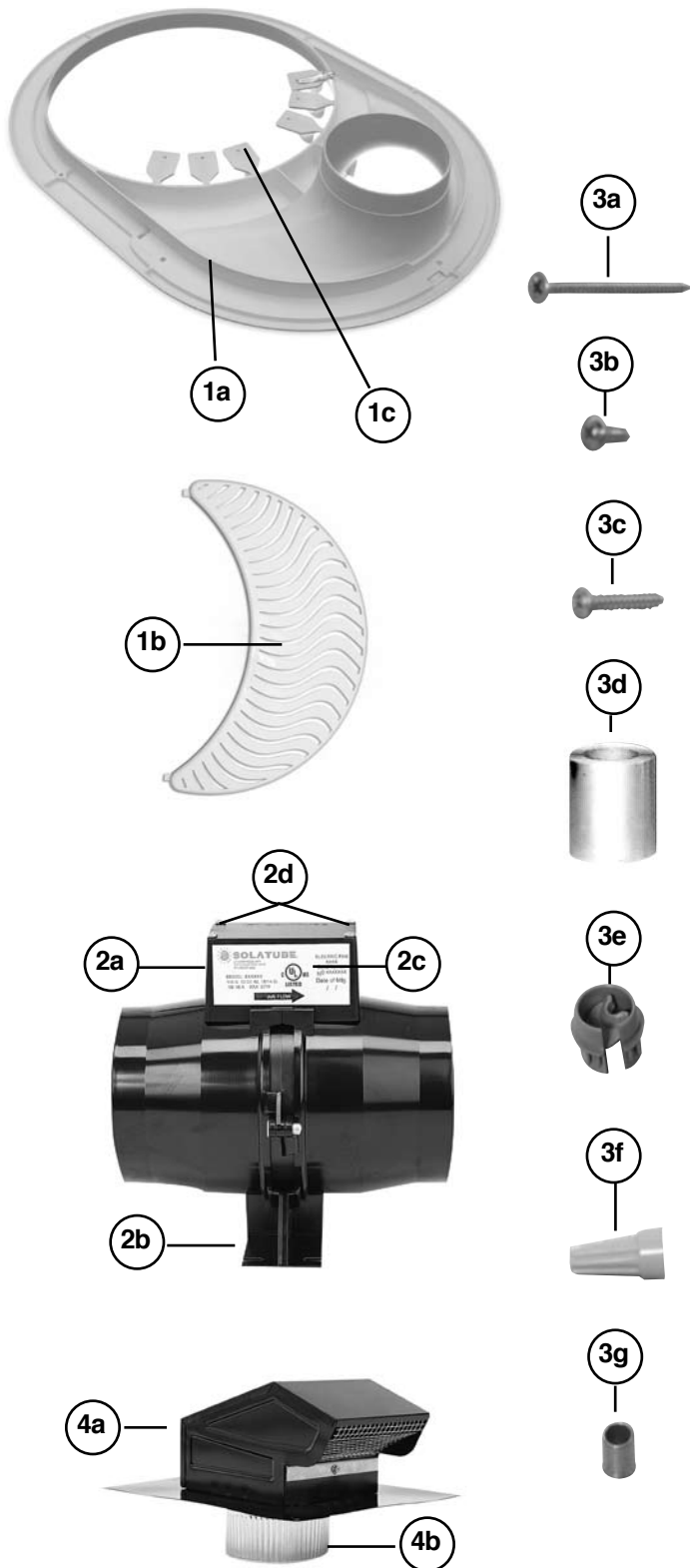


Solatube® Ventilation Add-On Kit Installation Instructions



PARTS LIST

	Quantity
1. Ventilation Grille Assembly	(1)
a. Ventilation Housing	(1)
b. Ventilation Screen	(1)
c. Screw backing tabs (snap off)	(6)
2. In-line Fan Motor Assembly including	
a. Wire Junction Box	(1)
b. Mounting Bracket	(1)
c. UL/CE Label	(1)
d. Wire Junction Box Screws - #6 x 1/2 in (15 mm)	(4)
3. Ventilation Fastener Kit including	
a. Drywall (Ceiling) Screws - #6 x 1 5/8 in (40 mm)	(6)
b. Duct Screws - #8 x 1/2 in (15 mm)	(12)
c. Fan Motor Mounting Screws - #8 x 1 in (25 mm)	(4)
d. 2 in (50 mm) Foil Duct Tape – 6 ft (1.8 m) long	(2)
e. Cable Connector	(1)
f. Wire Nut	(2)
g. Ground Crimp Connector	(1)
<i>NOTE: Not all items are shown or are to scale.</i>	
4. Optional Ventilation Roof Vent Cap including	sold separately
a. Roof Vent Cap with flashing	(1)
b. Duct Connector	(1)
5. Additional material recommended	not supplied
a. Extra Caulk	
b. Extra Roof Sealant for Roof Vent Cap	
c. 2 in (50 mm) Flashing Screws for Roof Vent Cap	(4)
d. 4 in (100 mm) Insulated Air Duct (Class 1)	(1)



WARNING



Do not proceed with the installation until you have read the entire instructions, including these warnings.

