



PENNBARRY™

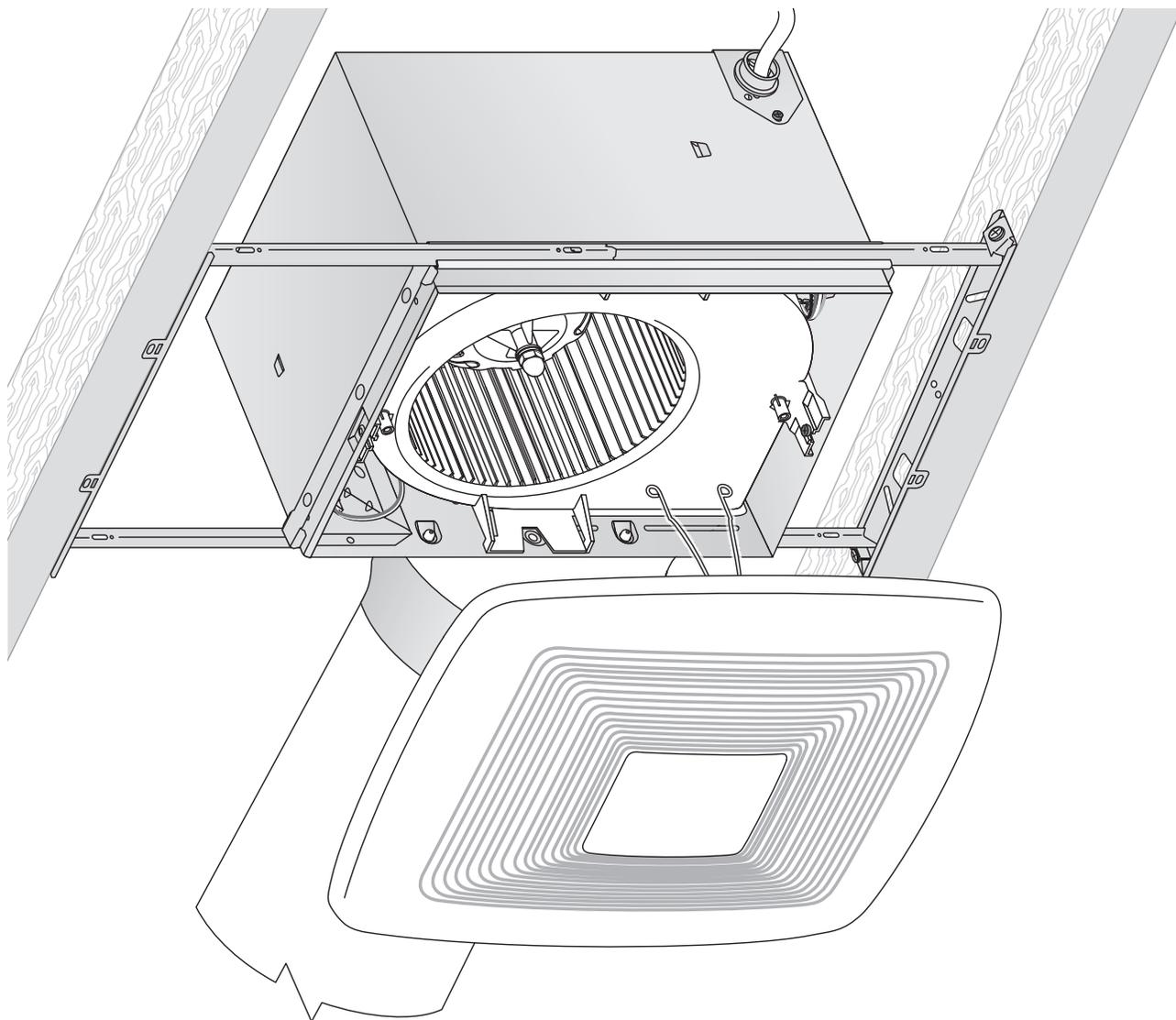
Models ZQ80-GPE ■ ZQ110-GPE

Multi-Speed  
Ventilation Fan

## INSTALLATION GUIDE

### READ AND SAVE THESE INSTRUCTIONS

Installer: leave this guide with homeowner.



**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. 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 a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent 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.
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. Use only ON/OFF switch, mechanical timer or relay-switched control.
8. Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
9. This unit must be grounded.

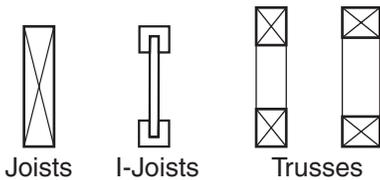
## CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. This product is designed for installation in 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.

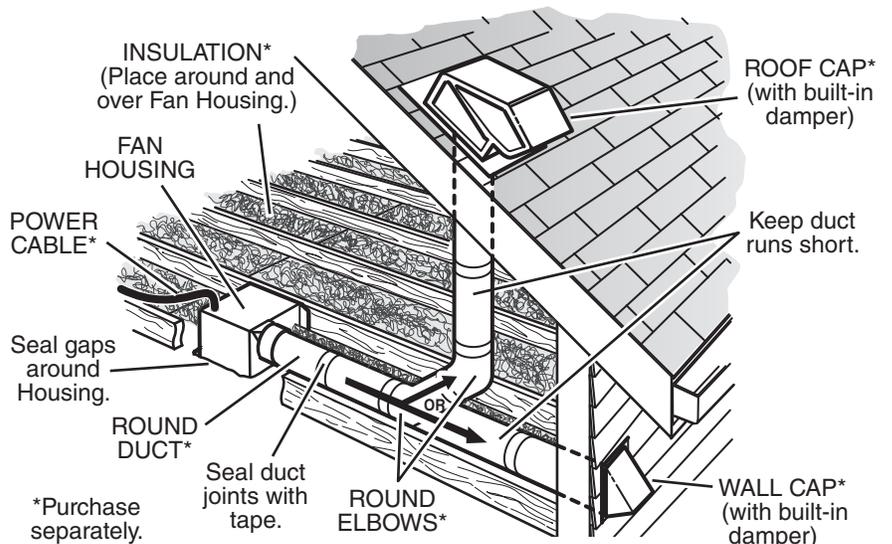


## Typical Installation

- 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.
- 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.

