

BATHOLOGY

rediscover bathing

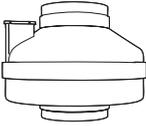
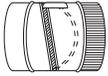


A t m o s p h e r i c 310

B a t h V e n t i l a t i o n

Installation and Operation Manual

Components

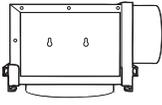
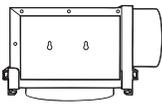
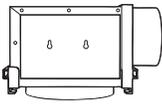
		Spec Page	Install Page
Fan			
A		1x 100 CFM Exhaust Fan, 4"	6
		1x Mounting Bracket	
		3x Vibration Isolation Grommet	6 - 8
		4x 1" Screws	
		3x 7/16" Screws	
Electronic Time Control			
C		1x Electronic Time Control	13
		2x Mounting Screws	
		1x Timer Face (White) (Pre-installed)	13 - 15
		1x Timer Face (Ivory)	
		1x Timer Face (Almond)	
Damper			
E		1x Damper, 4"	16
		3x Damper Screws	16
Duct			
H		1x Flex Duct, 4"x25'	18
			18 - 19
Mastic and Duct Ties			
K		1x Mastic Tube, Net Contents: 1/12 Gallon	18
		4x Flex Duct Tie, 18"	18 - 19
		4x Flex Duct Tie, 36"	
Optional			
Slide Speed Control			
D		1x Slide Speed Control	13
		2x Mounting Screws	13 - 15
		3x Wire Nuts	

Components Continued

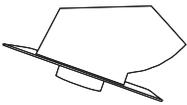
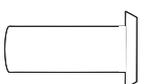
Spec
Page

Install
Page

Expansion Vent Options

		Spec Page	Install Page			
No Light						
B		1x Expansion Vent Housing, 4" duct	 4x Hanger Bars	9	9 - 12	
		1x Expansion Vent Grille				 4x 1" Screws
		 2x 3/8" Short Screws				
Halogen						
B		1x Expansion Vent Housing, 4" duct	 4x Hanger Bars	9	9 - 12	
		1x Expansion Vent Halogen Light				 4x 1" Long Screws
		1x Expansion Vent Grille				
LED						
B		1x Expansion Vent Housing, 4" duct	 4x Hanger Bars	9	9 - 12	
		1x Expansion Vent LED Light				 4x 1" Long Screws
		1x Expansion Vent Grille				

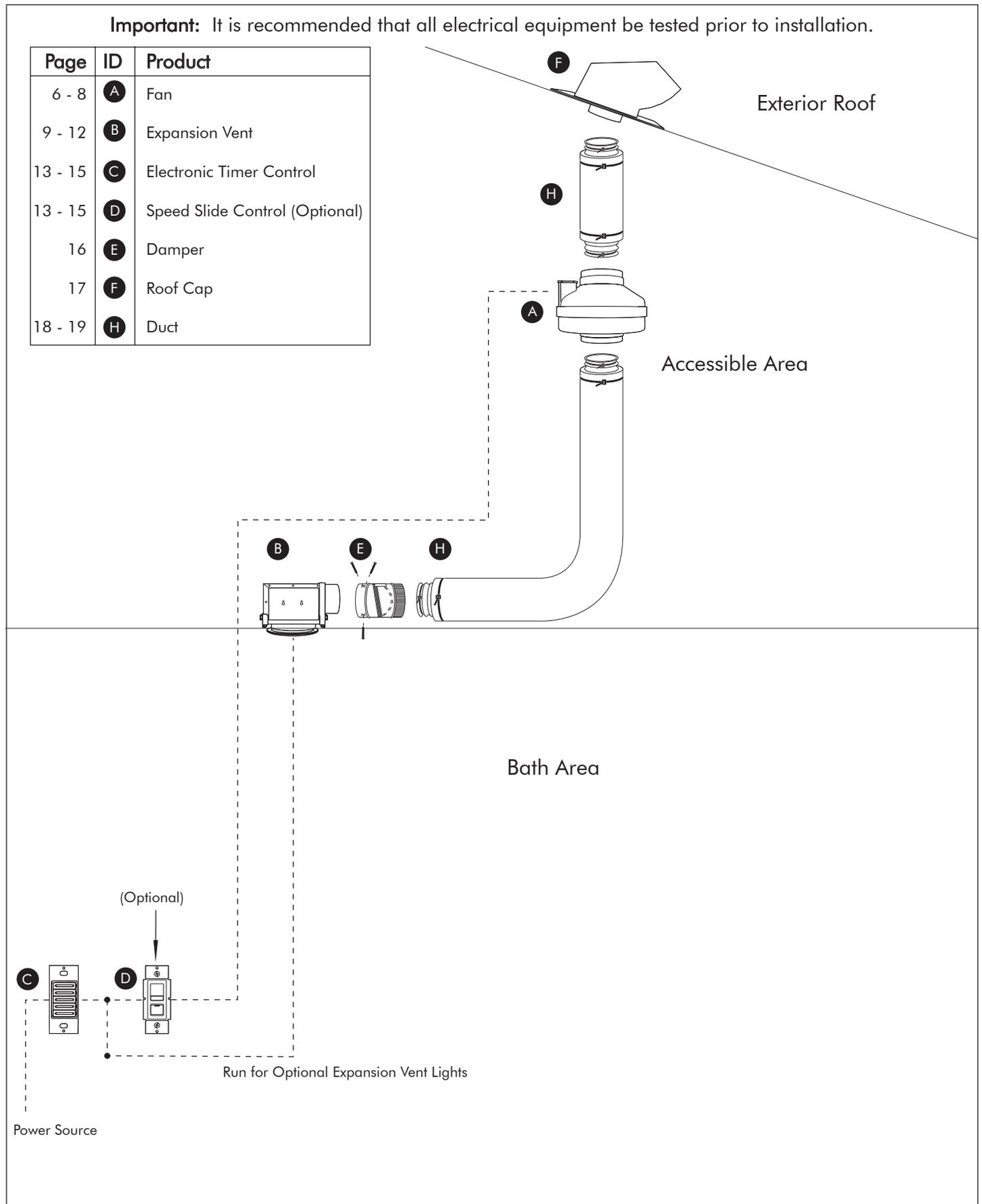
Vent Options

Roof Cap				
F		1x Roof Cap, 4"	17	17
Wall Vent				
G		1x Wall Vent, 4"	17	17

Typical Installation - Exterior Roof

Important: It is recommended that all electrical equipment be tested prior to installation.