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

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

1. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
2. Before installing, servicing or cleaning unit, switch power off at service panel and lock service panel 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 persons in accordance with all applicable codes and standards including fire-rated construction.
4. When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. Exhaust fans must always be vented to the outdoors.
6. If this unit is to be installed over a tub or shower, the circuit must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) - Protected Branch Circuit.
7. Never place a switch where it can be reached from a tub or shower.
8. Do not use this fan with any solid-state speed control device.
9. Insulated Air 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 and or respiratory tract. Take appropriate precautionary measures when handling.

NOTE: Understand the following before beginning installation:

1. Read and understand both the Solatube® Brighten Up® Series and the Solatube Ventilation Add-On Kit installation instructions.
2. Follow all electrical codes and building code requirements within your jurisdiction.
3. Use appropriate safety glasses, gloves, hard hats, restraints and other equipment to avoid unnecessary accidents.
4. Motor is impedance protected. If motor becomes jammed or if another condition causes overheating, an internal fuse will fail.
5. Use house wiring suitable for 90° C and run it from wall switches to Fan Motor Assembly Junction Box and/or to Light Add-On Kit Junction Box location. Fan Motor Assembly Junction Box to be used only for wiring Solatube Ventilation Add-On Kit or Solatube Light Add-On Kit. Fan Motor Assembly Junction Box not to be used for other fixtures. Fan Motor Assembly suitable for residential and non-rated residential assemblies only. For romex connections use one (1) 14/3, one (1) 12/3 or two (2) 14/3 cables only.
6. Use Ventilation Add-On Kit only as a component of Solatube Daylighting System products, including Light Add-On Kit.
7. Any alteration or misuse of Solatube products will void warranty.

SPECIFICATIONS: Ventilation Add-On Kit

Fan Motor Assembly:	4 in (100 mm) in-line
Motor:	Impedance protected
Supply:	115 volt – 50-60Hz or optional 230 volt – 50-60Hz
Amps:	0.36 Amp or optional 230 volt – 0.19 Amp
Airflow:	110 cfm (cubic feet/minute) or optional 230 volt – 3.11 cmm (cubic meters/minute)
Insulation:	IC (Insulation may contact Fan Motor Assembly)
Moisture:	Suitable for wet or damp locations

Flexible Duct:

- 1) 4 in (100 mm) diameter air duct (Class 1).
- 2) Local building codes may require air duct (Class 0) for certain fire-rated installations.

Installation:

- 1) Service access is required to the Fan Motor Assembly Junction Box.
- 2) Space requirements: Minimum 12 1/2 in (320 mm) between ceiling joists and minimum 8 in (200 mm) vertical clearance above ceiling is required.
- 3) Ventilation fan should remain on for a minimum of 10 minutes in a bathroom after a shower.

OVERVIEW

These instructions are for installing the Solatube® Ventilation Add-On Kit with the Solatube Brighten Up® Series 160 DS (10 in/250 mm Daylighting System). The Solatube Light Add-On Kit may also be installed in conjunction with the Ventilation Add-On Kit. Refer to the Solatube Brighten Up Series and the Solatube Light Add-On Kit instructions to complete the installation.

MARKING LOCATION

Step 1. Refer to the Solatube Brighten Up Series instructions, Step 1 and Step 2, to mark ceiling and roof location of the Daylighting System.

Step 2. In the attic, look for possible mounting locations for Fan Motor Assembly. Check that wiring can be run to the planned location. Ensure Insulated Air Duct will reach planned location of roof or side-wall vent (**Diagram A**).

See Optional Installation Section.

1. Ventilation Mounting Plate (page 5)

Step 3. Place Ventilation Housing Template on ceiling surface and orient one of the locator points with the ceiling hole from Step 1. Drill 1/8 in (3 mm) hole through the ceiling at the other locator point, and repeat Step 1 to establish clearance (**Diagram B**). Once location has been established, tape template to ceiling.

VENTILATION HOUSING

Step 4. Cut through Template along line and remove ceiling material. Remove the screw backing tabs from the Ventilation Housing. Secure Ventilation Housing with six (6) #6 x 1 5/8 in (40 mm) drywall (ceiling) screws and the six (6) screw backing tabs (**Diagram C**).