## New Construction Installation

### Tools needed

- Power screwdriver with a Phillips bit
- Phillips screwdriver
- Flathead screwdriver
- Pliers
- Wire insulation stripper
- Wire cutter

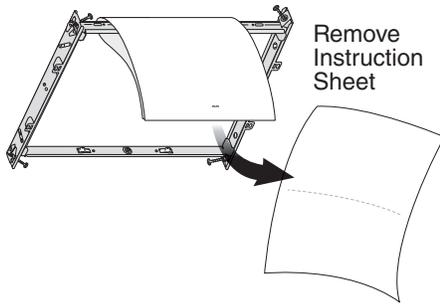
### Materials needed

- 6" round metal ducting recommended for best performance.  
Use of other ducting is acceptable but may impact performance.
- Roof cap or wall cap (built-in damper recommended)
- Tape to seal duct connections
- Electrical wiring and supplies per local code requirements

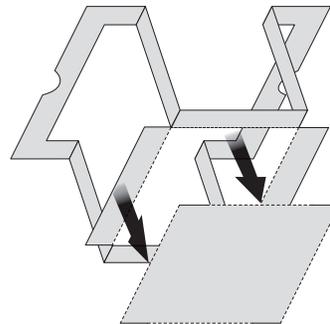
## 1 Remove Packaging



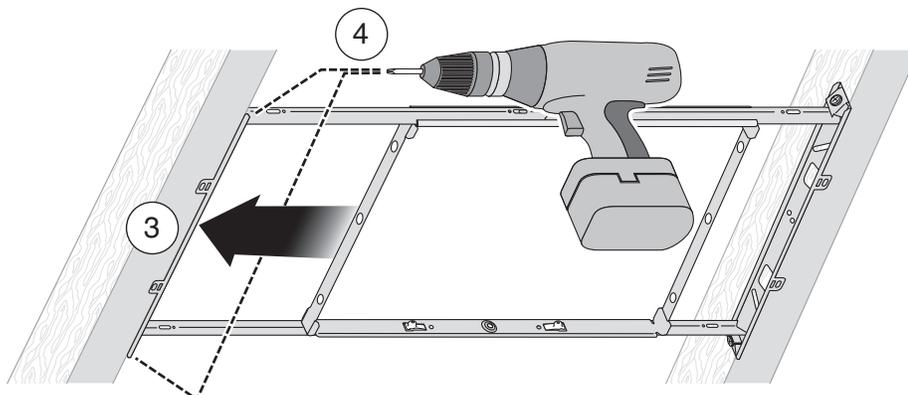
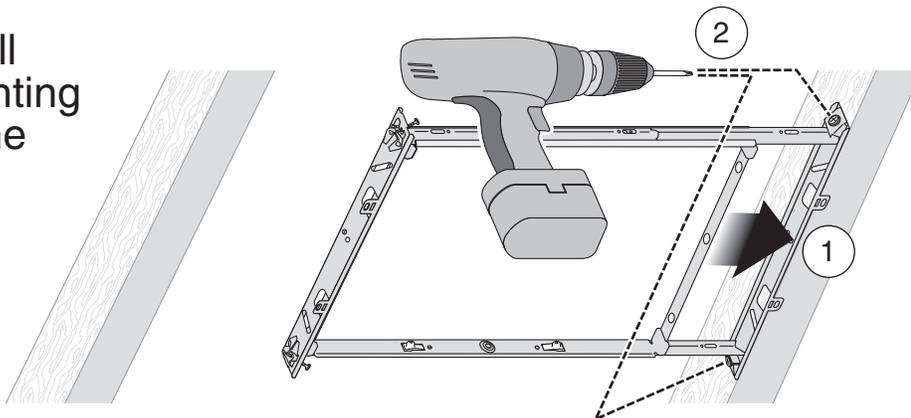
Parts Bag holds Knockout Plate and six (6) screws



Punch out Mask from packaging. See Step 6.