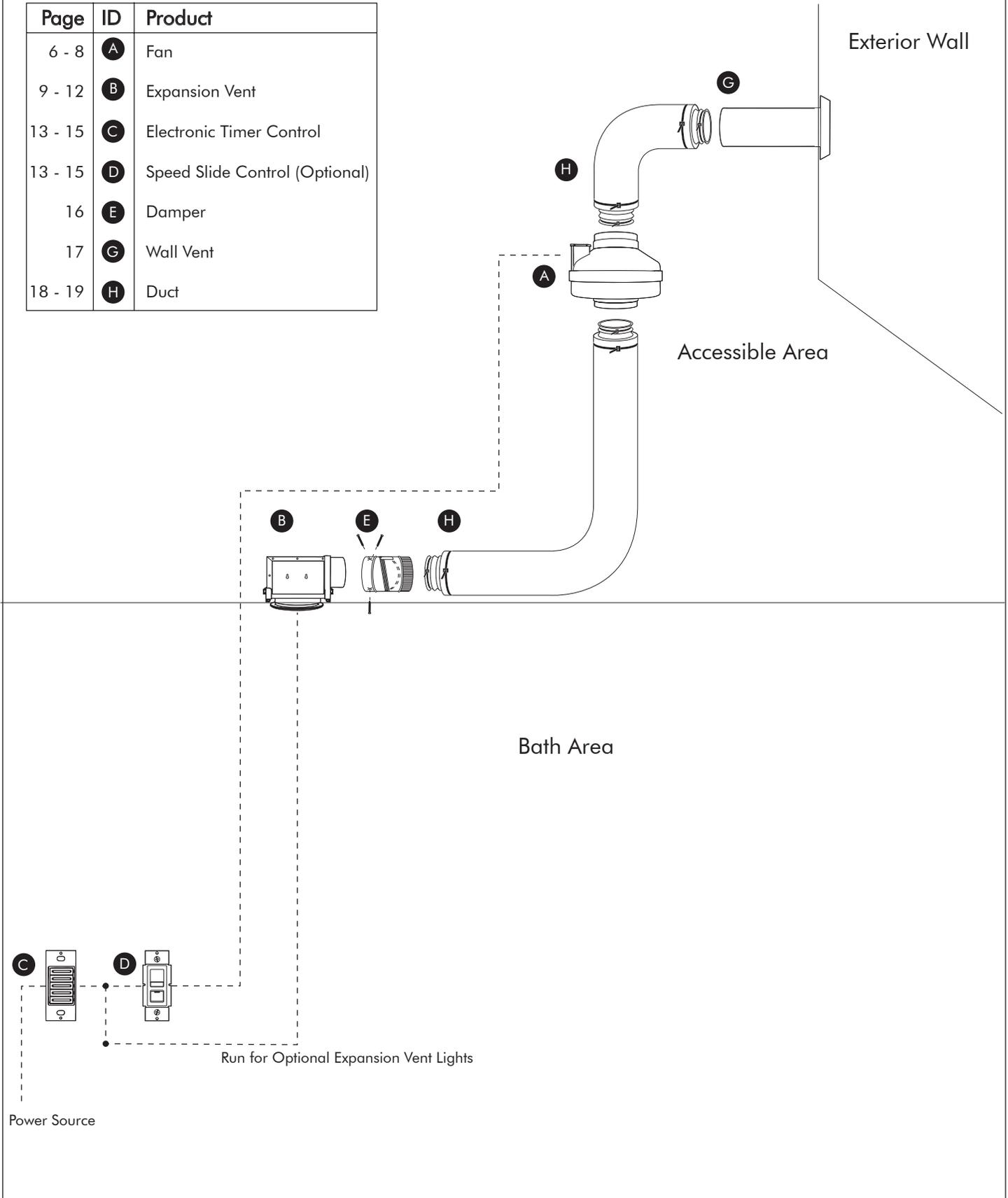
Page	ID	Product
6 - 8	A	Fan
9 - 12	B	Expansion Vent
13 - 15	C	Electronic Timer Control
13 - 15	D	Speed Slide Control (Optional)
16	E	Damper
17	F	Roof Cap
18 - 19	H	Duct



Typical Installation - Wall Exhaust

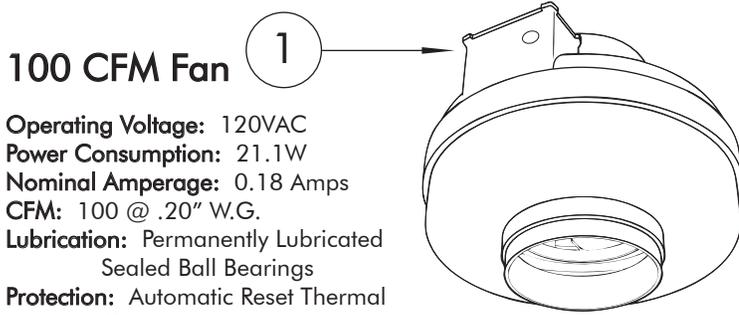
Important: It is recommended that all electrical equipment be tested prior to installation.

Page	ID	Product
6 - 8	A	Fan
9 - 12	B	Expansion Vent
13 - 15	C	Electronic Timer Control
13 - 15	D	Speed Slide Control (Optional)
16	E	Damper
17	G	Wall Vent
18 - 19	H	Duct

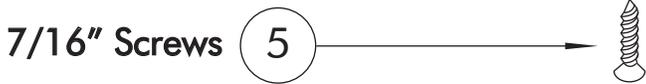
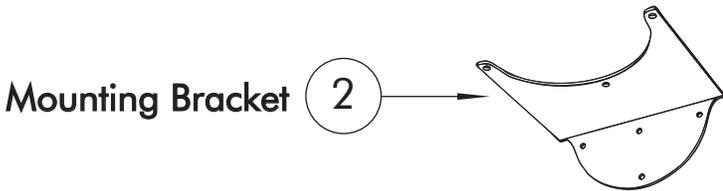