NOTE: For an air infiltration seal, apply a 1/4 in (5 mm) bead of acrylic caulk to the back of the Ventilation Housing prior to installation.

MOUNTING FAN MOTOR ASSEMBLY

Step 5. Select a suitable Fan Motor Assembly location approximately 3 to 4 feet (1 m) from intake hole toward roof or side-wall vent. Fan Motor Assembly can be installed at any angle without affecting performance. The arrow printed on UL/CE label on Fan Motor Assembly Wire Junction Box shows airflow direction. Point the arrow away from Ceiling Plate intake and toward the roof or side-wall vent (**Diagram D**).

Step 6. To secure Fan Motor Assembly, screw four (4) 1 in (25 mm) screws through Mounting Brackets on Fan Motor Assembly into building structure (**Diagram D**).

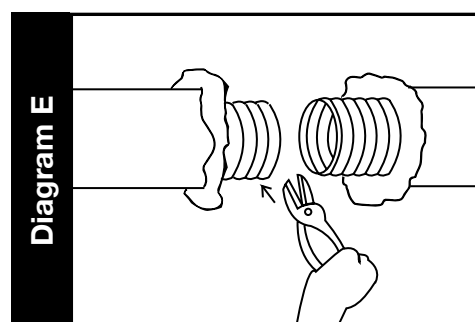
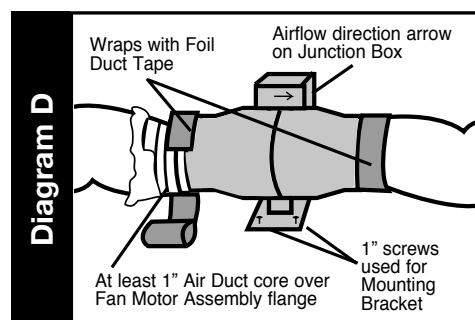
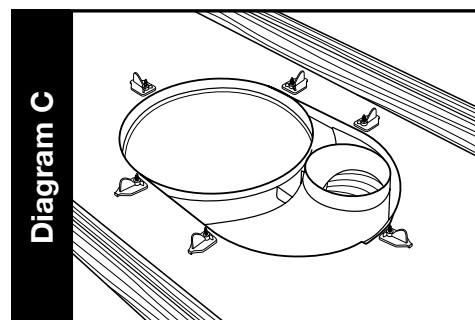
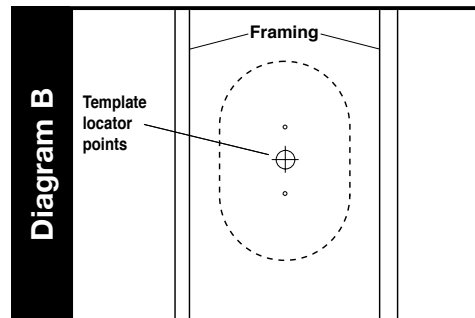
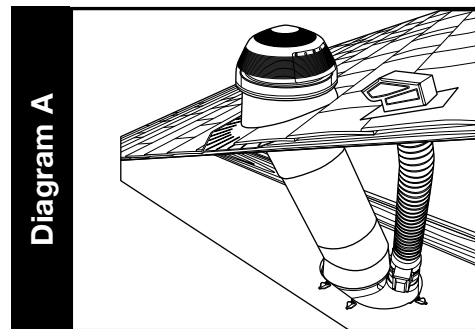
DUCT ASSEMBLY

Step 7. Install 4 in (100 mm) Insulated Air Duct (not provided) fully extended. Run Air Duct from vent inlet intake to Fan Motor Assembly. On the other side of the Fan Motor Assembly, run Air Duct to Duct Connector of ventilation exhaust pipe or optional Roof Vent Cap (see page 4 for installation instructions on the Solatube Ventilation Roof Vent Cap). For best venting performance, make Air Duct run as short as possible with minimum bends.

Step 8. After desired length is determined, cut completely around Air Duct with scissors or knife. Cut wire with wire cutters (**Diagram E**).

Step 9. Pull back Air Duct jacket and insulation from Air Duct core. Slide at least 1 in (25 mm) of Duct core over vent intake, Fan Motor Assembly flange and Duct Connector. Tape core with at least one (1) wrap of Foil Duct Tape (not provided) and secure with three (3) 1/2 in (15 mm) Duct Screws. Pull insulated jacket over connection and secure with one (1) wrap of Foil Duct Tape (not provided). To prevent condensation from collecting on the vent housing, form a “P” trap shape in duct between ceiling plate and fan motor.