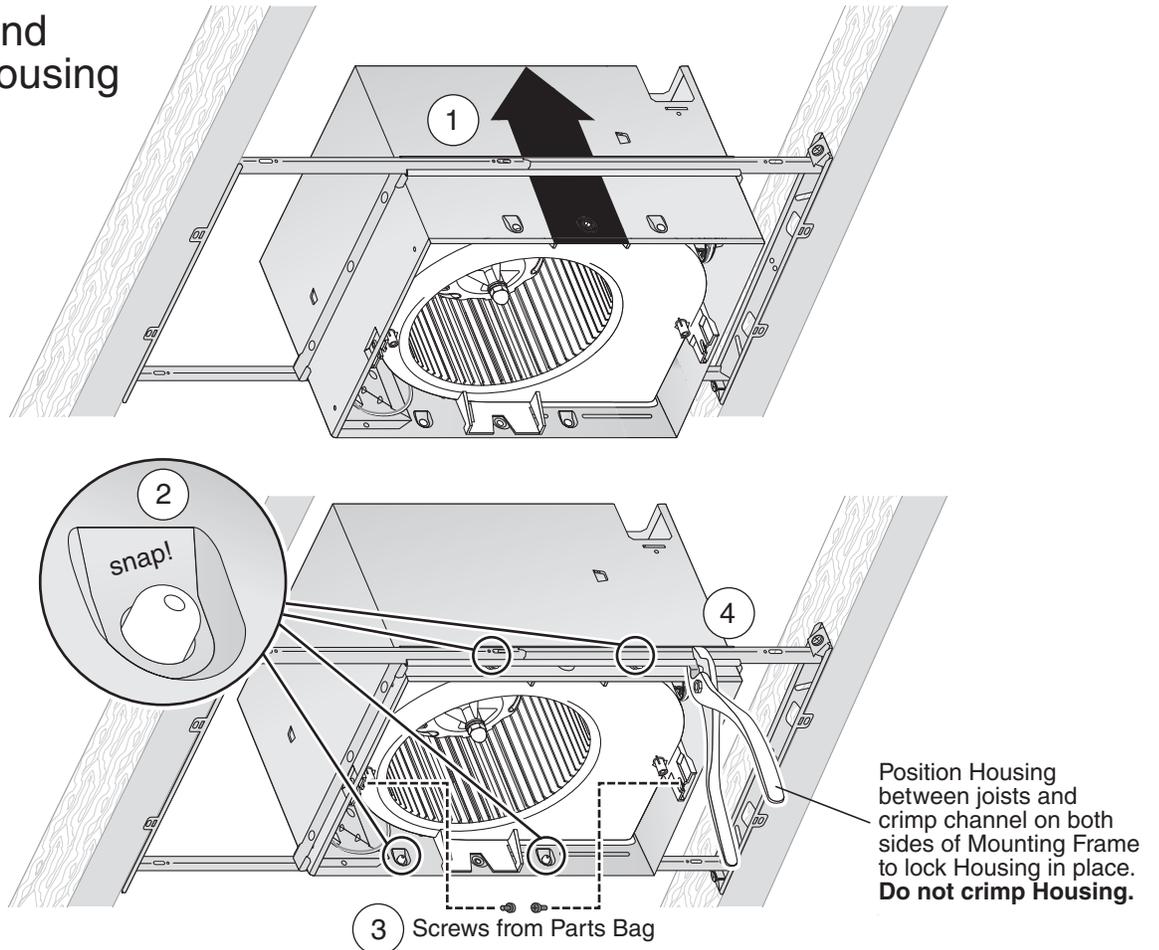


## 2 Install Mounting Frame

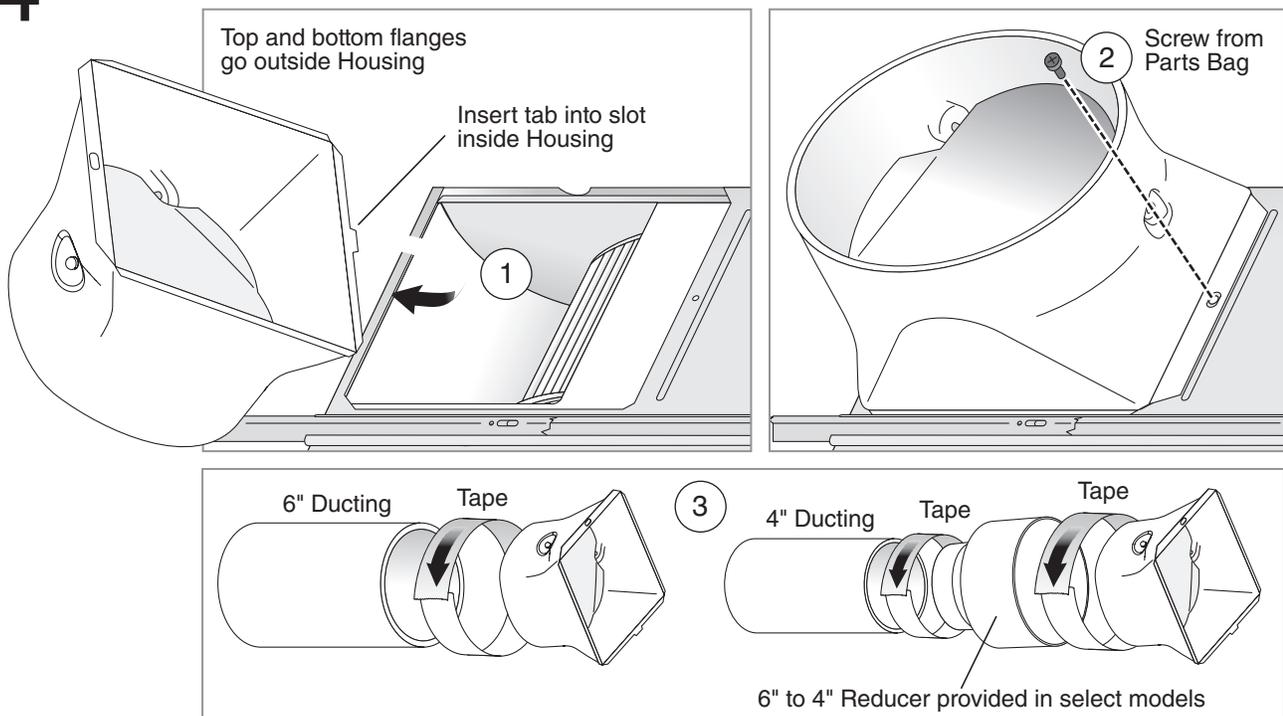


## New Construction Installation

### 3 Snap-in and Secure Housing



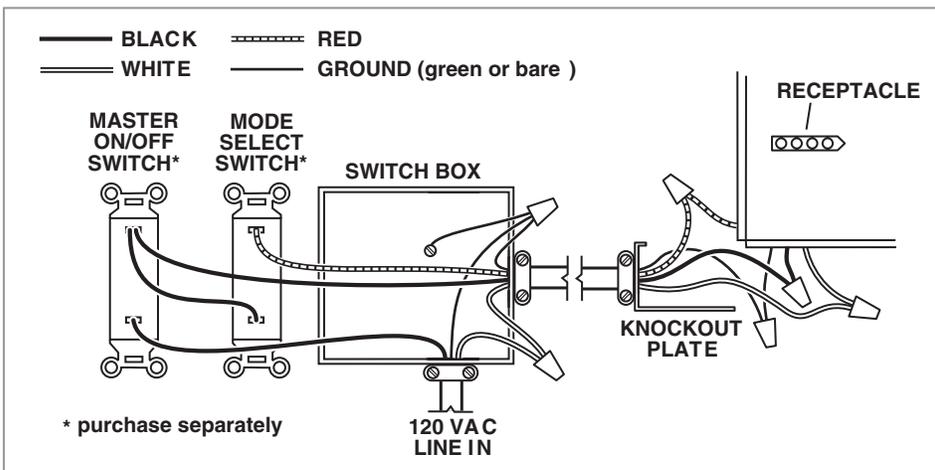
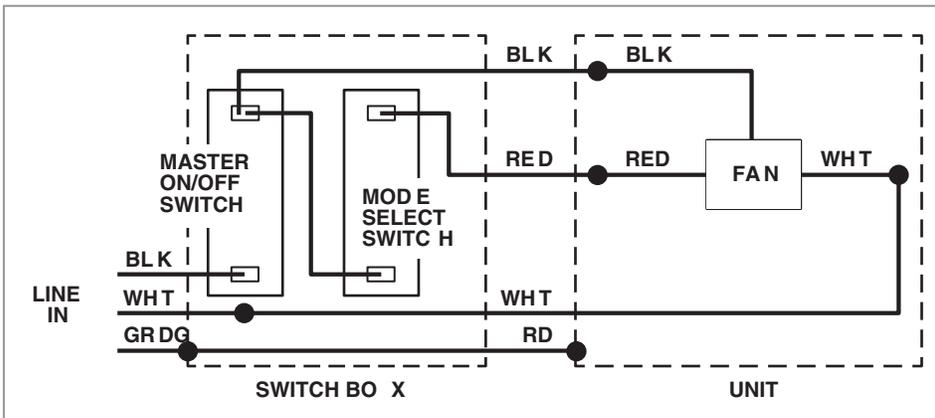
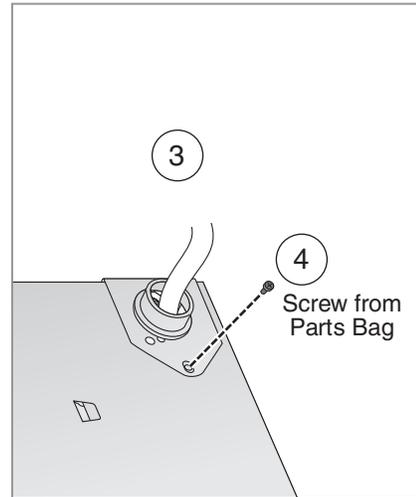
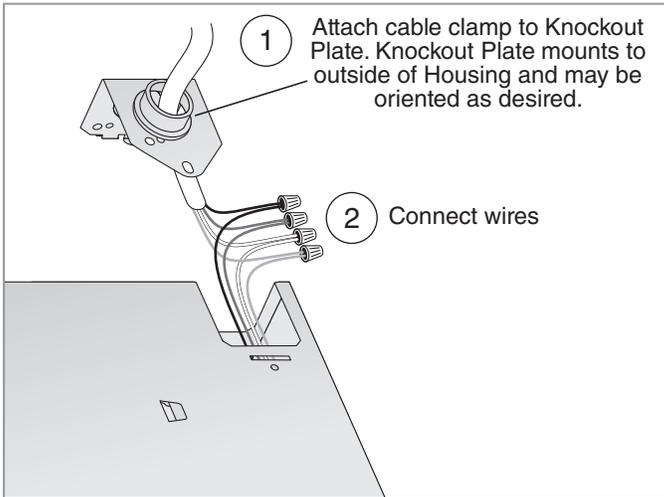
### 4 Attach Duct Connector and Ducting