Fan Specifications and Installation

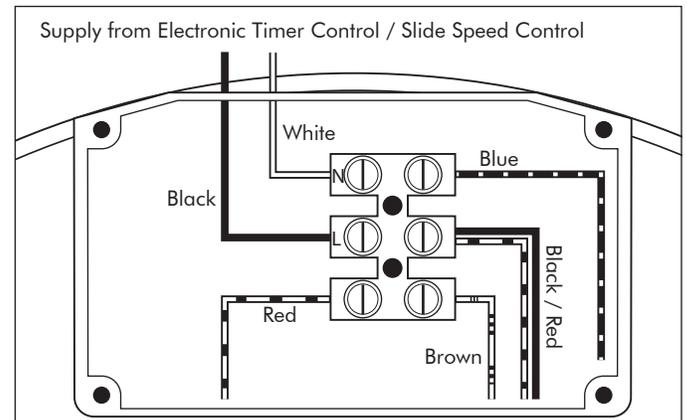
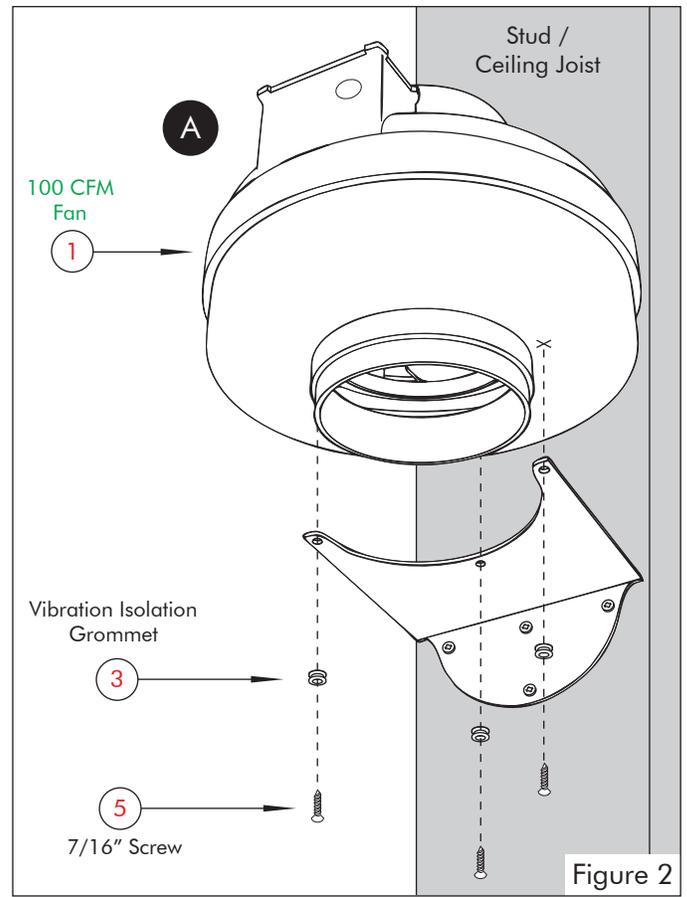
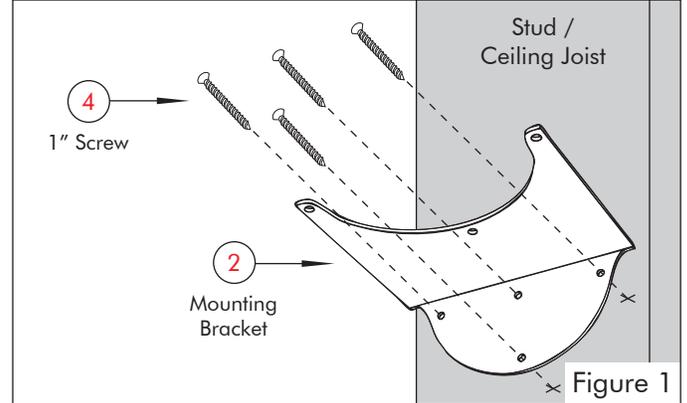
Specifications



- Operating Voltage:** 120VAC
- Power Consumption:** 21.1W
- Nominal Amperage:** 0.18 Amps
- CFM:** 100 @ .20" W.G.
- Lubrication:** Permanently Lubricated Sealed Ball Bearings
- Protection:** Automatic Reset Thermal Overload Protection
- Speed Control:** 100% Speed Controllable
- Testing:** U.L. Listed; CSA Certified
- Airstream Tolerance:** Suitable for Airstream Temperatures up to 140°F
- Dimensions:** 9-1/2" Diameter x 10" Length



Installation



Fan Installation

Installation Considerations

- **Warning:** For your safety, read and understand instructions completely before starting. Before wiring to power supply, turn off electricity at the fuse or circuit breaker box. Make sure electrical service to fan is locked in "OFF" position.
- **Note:** Prior to installation, consider the placement of the **100 CFM Fan** carefully, taking into account the location of electrical, plumbing, and other fixtures.
- **Note:** All units are suitable for use with solid-state speed controls
- **Note:** This unit has rotating parts and safety precautions should be exercised during installation, operation and maintenance.
- **Caution:** For general ventilation use only. Do not use to exhaust hazardous or explosive materials and vapors.
- **Note:** All wiring must be done in accordance with National Electrical Code and local building code.
- **Note:** The combustion air-flow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE).
- **Note:** Exhaust fans must always be vented to the outdoors.
- **Note:** Acceptable for use over a bathtub or shower.
- **Warning:** NEVER place a switch where it can be reached from a tub or shower.
- **Warning:** For installation over a tub or shower, power source must be externally switched GFCI circuit and must be installed in accordance with local and building codes.

- **Warning:** Check voltage at the fan to see if it corresponds to the motor nameplate.
- **Warning:** Guards must be installed when fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.

CAUTION For safety purposes, use safety goggles at all times.

WARNING Before wiring to power supply, turn off electricity at the fuse or circuit breaker box.

WARNING Check for piping/electrical before cutting or drilling.

WARNING If there is any risk of uninsulated electrical connections in your wall/ceiling area, use insulating gloves.

Important: It is recommended that all electrical equipment be tested prior to installation.

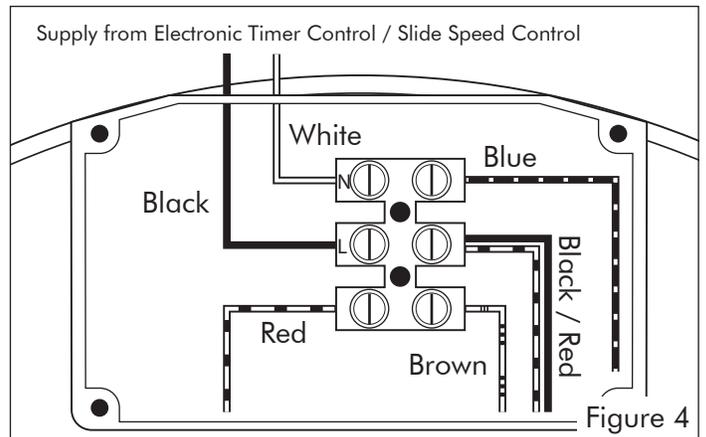
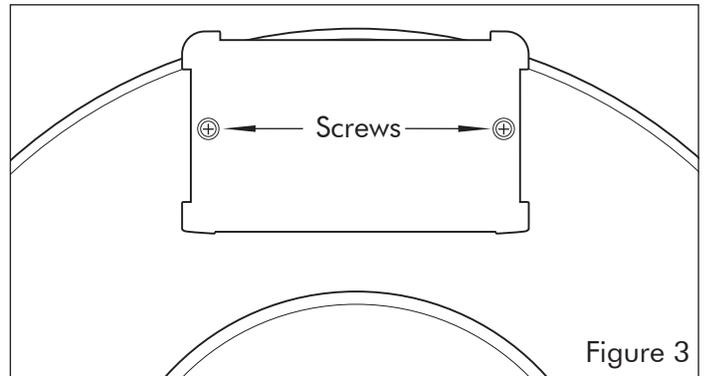
Installation

1. When selecting fan (1) mounting location, the following criteria should be considered: a) mounting to minimize noise generated by fan operation; b) service accessibility.
 - a) Mounting to minimize noise generated by fan operation: Mounting the fan (1) as far as possible from the intake point will minimize fan operating noise from being transmitted back through the duct work. Insulated flexible type duct work (recommended for all bathroom exhaust applications) will result in much quieter operation. It is recommended that a minimum 8' of insulated flexible ducting be used between any expansion vent and fan (1) for low noise level.
 - b) Service accessibility: Fan (1) location should allow sufficient access for service.

