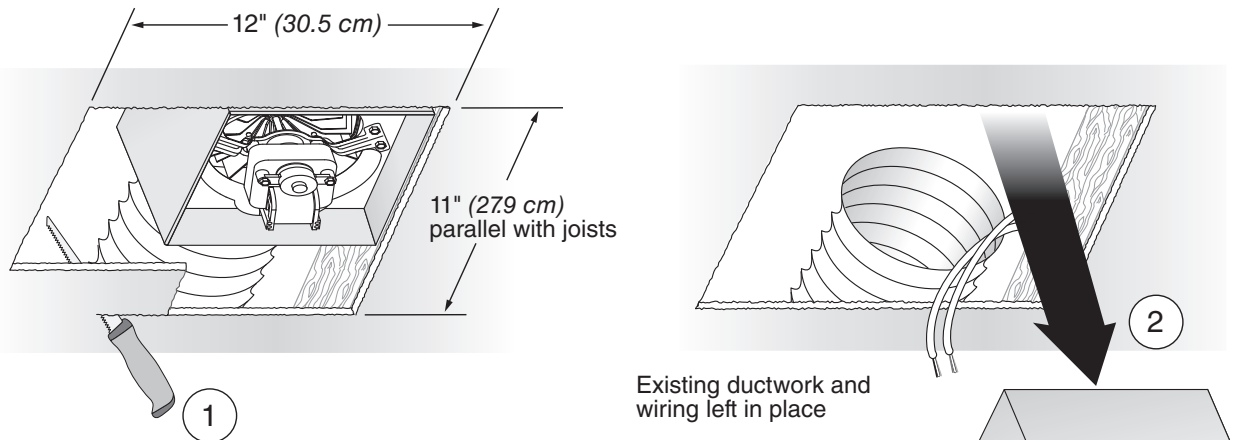


NOTE: If using alternate  
installation method  
without mounting frame,  
tape off mounting frame  
holes on the housing,  
on both sides, using  
foil tape to prevent air  
leakage.

NOTE: Use 4 screws preattached to mounting frame to mount to joist.

## Retrofit Installation

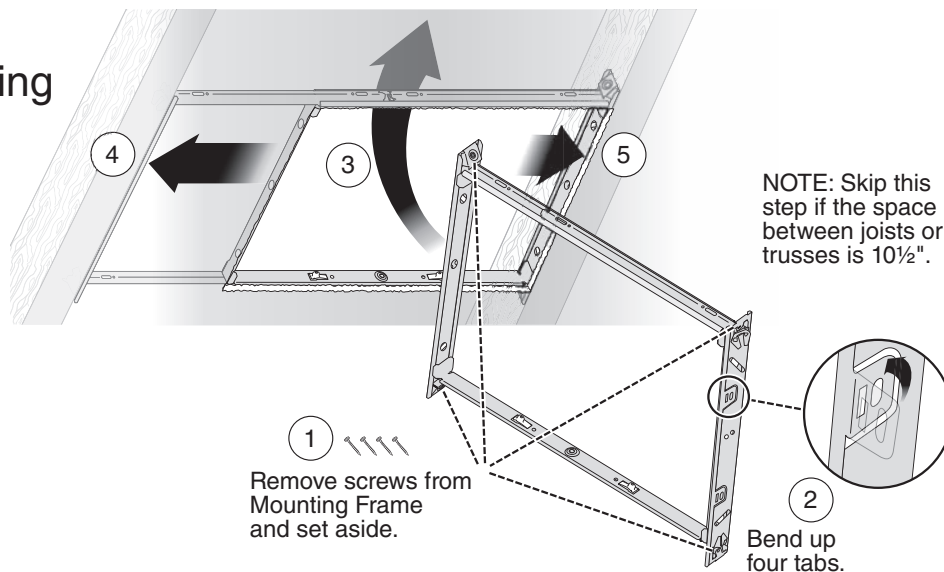
### 1 Enlarge Ceiling Opening and Remove Existing Fan