# New Construction Installation

## 5 Connect Wires and Install Knockout Plate

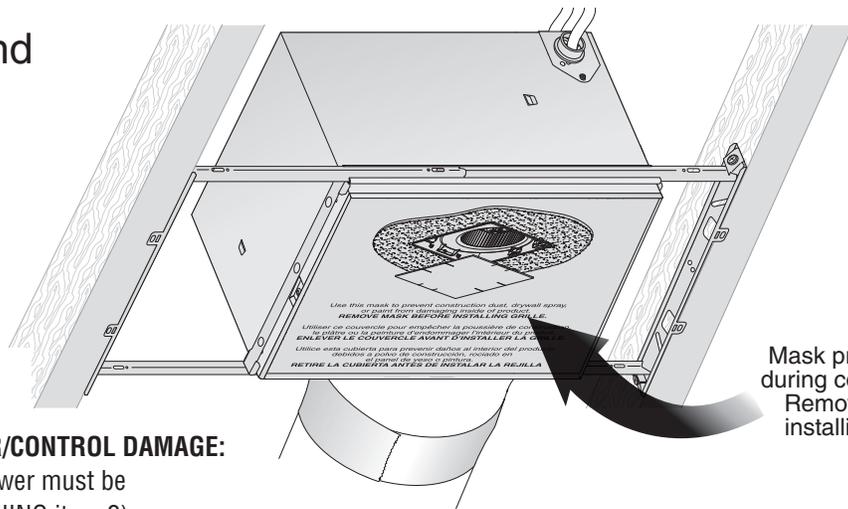
- Run 120VAC electrical wiring to the installation location.
- Use proper UL-approved connectors to secure wiring to the Knockout Plate provided in Parts Bag.
- Connect wires as shown in wiring diagram.



## New Construction Installation

### 6 Insert Mask and Finish Ceiling

- Install ceiling material.
- Cut out around Housing.



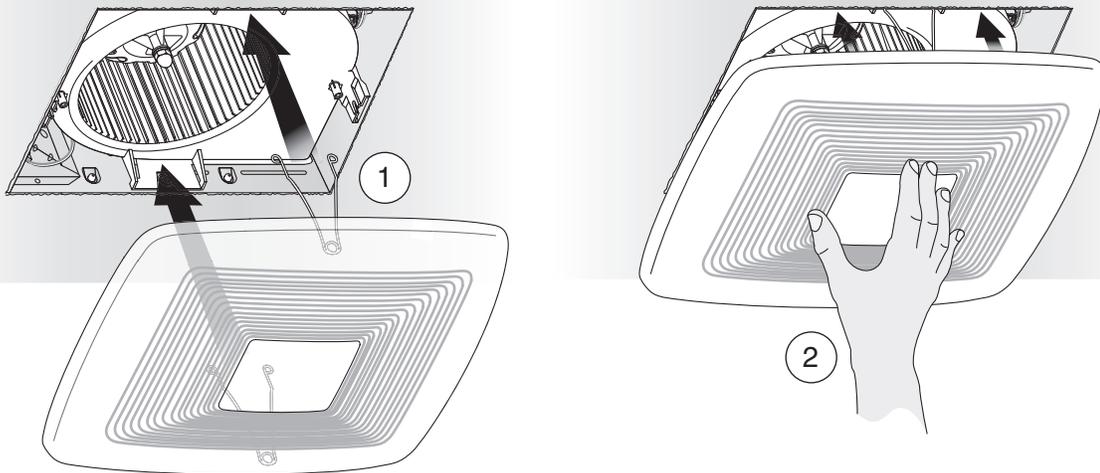
Mask protects unit during construction. Remove before installing Grille.

### CAUTION

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

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

### 7 Install Grille



See Page 12 for Operations, Cleaning and Maintenance, and Troubleshooting.

# Retrofit Installation

## Tools needed

- Power screwdriver with a Phillips bit
- Phillips screwdriver
- Flathead screwdriver
- Pliers
- Wire insulation stripper
- Wire cutter
- Ruler
- Pencil
- Drywall saw
- Claw hammer or pry bar
- Utility knife

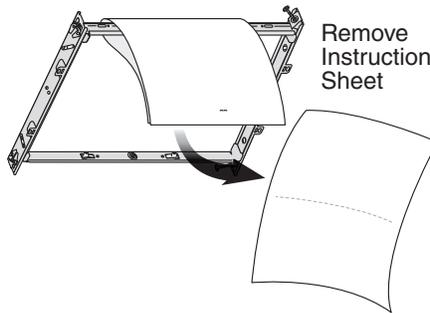
## Materials needed

- Tape to seal duct connections
- Existing rigid duct will require the addition of a short length of flexible duct
- Electrical wiring and supplies per local code requirements