Fan Installation

- Using the 1" wood screws (4) provided, attach the fan mounting bracket (2) to a support beam at the selected location (see figure 1 on page 6). **Note:** Fan (1) mounting can be at any point along the duct and in any angle; however, vertical mounting is recommended to reduce condensation buildup in the fan (1). If a horizontal installation is necessary and condensation buildup may pose a problem, wrap insulation around the fan (1).
- Attach fan (1) to the mounting bracket (2) with the three 7/16" sheet metal screws (5) provided, making sure the wiring box is positioned for easy access (see figure 2 on page 6). **Note:** Bracket (2) is provided with rubber vibration isolation grommets (3) to prevent the transmission of sound through the structure. Be careful not to overtighten. Also, care should be taken not to strip the plastic housing. Screws (5) are selftapping and do not require pilot holes. However, pilot holes no larger than 3/32" are recommended.

- Secure the romex connector. Secure the incoming supply with the romex connector. Replace the fan terminal box cover. All fan motor and capacitor connections have been pre-wired from the factory. No additional fan wiring is necessary.



Wiring the Fan

- Remove the screws securing the terminal box cover plate located on the side of the fan (1) (see figure 3). All fan motor connections are pre-wired to an electrical terminal strip. A 3/8" romex type cable restraint connector will be needed to secure the wiring through the knockout provided on the side of the terminal box.
- Bring incoming electrical service through the romex connector and the fan knockout. Be sure to place the connector nut over the wiring coming into the terminal box. There are two open ports on the terminal strip. Using a small regular screwdriver, tighten the neutral (white) wire of the incoming supply under the open terminal strip port labeled "N". Tighten the line (black) wire of the incoming supply under the open terminal strip port labeled "L". Since the fan motor is isolated within a plastic housing, grounding is not necessary (see figure 4).

Housing Specifications and Installation Specifications

Expansion Vent Options

No Light

Expansion Vent Hanger Bars (3) →

Duct Connection: 4"

Expansion Vent Housing (1) →

Expansion Vent Grille (2) →

Rough-in Cutout: 6"

Halogen

Expansion Vent Hanger Bars (3) →

Expansion Vent Housing (1) →

Duct Connection: 4"
Operating Voltage: 120VAC, 60Hz
Nominal Amperage: .42 Amps

Halogen Light →

Expansion Vent Grille (2) →

Rough-in Cutout: 6"

LED

Expansion Vent Hanger Bars (3) →

Expansion Vent Housing (1) →

Duct Connection: 4"
Operating Voltage: 120VAC, 60Hz

LED Light →

Lumens: 470
Color Temperature: 3000K

Expansion Vent Grille (2) →

Rough-in Cutout: 6"

Installation Considerations

- **Warning:** For your safety, read and understand instructions completely before starting. Before wiring to power supply, turn off electricity at the fuse or circuit breaker box. Make sure electrical service to fan is locked in "OFF" position.
- **Note:** Prior to installation, consider the placement of the Expansion Vent carefully, taking into account the location of electrical, plumbing, and other fixtures.
- **Note:** All wiring must be done in accordance with National Electrical Code and local building code.
- **Note:** The combustion air-flow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE).
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WARNING Before wiring to power supply, turn off electricity at the fuse or circuit breaker box.

WARNING Check for piping/electrical before cutting or drilling.

WARNING Some electrical components are not waterproof.

WARNING If there is any risk of uninsulated electrical connections in your wall/ceiling area, use insulating gloves.

Expansion Ventilation Specifications and Installation

Expansion Vent Housing Installation

Mounting Directly to Joist

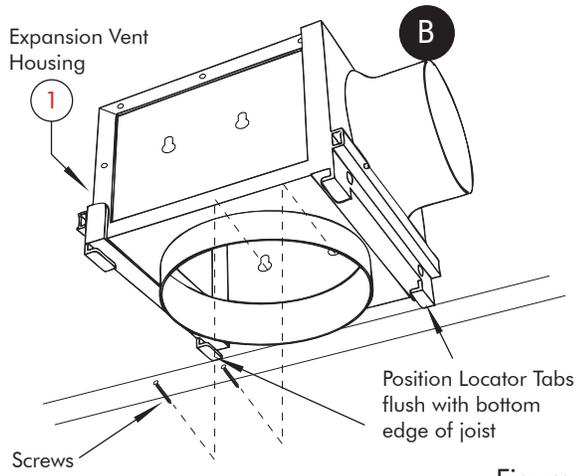


Figure 1

Mounting Brackets to Joist

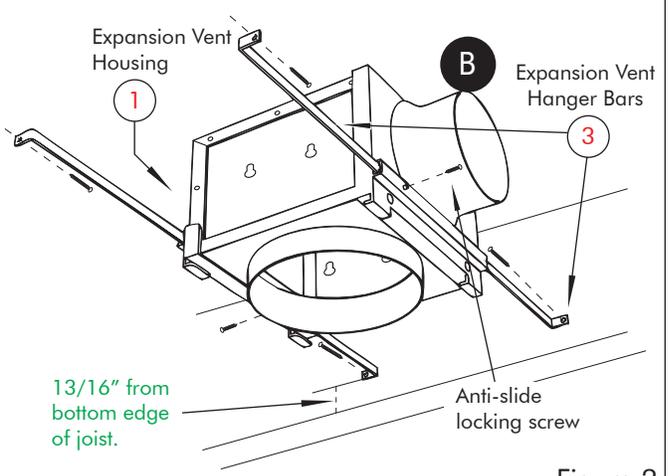


Figure 2

Grille / Light Installation

No Light Install

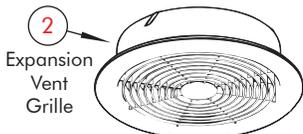
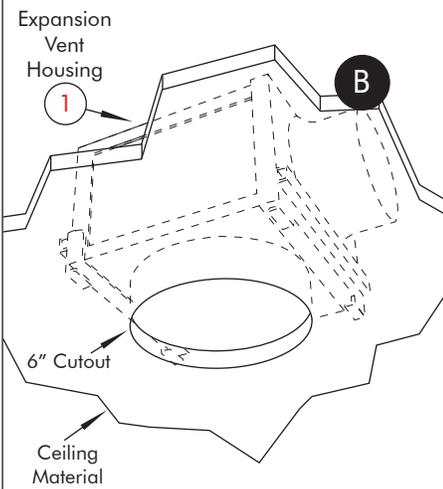


Figure 3

Halogen Light Install

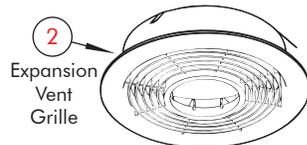
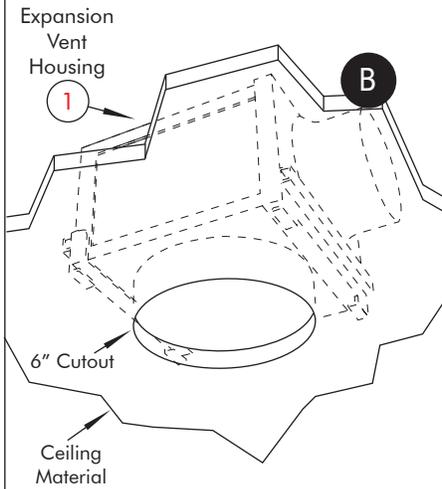