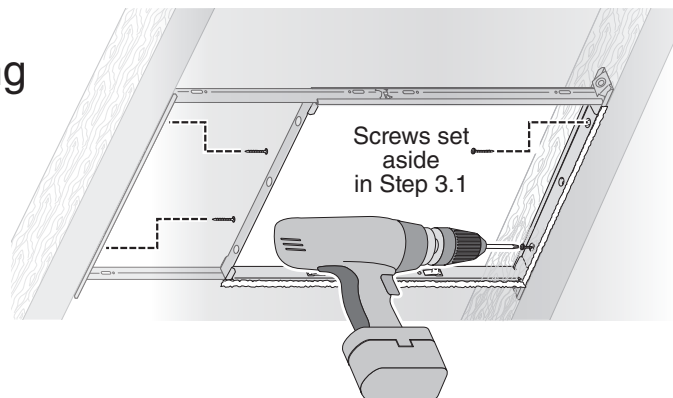
### 2 Examine Wiring

Examine the existing wiring to make sure it is not damaged. If any damage is found, **DO NOT CONTINUE INSTALLATION** of this product. Contact a qualified person(s) for repair.

### 3.1 Insert Mounting Frame



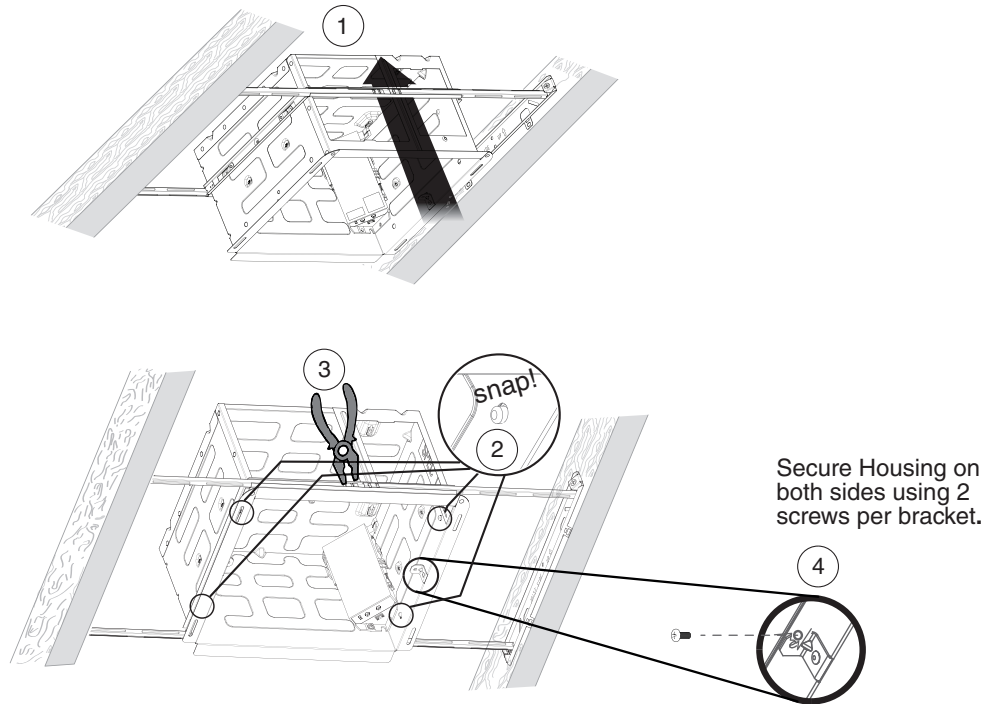
### 3.2 Secure Mounting Frame



## New Construction/Retrofit Installation

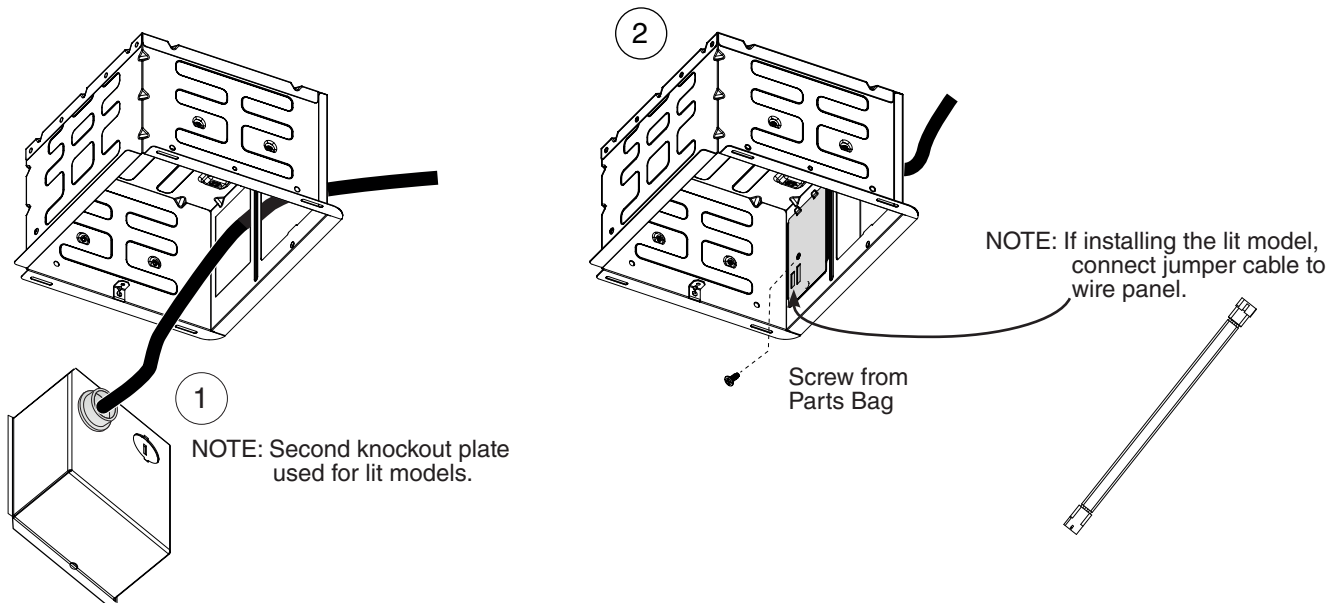
### 4 Snap-in and Secure Housing

Position Housing between joists and crimp channel on