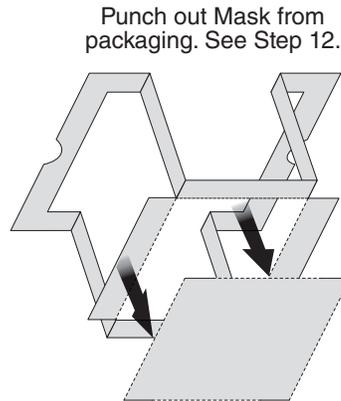
## 1 Remove Packaging



Parts Bag holds Knockout Plate and six (6) screws



Remove Instruction Sheet



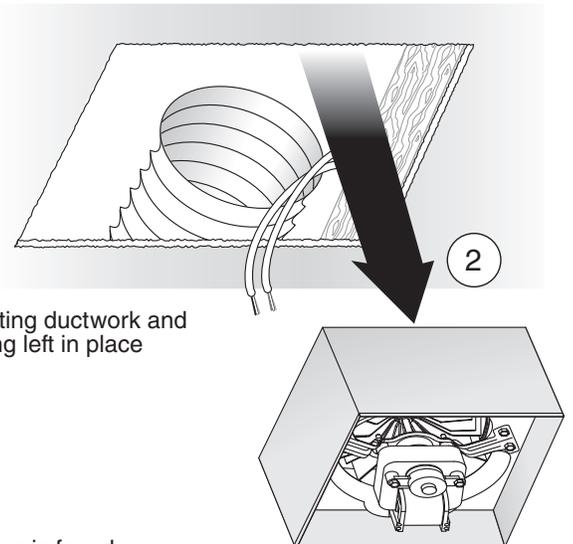
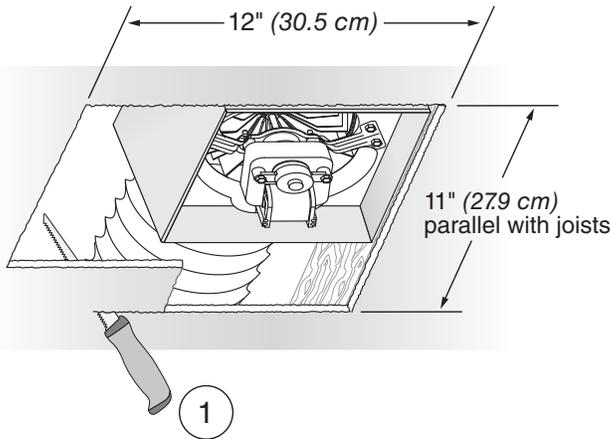
Punch out Mask from packaging. See Step 12.

## 2 Switch Off Power

### WARNING

Before removing existing fan, 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 Enlarge Ceiling Opening and Remove Existing Fan



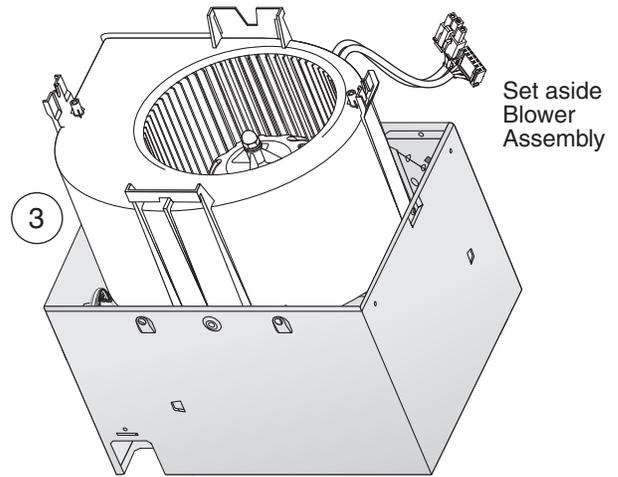
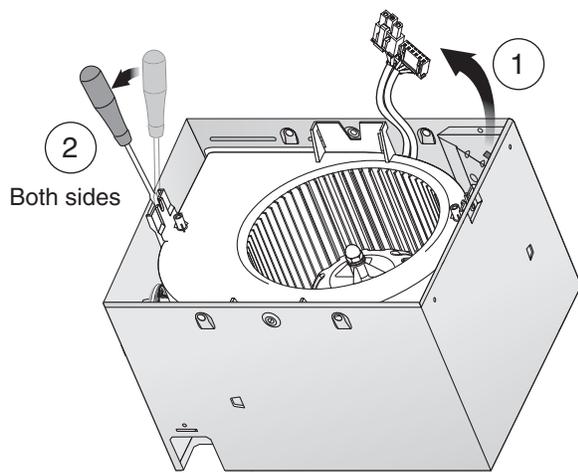
Existing ductwork and wiring left in place

## 4 Examine Wiring

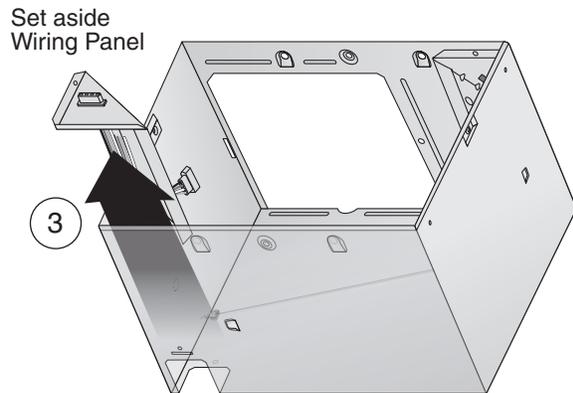
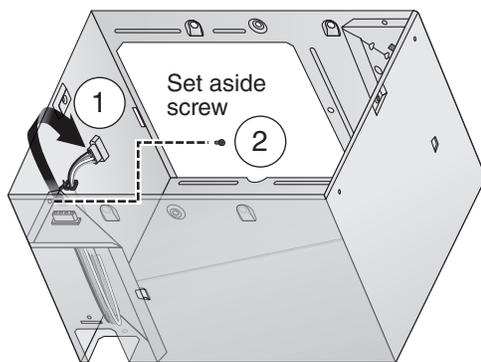
Examine the existing wiring to make sure it is not damaged. If any damage is found, **DO NOT CONTINUE INSTALLATION** of this product. Contact a qualified person(s) for repair.