Figure 4

LED Light Install

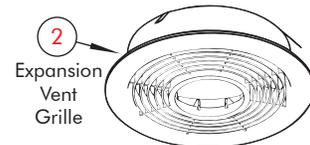
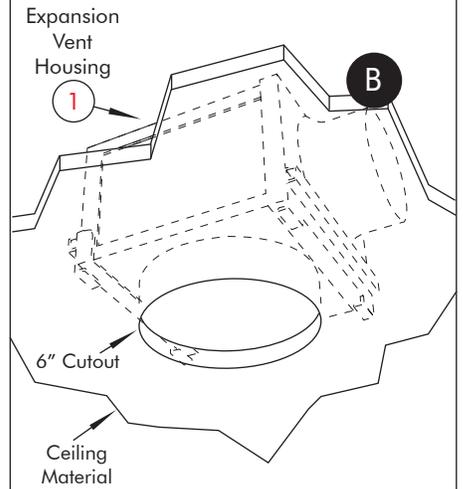


Figure 5

Expansion Ventilation Installation

Important: It is recommended that all electrical equipment be tested prior to installation.

Installation

1. Based on the bathroom layout and fixtures, plan the location of the expansion vent grilles (2) for the most effective ventilation.
2. Punch out the keyhole knockouts (if using) and the electrical knockout if needed (see figure 6).
3. Mount expansion vent housing (1) directly to the ceiling joist using screws and keyhole slots. Locator tabs on housing should be flush with the bottom edge of the ceiling joist for correct positioning of the unit once ceiling material is installed (see figure 1 on page 10).
4. Cut a 6" round hole for the expansion vent grille (2). To complete installation for Bath Fan models with lights, continue with steps 6 and 7. For models without lights, skip to step 7.
5. Remove the electrical cover inside the expansion vent housing (1) using a screwdriver. Connect power by following wiring diagram (see figure 7) and following local or National Electrical Codes. Replace the electrical cover.

OR

Use the expansion vent hanger bars (3) to suspend the expansion vent housing (1) between ceiling joists. For correct positioning, hanger bars (3) should be positioned 13/16" up from the bottom edge of the ceiling joist. Tighten anti-slide screws to keep hanger bars (3) in place. (see figure 2 on page 10).

Note: Expansion vent hanger bars (3) can be used on ceiling joists up to 24" on center.

Note: If ceiling material is thicker than 5/8" the locator tabs may be removed to allow the grille collar to be flush with the finished ceiling material.

Note: Designed for 1-1/8" ceiling material maximum.

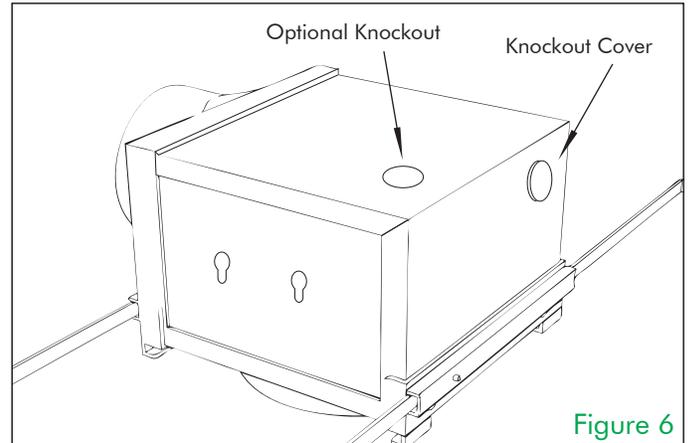


Figure 6

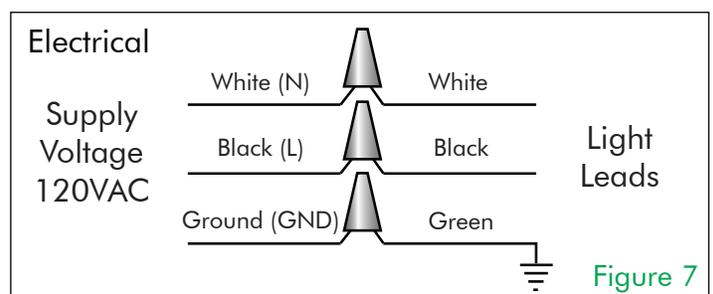
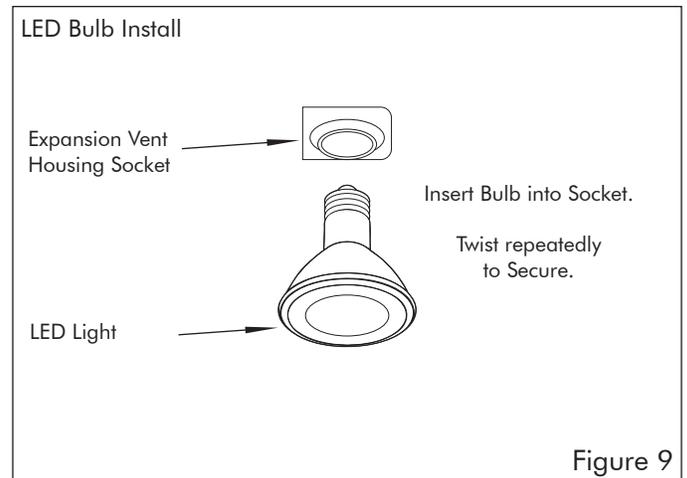
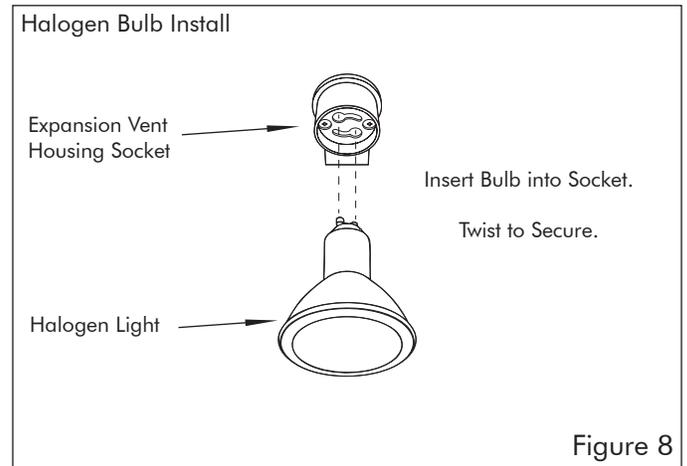


Figure 7

Expansion Ventilation Installation

7. Install the bulb by gently inserting it into the socket in the expansion vent housing (1). Install the expansion vent grille (2) by pushing it firmly into the steel collar until it is shouldered by the ceiling material (see figure 8 for halogen, figure 9 for LED).