both sides of Mounting Frame to lock Housing in place. **Do not crimp Housing.**



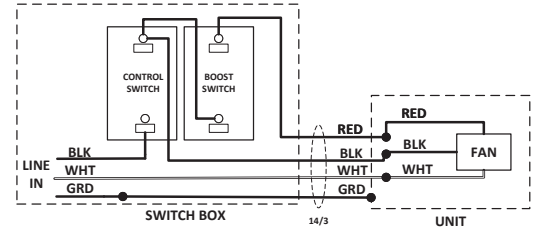
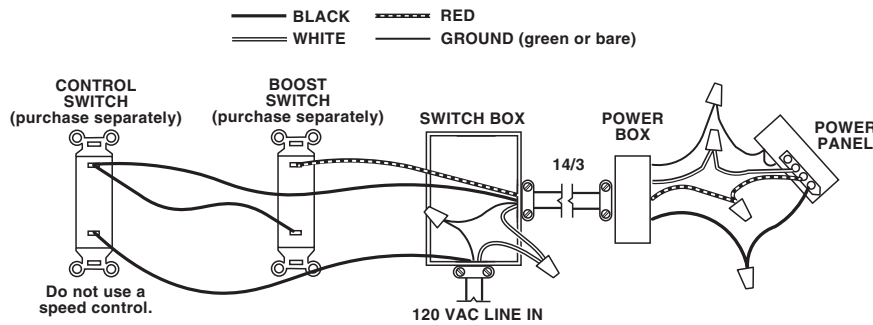
### 5 Insert Power Box into Housing

- 1- Run 120 VAC electrical wiring to the installation location.
- 2- Attach cable clamp to the Power Box.
- 3- Secure house wiring using cable clamp.
- 4- Connect wires on power panel to 120 VAC as shown in wiring diagram.
- 5- Assemble the Power Panel to the Power Box. Secure Power Panel using provided screw.