## Retrofit Installation

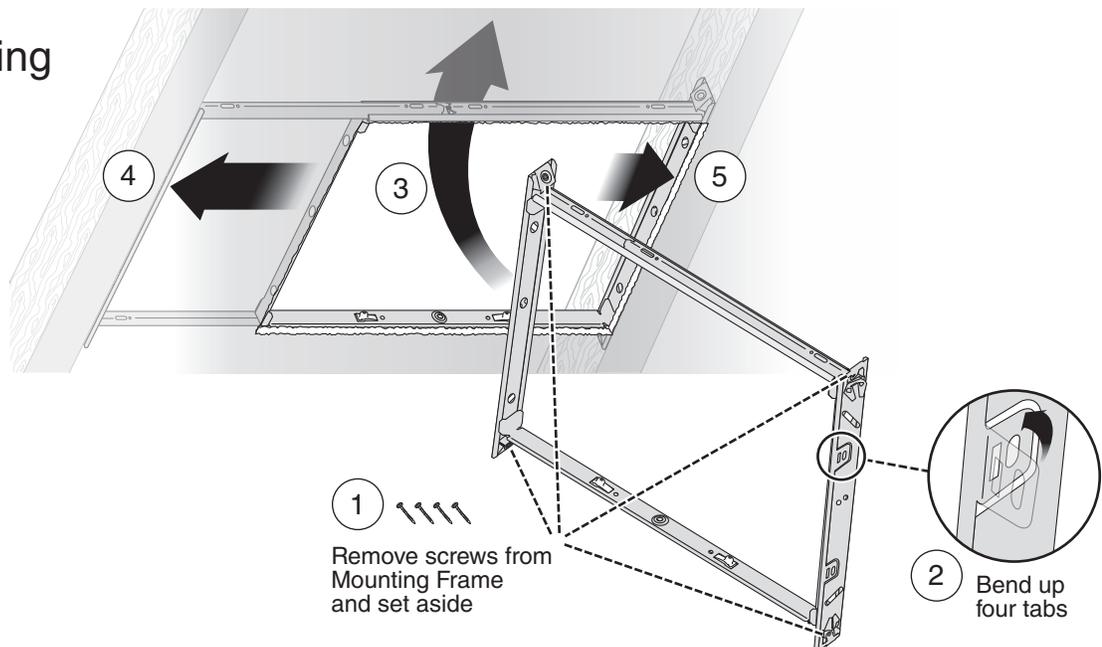
### 5 Remove Blower Assembly



### 6 Remove Wiring Panel

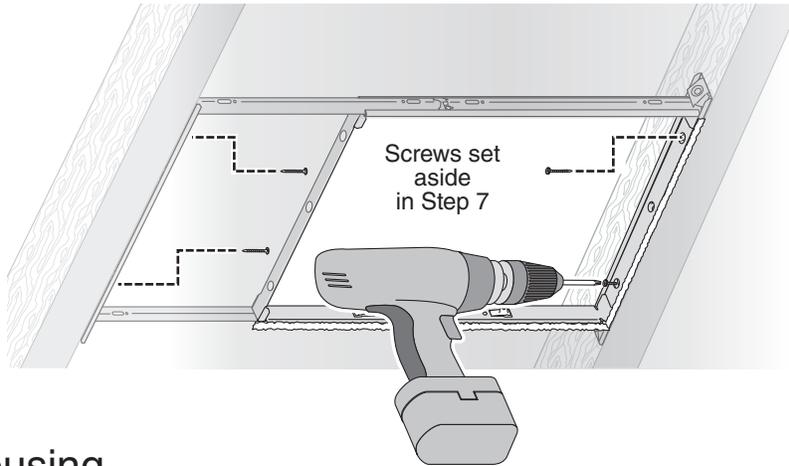


### 7 Insert Mounting Frame

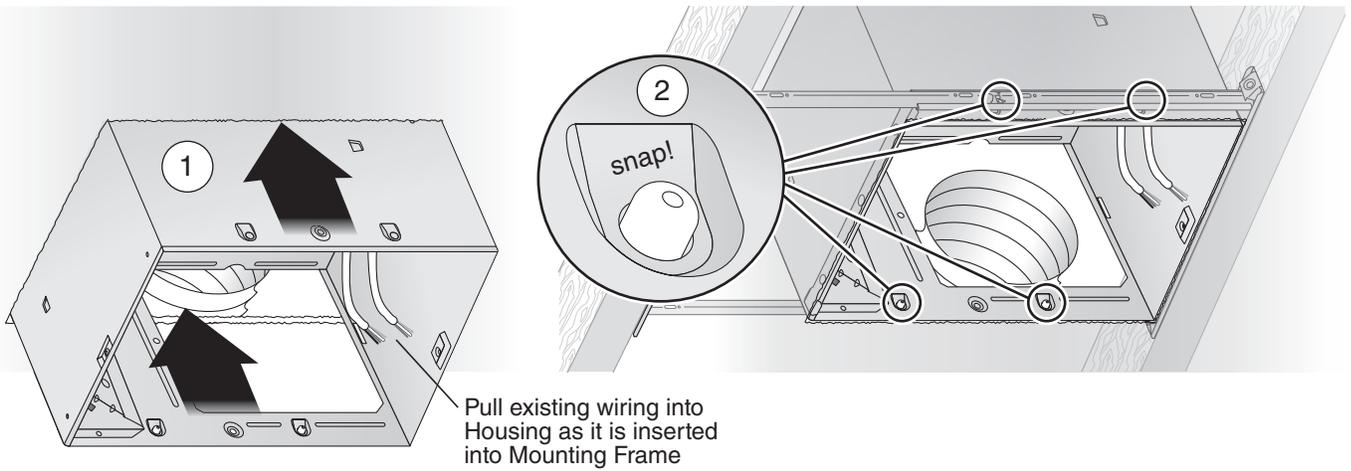


## Retrofit Installation

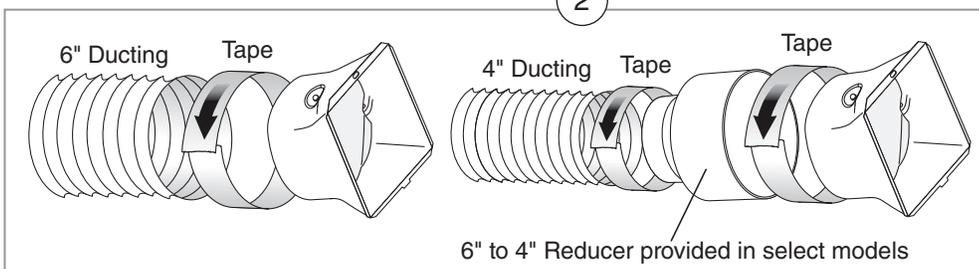