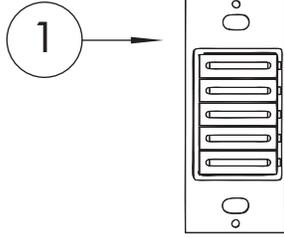


Control Specifications and Installation

Specifications

Electronic Time Control

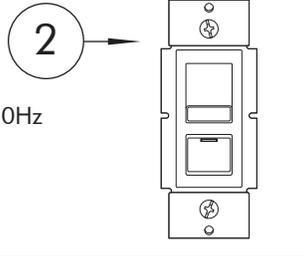
Operating Voltage: 120VAC, 60Hz
Nominal Amperage: 20 Amps
Motorload: 1HP



Optional

Slide Speed Control

Operating Voltage: 120VAC, 60Hz
Nominal Amperage: 5 Amps



CAUTION For safety purposes, use safety goggles at all times.

WARNING Before wiring to power supply, turn off electricity at the fuse or circuit breaker box.

WARNING Check for piping/electrical before cutting or drilling.

WARNING Electrical components are not waterproof.

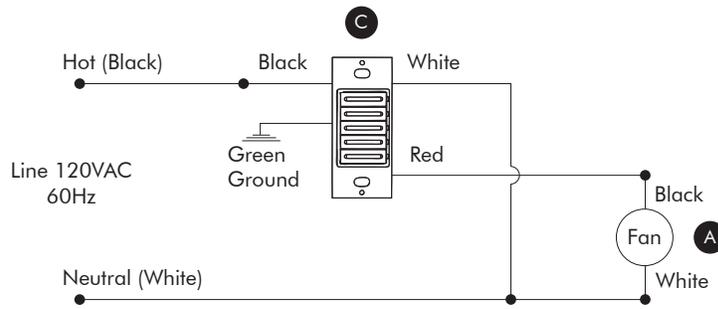
WARNING If there is any risk of uninsulated electrical connections in your wall/ceiling area, use insulating gloves.

Installation Considerations

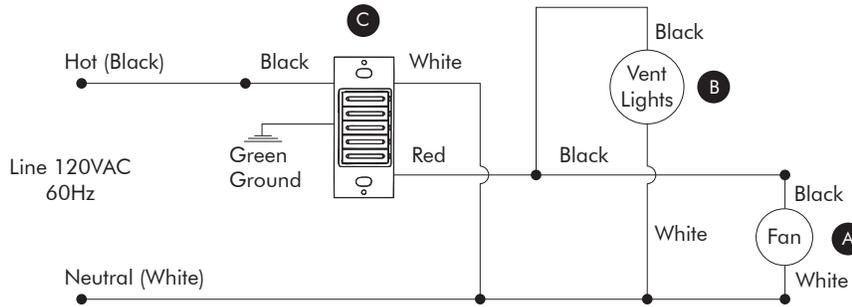
- **Warning:** For your safety, read and understand instructions completely before starting. Before wiring to power supply, turn off electricity at the fuse or circuit breaker box.
- **Note:** All wiring must be done in accordance with National Electrical Code and local building code.
- **Note:** NEVER place a switch where it can be reached from a tub or shower.
- **Note:** Recommended minimum wall box depth is 2-1/2".
- **Note:** Maximum wire length from electronic time control to all installed remote switches cannot exceed 300 ft (90m).
- **Note:** Use these devices with copper or copper clad wire only.
- **Note:** When combinations of electronic time control / slide speed control are installed in a ganged wall or outlet box, derating is required. When two devices are mounted in a ganged box, the maximum load per device shall not exceed 4A or 500 watts. When three or more devices are mounted in a ganged box, the maximum load shall not exceed 3A or 400 watts.
- **Note:** The electronic time control and the slide speed control should be installed 48" above the floor, on a vertical wall, convenient for user operation.

Control Installation

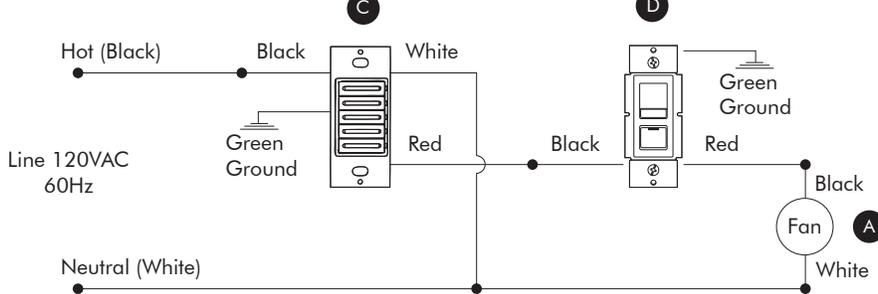
Timer / Fan Wiring



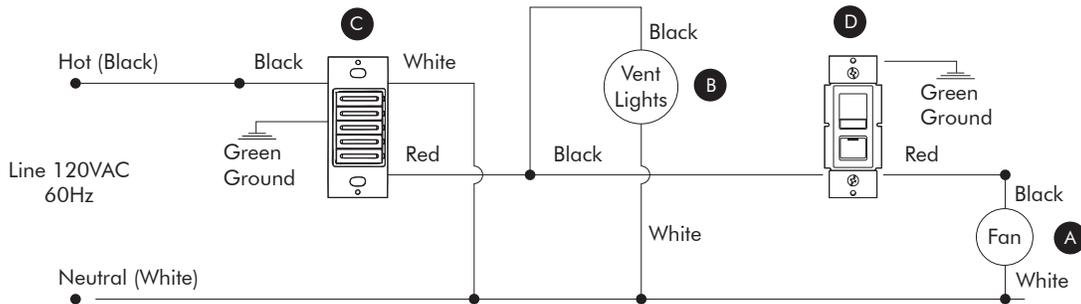
Timer / Light / Fan Wiring



Timer / Slider / Fan Wiring



Timer / Lights / Slider / Fan Wiring



Control Installation

Important: It is recommended that all electrical equipment be tested prior to installation.

Installation

1. To change faceplate of electronic time control (1), push in the side of the faceplate at the tabs to release. With desired faceplate, line up tabs and press in sides one at a time to attach.
2. Remove pre-cut 3/8" of insulation from each circuit conductor. Make sure the ends of wires are straight.
3. Install electronic time control (1) and slide speed control (2) into **double gang box, two single gang boxes, or single gang box as installation permits.**
4. Connect wires per applicable wiring diagram on previous page: Twist strands of each lead tightly together and, with circuit conductors, push firmly into appropriate wire connector. Screw connectors on clockwise making sure no bare conductors show below the wire connectors. Secure each connector with electrical tape.
5. Restore power at circuit breaker or fuse.

Operation

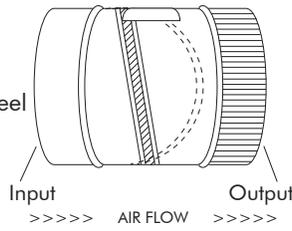
Press timer button based on desired operation time. This will enable use of the slide speed control (B), as well as illuminate expansion vent lighting if present. Slide bar control up or down for desired fan rotation speed. ON/OFF rocker switch will turn fan ON at speed set by slide bar.