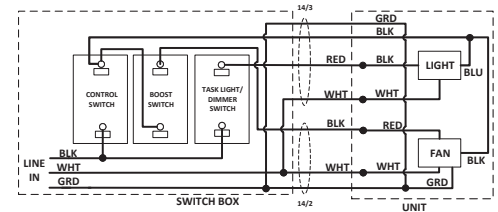
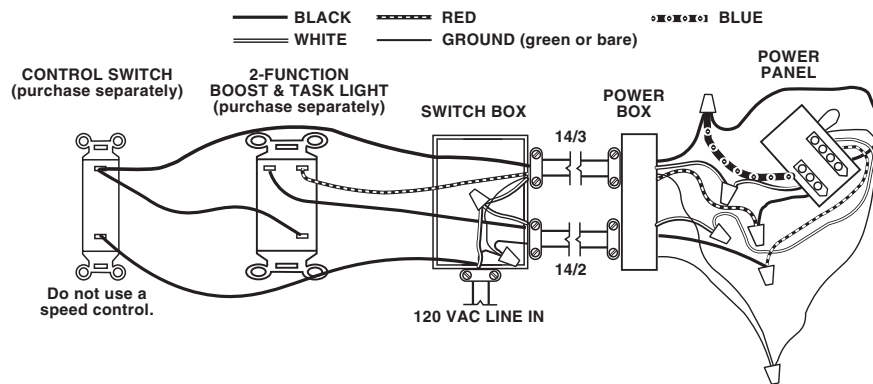


## New Construction/Retrofit Installation

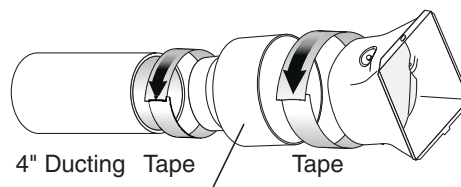
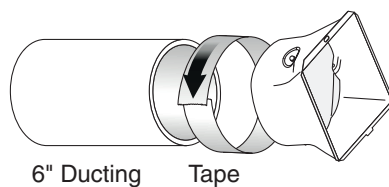
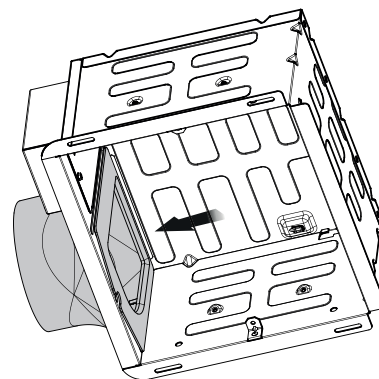
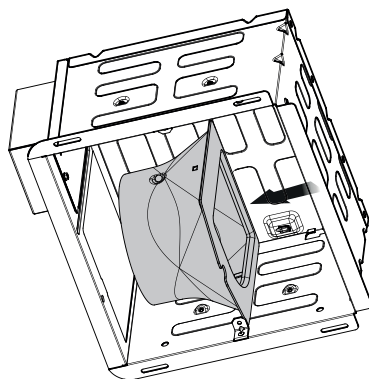
### PTE511RK - PTE1115RK