Step 10. Strap Air Duct to framing every 5 ft (1.5m).



WIRING

Step 11. Disconnect power before proceeding. If power disconnect switch is not in sight, lock it in the off position, and tag it to prevent unexpected application of power.

Step 12. To open Fan Motor Assembly Junction Box cover, remove the four (4) screws.

Step 13. Feed house wiring (with ground) from wall switch to Junction Box located on the Fan Motor Assembly. Use Cable Connector provided to fasten cable to Junction Box. Use crimp sleeve to connect motor ground wire (Green 110v or Green Yellow 230v) to house ground wire. Use wire nuts or cable connectors provided to connect the two (2) hot (Black 110v or Brown 230v) and the two (2) common (White 110v or Neutral/Blue 230v) wires of Fan Motor Assembly to corresponding house wiring (**Diagram F1**). For wiring the Ventilation Add-on Kit and the Light Add-on Kit see **Diagram F2**.

Step 14. Replace Junction Box cover and screws.

SOLATUBE 160 DS INSTALLATION

Return to the Solatube Brighten Up Series installation instructions and complete through Step 14.

BOTTOM TUBE ASSEMBLY/EXTENSION TUBE INSTALLATION

Step 15. To check fit, insert bottom tube through vent housing. If necessary, rotate bottom tube angle adaptor to make top of assembly fit into top tube and the ceiling ring to fit flush on vent housing.

Step 16. Complete Step 16 of the Solatube Brighten Up Series instructions. Insert assembly through vent housing and push into top tube until ceiling ring flange is flush with the vent housing. Rotate and tighten the four ceiling ring fastening clamps to secure the bottom tube assembly to the Ventilation Housing.

Note: Do not overtighten fastening clamps or the diffuser may not be able to be installed.

Step 17. Snap the Vent Screen onto the Ventilation Housing (**Diagram H**).

Step 18. Snap diffuser onto the perimeter edge of the ceiling ring (**Diagram I**).

INSTALLING OPTIONAL SOLATUBE VENTILATION ROOF VENT CAP

Note: For roof types other than composition, contact your Solatube dealer if additional information is required.

Step 19: Locate the flashing a minimum of 5 ft (1.5 m) from an operable window or skylight, 16 in (400 mm) from a ridge or hip, and 24 in (600 mm) from a valley. Roof Vent Cap may be side-wall mounted.

Step 20: In the attic, mark vent location by running a screw up through the roof.

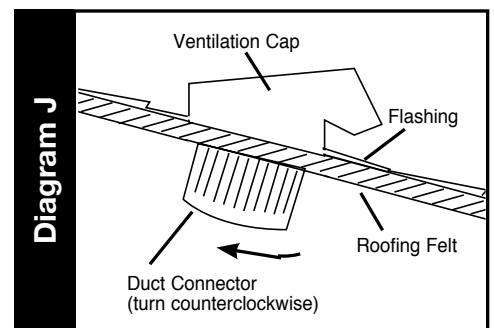
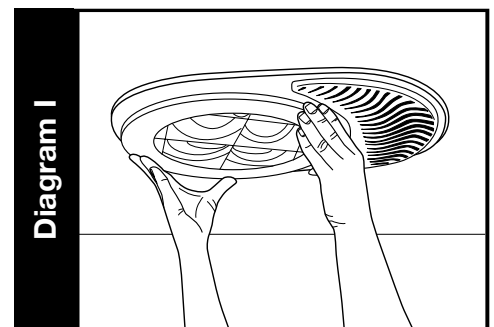
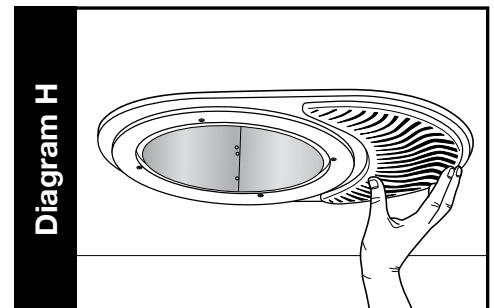
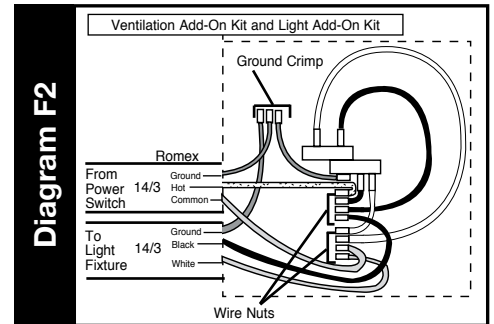
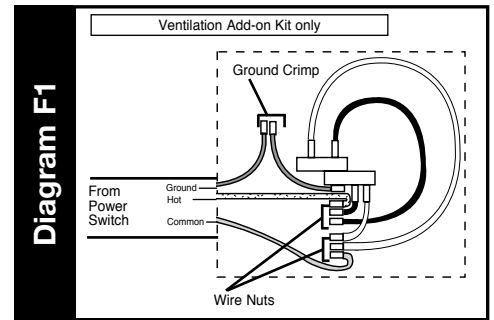
Step 21: Find the location on roof and cut a 6 in (150 mm) round hole through the roof.