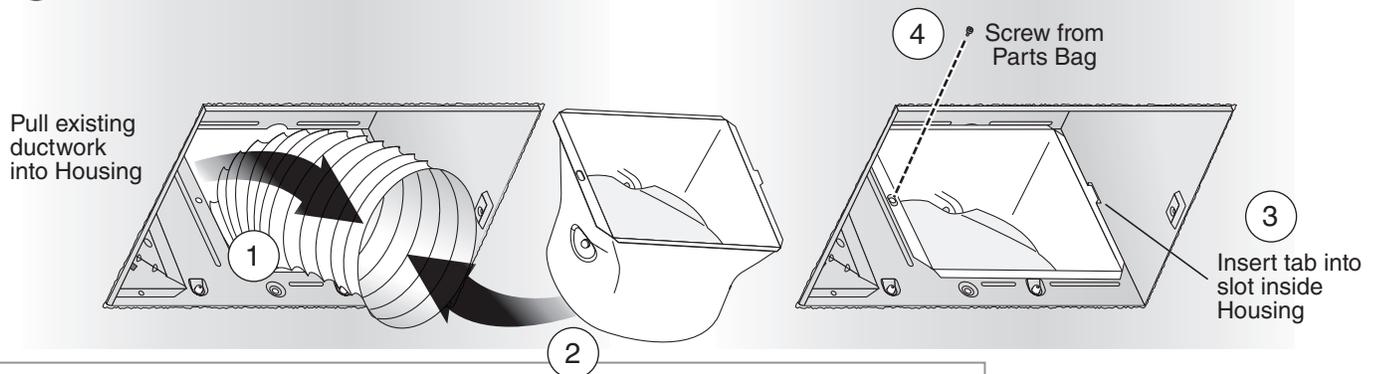
### 8 Secure Mounting Frame



### 9 Snap-in Housing



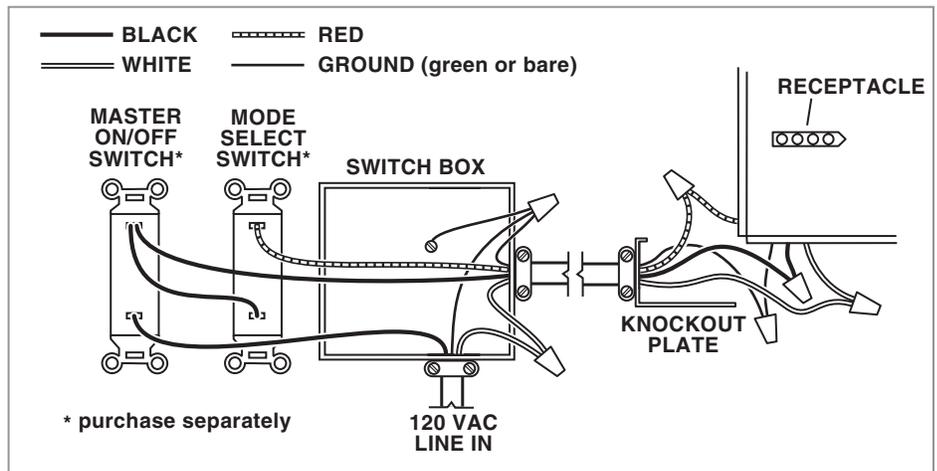
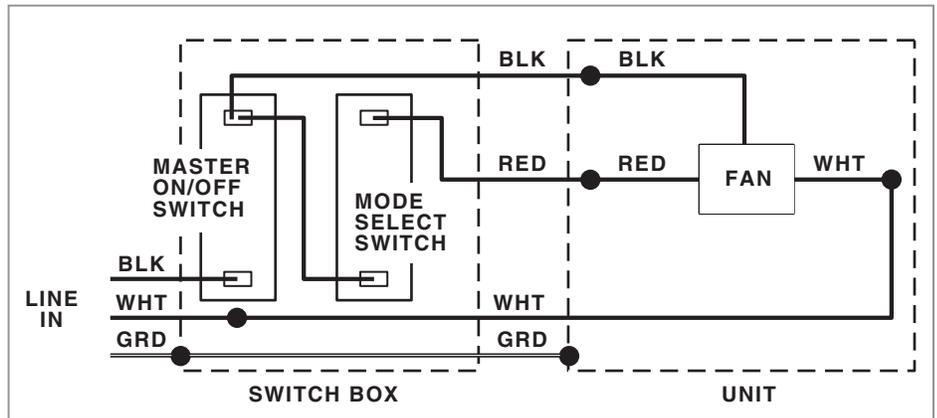
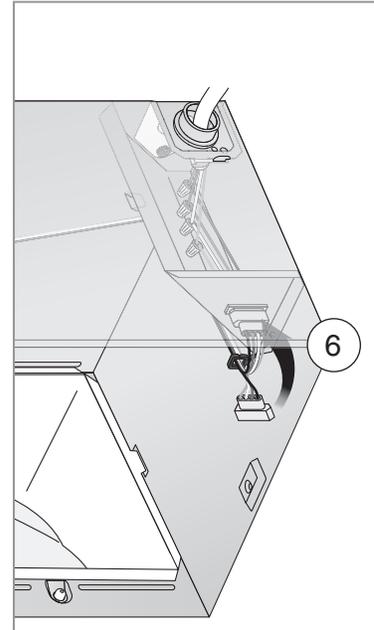
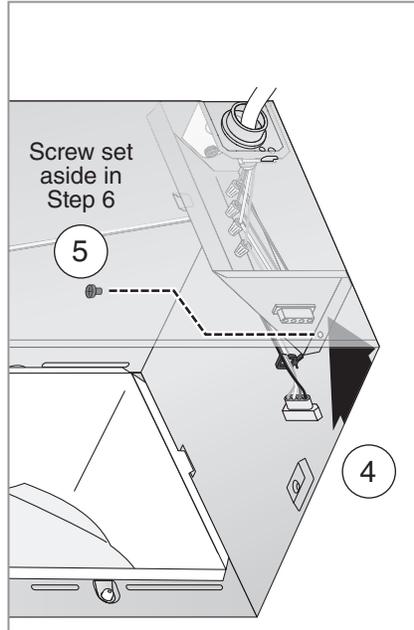
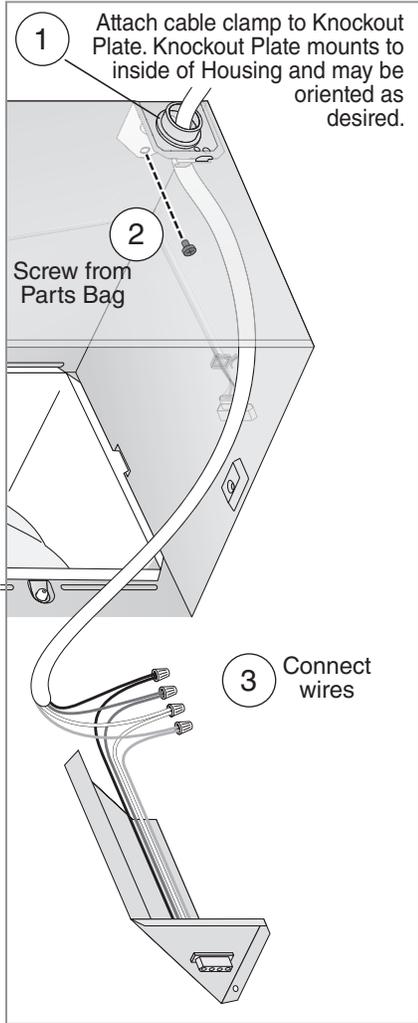
### 10 Attach Ducting and Duct Connector