### PTEL511RK - PTEL1115RK



## 6 Insert Duct Connector and Attach Ducting

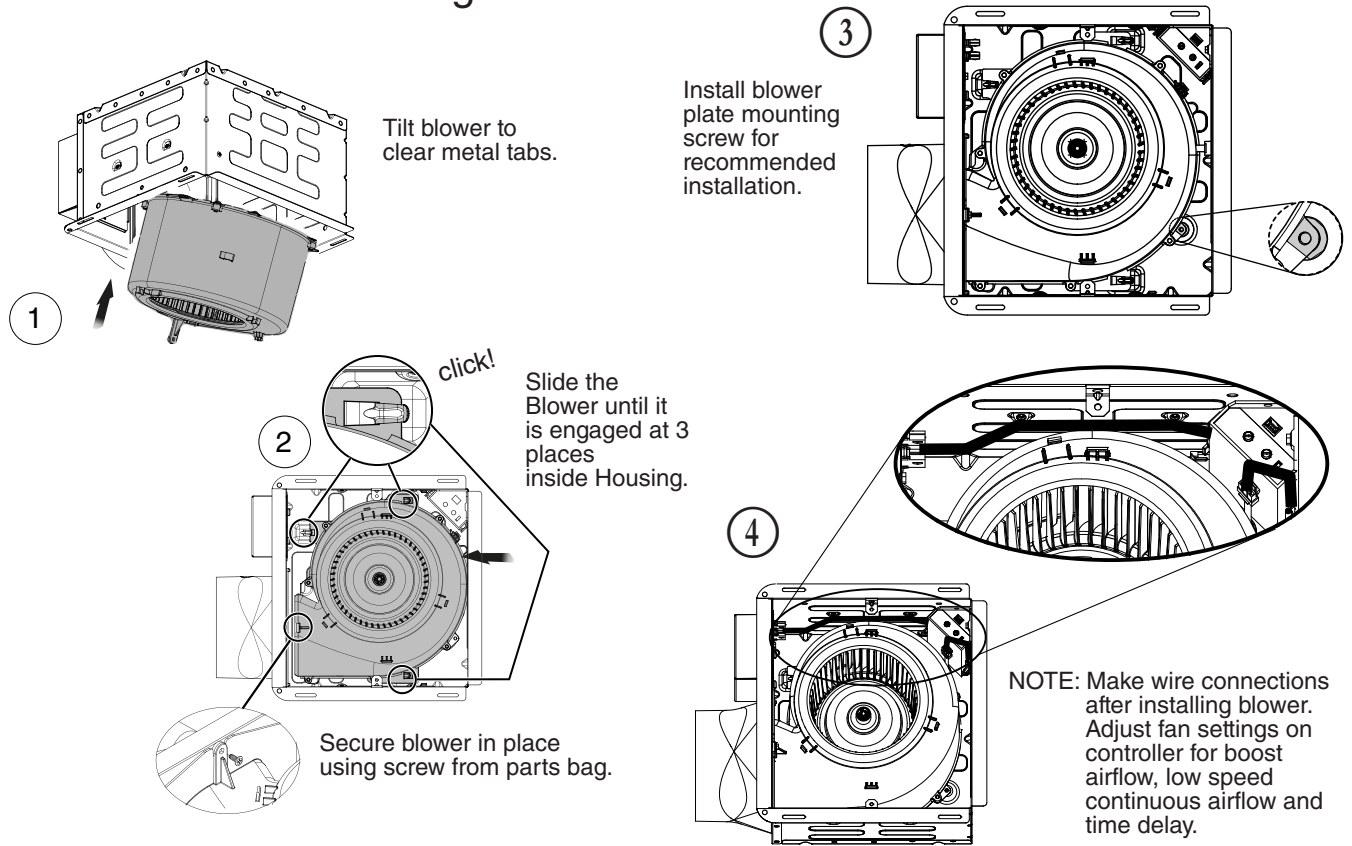


NOTE: 6" duct connector provided with 110-130-150 Selectable CFM models PTE1115RK and PTEL1115RK.

NOTE: 6" duct connector and 4" reducer provided with 50-80-110 Selectable CFM models PTE511RK and PTEL511RK.

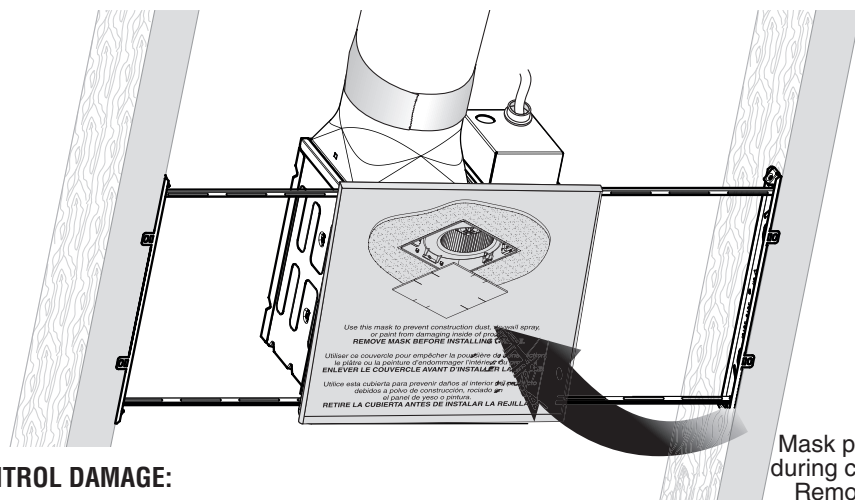
## New Construction/Retrofit Installation

### 7 Insert Blower in Housing



### 8 Insert Mask and Finish Ceiling

- Install ceiling material.
- Cut out around Housing.