Step 22: Using flat bar, loosen the asphalt sealing tabs of the shingles and carefully pull out the staples or nails above the midpoint to the upper edge of the hole. Remove enough shingles to expose the roofing felt.

Step 23: With a caulking gun, apply a 1/2 in (15 mm) bead of roof sealant (not provided) around the underside of the flashing base.

Step 24: Secure the flashing with four (4) screws (2 in (50 mm) recommended, not provided) at least 1 in (25 mm) from edge of flashing flange. Seal all screw heads with sealant.

Step 25: When securing Insulated Air Duct to Ventilation Cap, use the Duct Connector (**Diagram J**). Thread flanged end of the Duct Connector to the Roof Vent Cap by turning it counterclockwise into the vent opening on the underside of the flashing. Flange will lock into place after (1) revolution. Connect Air Duct per instructions above.



Solatube® Ventilation Mounting Plate Installation Instructions

Addendum to parts list

1. Mounting Plate

2. Mounting Plate Fastener Kit including

- a. Screws - #8 x 1/2 in (12 mm)

Additional material recommended

- a. Concrete Mounting Screws – 4 mm

Quantity

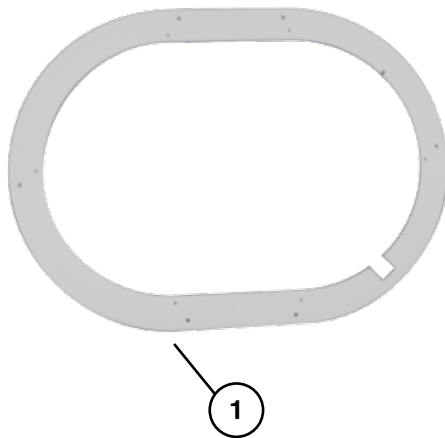
(1)

(6)

(not supplied)

(6)

NOTE: Not all items are shown or are to scale.



Complete ventilation add-on kit instructions steps 1 through 3.

VENTILATION MOUNTING PLATE

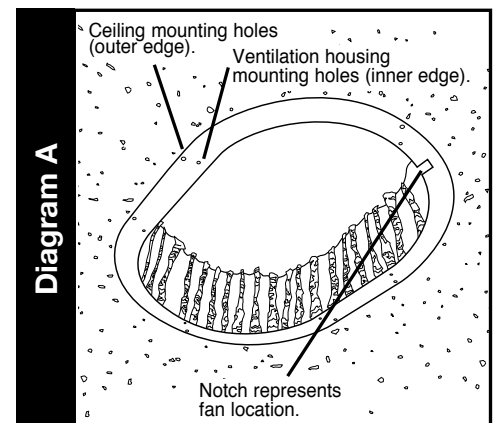
Note: Ceiling template represents finished size of opening. Do not oversize.

Step 1. Remove ceiling material from inside line of template. Test fitment of mounting plate and adjust opening if necessary.

Note: For optimal performance, fan side of vent unit should be positioned close to moisture source when possible.

Step 2. Place mounting plate on ceiling making note of fan orientation. Notch in mounting plate indicates fan orientation, opposite end will be the Solatube Daylighting System. Align edges of mounting plate on opening (**Diagram A**).

Note: For drywall ceilings, continue to Step 4.



Step 3. For concrete ceilings, use mounting plate as a location guide and mark screw holes. Remove mounting plate and pre-drill outer and inner screw holes. For outer holes, pre-drill hole according to manufacturer recommendations of the fastener used. For inner holes (closest to opening) that are used for attaching Ventilation Housing, the pre-drilled holes need only be approximately 1/2 inch (12.5 mm) deep (**Diagram B**).

Step 4. Attach mounting plate to ceiling using fasteners appropriate for ceiling material (not provided) (**Diagram C**).

Step 5. Align attachment holes of the ventilation housing with the mounting plate. Using 1/2 in (12 mm) screws (provided), attach housing to mounting plate (**Diagram D**).

Return to **Step 5** of the **Ventilation Add-On Kit** standard instructions to complete installation.