Damper Specifications / Installation

Specifications

Damper ①

Dimensions: 4" Diameter x 6" Length
Body Composition: 28 gauge galvanized steel
Blade Composition: Aluminum blades
Gasket Composition: Foam



Damper Screw ②

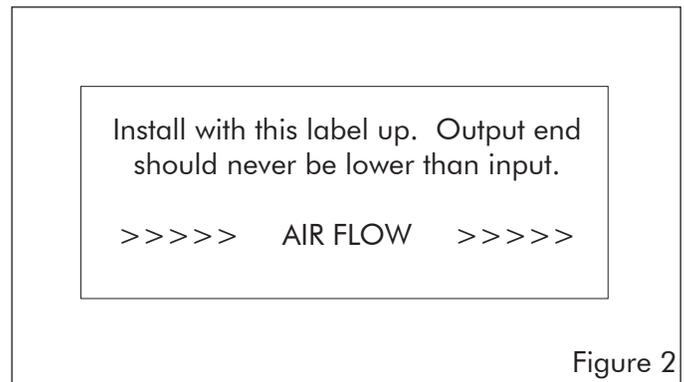
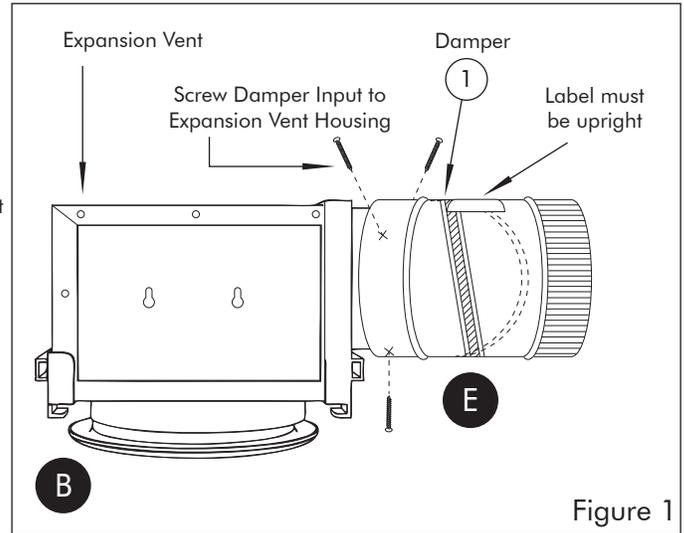


Installation Considerations

Please read this manual in its entirety prior to installation.

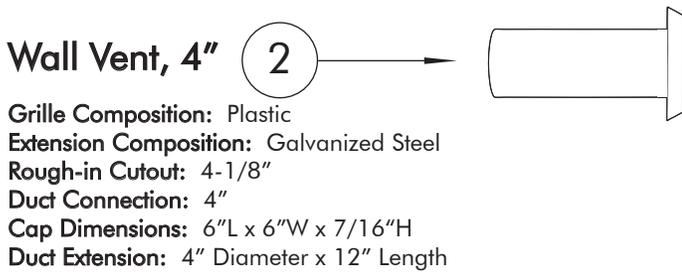
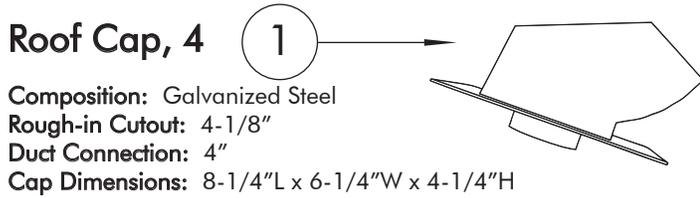
- **Note:** Output end should never be lower than input.
- **Note:** Follow all applicable codes and standards.

Installation



Roof Cap / Wall Vent Specifications and Installation

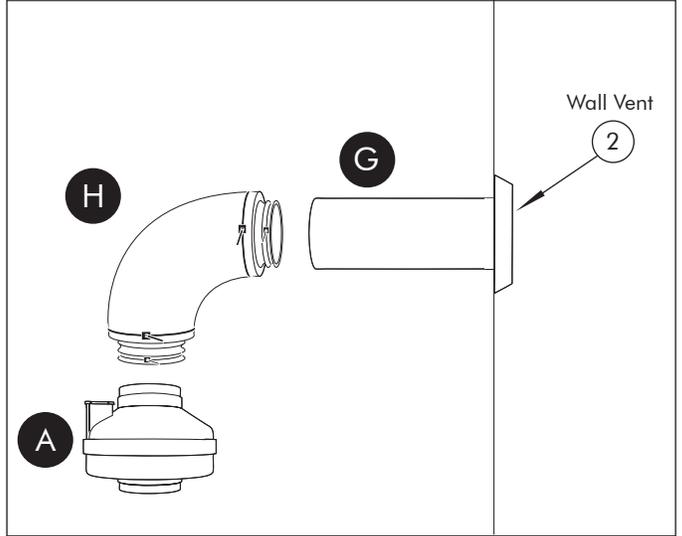
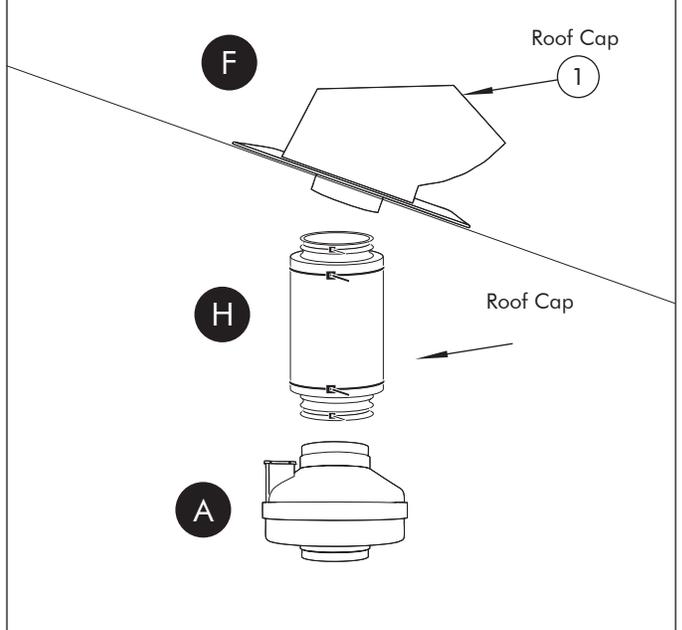
Specifications



Installation Considerations

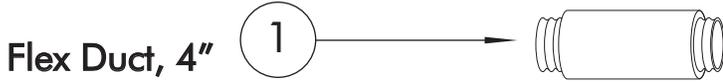
- Please read this manual in its entirety prior to installation.
- **Note:** Do not install the roof cap on a flat roof!
 - **Note:** Follow all applicable codes and standards.