### CAUTION ⚠ ⚡

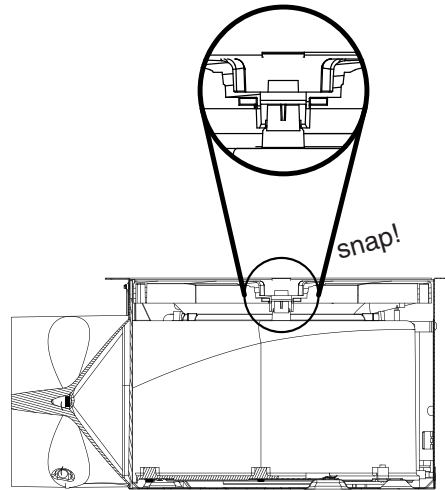
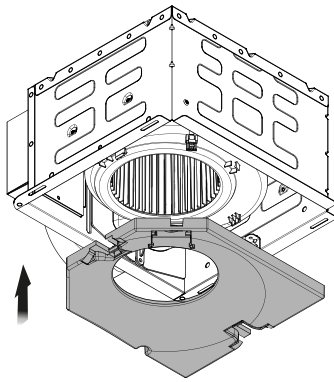
#### IN ORDER TO PREVENT MOTOR/CONTROL DAMAGE:

If the blower was unplugged, power must be disconnected (see page 2, WARNING item 5) before inserting motor plugs into control assembly.

## New Construction/Retrofit Installation

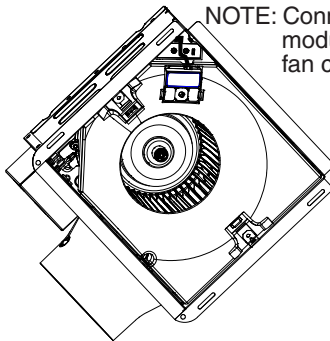
### 9 Insert Muffler Plate in the Housing

- Insert the Muffler Plate in the Housing. There are two points that muffler plate snaps in.
- If using the Humidity Sensing Module (accessory) - PES (purchase separately), connect the module and snap into the Muffler Plate.

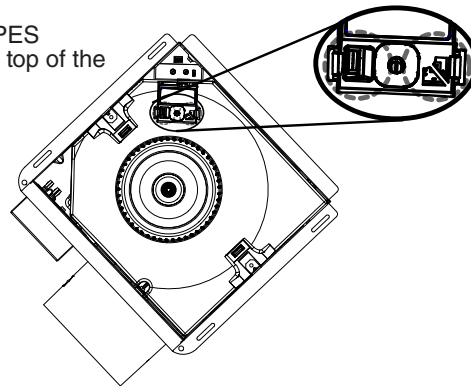


NOTE: To remove the muffler plate, use a flat head screwdriver to slide between muffler and blower snap-in features to easily detach the muffler plate from the blower.

PES



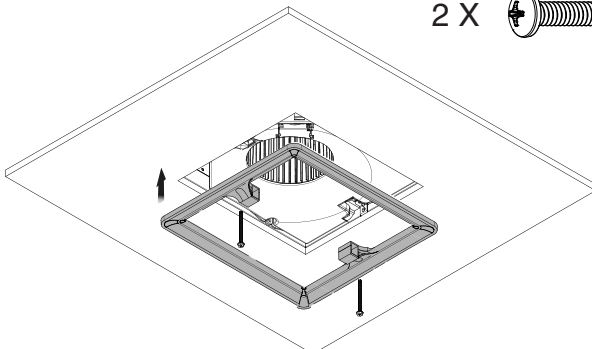
NOTE: Connect the PES module to the top of the fan controller.