# Retrofit Installation

## 11 Install Knockout Plate, Connect Wires and Reinstall Wiring Panel

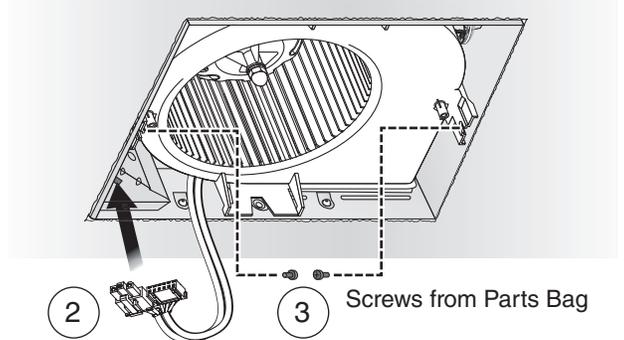
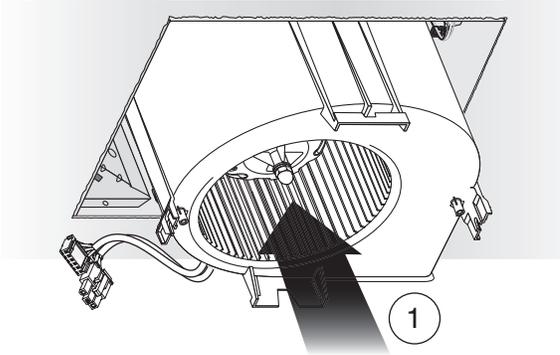
- Use proper UL-approved connectors to secure wiring to the Knockout Plate provided in Parts Bag.
- Connect wires as shown in wiring diagram.



## Retrofit Installation

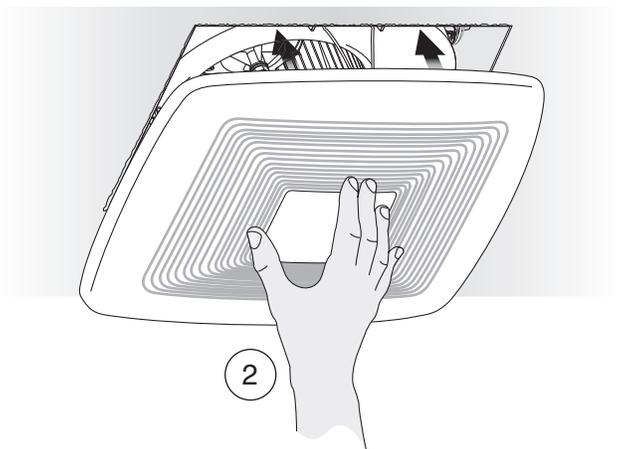
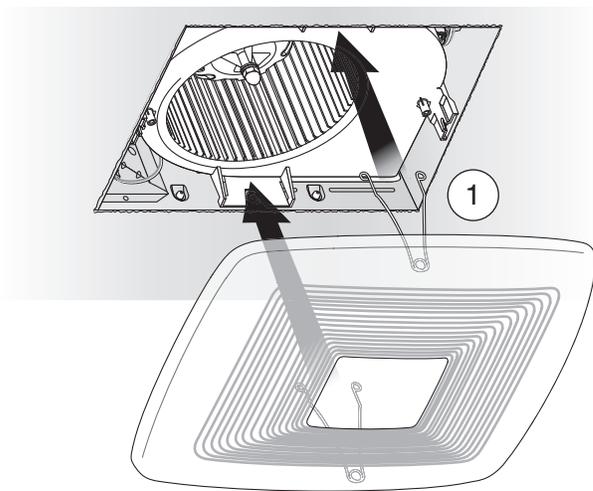
### 12 Reinsert and Secure Blower Assembly

**CAUTION** ⚠ ⚡ **IN ORDER TO PREVENT MOTOR/CONTROL DAMAGE:**  
Power must be disconnected (see page 2, WARNING item 2) before inserting motor plugs into control assembly.



If ceiling repairs are needed, place Mask in Housing after Blower Assembly is secured. See New Construction Installation Step 6. Remove Mask before installing Grille.

### 13 Install Grille



**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 master switch ON.

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

- Fan will run at the certified airflow rate if the mode select switch is ON.
- Fan will run at the user-adjustable airflow rate if the mode select switch is OFF.

### To Use Fan Time Delay Airflow Rate Change

1. Turn the master switch ON.
2. Turn the mode select switch ON - fan will run at the certified airflow rate.
3. When the mode select 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 user-adjustable airflow rate.

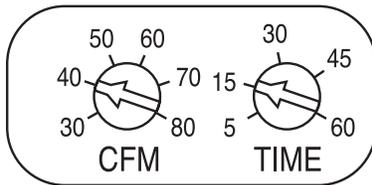
### To Set the User-Adjustable Airflow Rate\*

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

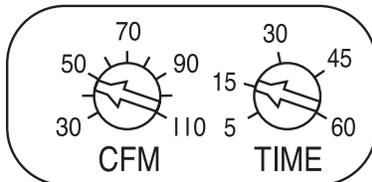
### To Set the User-Adjustable Time Delay\*

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.



ZQ80-GPE User-adjustable controls



ZQ110-GPE User-adjustable controls

## Cleaning and Maintenance

### CAUTION

**IN ORDER TO PREVENT MOTOR/CONTROL DAMAGE:**  
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.

### To Clean

For quiet and efficient operation, long life and attractive appearance, remove Grille and vacuum interior of unit with a dusting brush attachment.

The Motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noises, replace the Control Assembly and Motor.

## 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 master switch and the mode select 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 user-adjustable airflow rate.



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