Installation

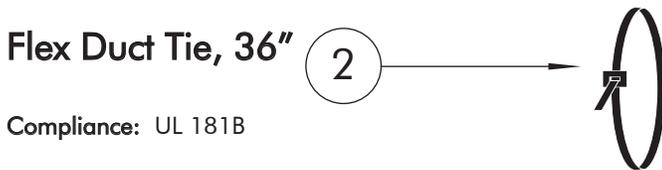


Duct Specifications and Installation

Specifications



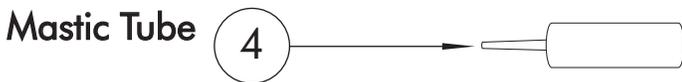
Dimensions: 4" Diameter x 25' Length
Insulation: Fiberglass
Outer Cover: Tri-directional, scrim reinforced grey polyester
Testing: U.L. Listed, Suitable for Wet Locations
R-Value: 4.2
Rated Positive Pressure: 10" w.g. per UL-181
Maximum Positive: 6" w.g.
Maximum Negative: 3/4" w.g.
Maximum Velocity: 5000 FPM
Maximum Operating Temperatures: -20°F to 140°F
 Continuous (@ maximum pressure)



Compliance: UL 181B

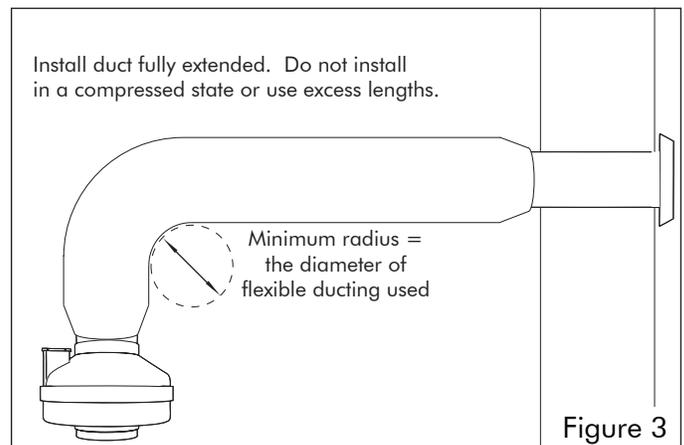
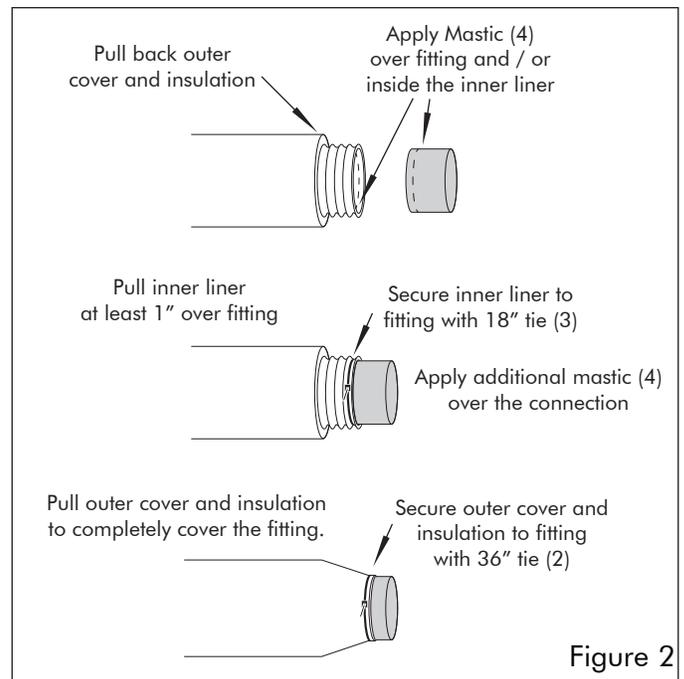
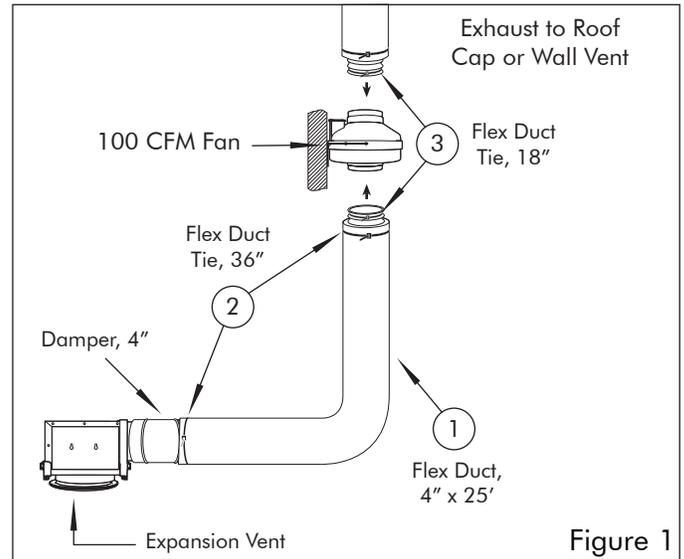


Compliance: UL 181B



Compliance: UL 181B
Net Contents: 1/12 Gallon

Installation



Duct Installation

Installation Considerations

Note: Do not use “outdoors” or install where duct can be exposed to direct sunlight. Prolonged exposure may cause degradation of vapor barrier.

Note: Do not install where duct can be exposed to UV radiation from bio-treatment lamps within the HVAC system. Exposure may cause degradation of the inner core.

Note: Do not exceed published pressure or temperature limits.

Note: Do not use duct to hang or support any diffuser, register, or other equipment during installation.

Note: Do not use screws or barbed fitting to make connections on ducts with plain ends.

Note: Duct should be supported at 5’ maximum intervals unless resting on ceiling joists or truss supports. 1/2” sag per foot of support spacing is permissible. Vertically installed duct shall be stabilized by support straps at a maximum of 6’ on center.

Note: Do not use on oval collars for medium or high pressure.

Warning: Insulated flexible duct contains fiber glass wool which has been classified as a possible cancer hazard by inhalation. Fiber glass wool may cause temporary irritation to skin, eyes, and respiratory tract.

Note: Use a properly fitted NIOSH or MSHA approved dust/mist respirator.

Note: Avoid breathing fiber glass duct.

Note: Avoid contact with skin and eyes.

Note: Wear long-sleeved, loose fitting clothing, gloves and eye protection.

Note: Wash with soap and warm water after handling.

Note: Wash work clothes separately and rinse washer thoroughly.

Note: All tapes, mastics, and non-metallic fasteners used for field installation of flexible ducts shall be listed and labeled to Standard UL-181-B - Closure Systems for use with Flexible Air Ducts and Air Connectors. Non-metallic fasteners are limited to 6” w.g. maximum positive pressure.

Note: It is recommended a minimum 8’ of insulated flexible ducting be used between any expansion vent and fan for low noise level.

Note: A multipurpose tool is recommended for duct installation.

Note: Follow all applicable codes and standards.

Installation

1. After desired length is determined, cut completely around the through duct with multipurpose tool. Fold back outer cover and insulation. Apply mastic over fitting and / or inside the inner liner (see figure 2 and 3 on page 18).
2. Slide at least 1” of inner liner over fitting. Seal inner lining to collar. Secure connection with tie placed over the inner lining.
3. Pull outer cover and insulation back over inner lining. Secure connection with tie placed over the outer cover and insulation.

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