NOTE: Remove the two small orange stickers.

### 10 Install the Trim Cover

2 X 



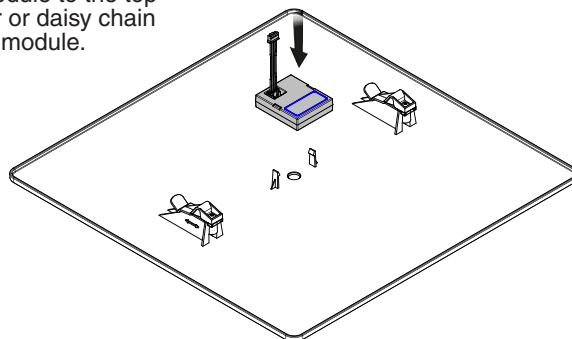
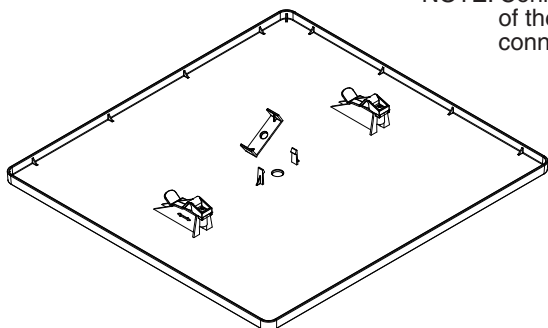
NOTE: Install trim cover using a power screwdriver.

## New Construction/Retrofit Installation

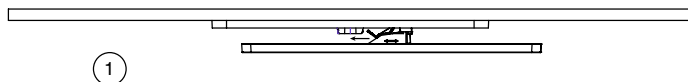
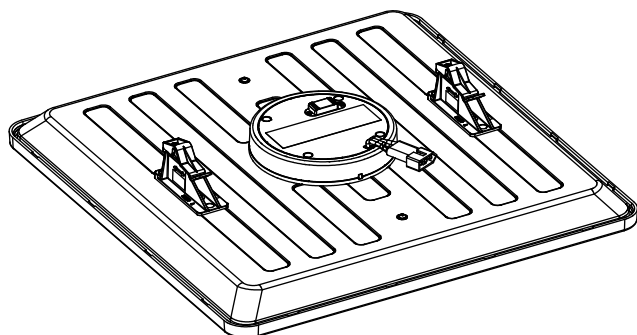
### 11 Install Grille

- Slide the grille onto the Trim Cover.
- If using the Motion Sensing Module (accessory) - PEM (purchase separately) remove the cap. Connect the module and snap to the back of the non-lit Grille. NOTE: this module is not compatible with the fan/light models PTEL511RK and PTEL1115RK. A motion wall control would need to be used for fan/light models.

NOTE: Connect motion module to the top of the fan controller or daisy chain connecting to PES module.



NOTE: For lit models, connect jumper wire to back side of the grille.



1



2

**WARNING** ⚡ 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.

## Operation

### To Turn Fan ON

Turn the control switch ON.

It is normal for this ventilation fan to take approximately 5-10 seconds to start running after it is turned on.

- Fan will run at the certified airflow rate if the boost switch is ON.
- Fan will run at low speed continuous airflow rate if the boost switch is OFF.

### To Use Fan Time Delay Airflow Rate Change

1. Turn the control switch ON.
2. Turn the boost switch ON - fan will run at the certified airflow rate.
3. When the boost switch is turned OFF, fan will continue to run at the certified airflow rate until the user-adjustable time delay has elapsed, and then will automatically change to the low speed continuous airflow rate.

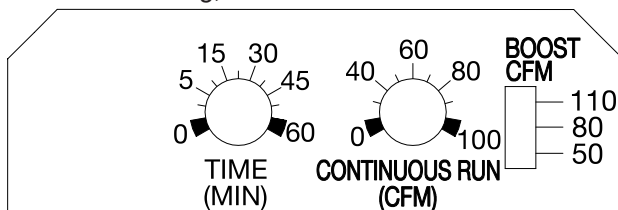
### To Set the Low Speed Continuous Airflow Rate\*

Using a small, flat-blade screwdriver, carefully rotate the CONTINUOUS RUN adjustment until the arrow points to the desired airflow rate.

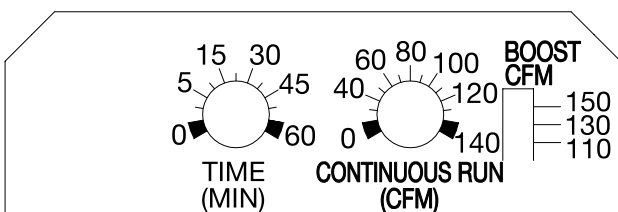
### To Set the User-Adjustable Time Delay\*

Using a small, flat-blade screwdriver, carefully rotate the TIME adjustment until the arrow points to the desired time delay, shown in minutes.

\* The user-adjustable controls are located in one corner of the Fan Housing, behind the Grille.



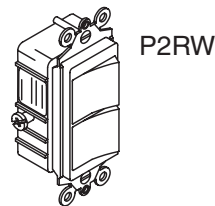
*PTE511RK/PTEL511RK User-adjustable controls*



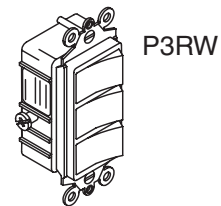
*PTE1115RK/PTEL1115RK User-adjustable controls*

### To Turn Fan OFF

Turn the control switch OFF (sold separately).



P2RW

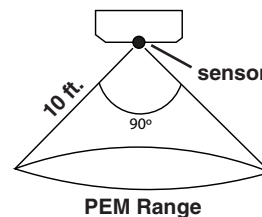


P3RW

### Lighting

Fan/light models are equipped with a main task light and a night light. The fan and task light can be operated independently using separate switches. The night light automatically turns on when the room is dark. There is a switch on the underside of the grille to deactivate the night light.

**Optional motion (PEM) or humidity sensing (PES) modules (sold separately)**



PES Range

## Cleaning and Maintenance

### CAUTION

#### IN ORDER TO PREVENT MOTOR/CONTROL DAMAGE:

DISCONNECT ELECTRIC POWER SUPPLY AND LOCK OUT SERVICE PANEL BEFORE SERVICING THE UNIT.

DO NOT remove motor plug to stop spinning motor.

Power must be disconnected (see WARNING at top left of this page) before motor plug is removed or inserted into control assembly.

#### PREVENTIVE MAINTENANCE

For quiet and efficient operation, long life and attractive appearance, regularly clean the grille and interior of unit.

#### TO CLEAN THE GRILLE

Remove the grille, use a mild detergent, such as dishwashing liquid, and dry with a soft cloth. DO NOT USE ABRASIVE CLOTHS, STEEL WOOL PADS, OR SCOURING POWDERS.

#### TO CLEAN INTERIOR OF UNIT

Once the grille is removed, vacuum interior of unit with the dusting brush attachment.

#### MAINTENANCE

The motor is permanently lubricated and never needs oiling. If the unit makes excessive or unusual noises, replace the blower assembly (includes motor and impeller).

## Troubleshooting

#### Symptom: The fan does not run.

- Check for an open fuse or circuit breaker in the building's service panel.
- Check that the two (2) plug-in connections for the Motor and the Control are seated firmly in place.
- Check that the Blower Wheel spins freely.

#### Symptom: The fan runs erratically.

- Check that the Blower Wheel is firmly attached to the Motor shaft and both spin freely.

#### Symptom: The fan seems noisy.

- Check that the back draft damper in the fan's Duct Connector pivots freely. Screws used to attach the duct to the Duct Connector may be preventing the damper from opening.
- Check that the back draft damper in the wall or roof cap pivots freely. These dampers are sometimes mistakenly painted shut or obstructed by bird and insect debris.

#### Symptom: The fan does not properly ventilate the room.

- For spot ventilation, turn both the boost switch and the control switch ON to enable the fan to run at the certified airflow rate.
- For spot ventilation followed by continuous ventilation, increase the "TIME" setting of the user-adjustable time delay.
- For continuous ventilation, increase the "CFM" setting of the low speed continuous airflow rate.