

Sky Tunnel - Rigid

INS 600/1

May 2007

Assembly Instructions
For Tiled, Slate, Pitched and Flat Roofs



IMPORTANT

**PLEASE BE CAREFUL
WHEN HANDLING THE PIPE
COMPONENTS AS THEY
CAN BE VERY SHARP**

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Sky Tunnel efficiently pipes available daylight into dark interiors. The units innovative Flexi-Tube incorporates a highly reflective inner surface that transmits the light entering the crystal clear roof dome down to the ceiling diffuser. In addition standard units can be configured to act as trickle ventilators.



Accessories for your Sky Tunnel

Design your Sky Tunnel to suit your home with our range of accessories.

Available accessories cater for power ventilation for bathrooms, wet rooms and kitchens (all systems come with passive ventilation as standard), variable light control, double glazed ceiling diffuser for additional insulation, security, fire protection, and a light kit to allow use at night.

Adjustair Ceiling Frame

Sky Tunnel models ST400 and ST500 can utilise the Adjustair Ceiling Frame in lieu of the standard diffuser to provide controlled room ventilation.



Eclipse Varilight

Installed within the Sky Tunnel roof assembly this system enables adjustment of brightness or light cut-off. Ideal for use in a bedroom or home office where a computer is installed.



Ceiling Diffuser Fire Collar

Protects against fire spread by collapsing the Sky Tunnel.



Security Collar

Fitted to the roof dome to prevent intrusion.



Double Glazed Ceiling Diffuser

Where room ventilation via the Sky Tunnel is not required this unit can be fitted in lieu of the standard unit.



Sola Skylights Electric Light Kit

Can be installed into any Sky Tunnel model including those supplied with the Adjustair system. This kit removes the need for a separate light fitting in a small room such as a WC or bathroom.



**For more
information
telephone**

0800 3897361

Sola Skylights

Naturally Lighter Living

Assembly Instructions

- 1. Tools and supplies recommended for the installation of a Sky Tunnel**
- 2. Confirm that all items ordered are in the package(s)**
- 3. Position & orientation of the Sky Tunnel**
- 4. Installation procedure – Roof Assembly**
- 5. Installation procedure – Pipe Assembly**
- 6. Installation procedure – Ceiling Diffuser Assembly**
- 7. Final points and finishing off**

1. Tools and supplies recommended for the installation of a Sky Tunnel

- Scaffolding or other safe means of accessing the roof area
- Safety equipment including safety helmet & harness, site jacket, goggles & work gloves (refer to the appropriate UK Safety Standards)
- Electric drill (preferably cordless) and bits (including Philips)
- 2mm twist drill
- Claw hammer, pencil, metal measuring tape
- 4x25mm (1 inch) galvanised flat head nails
- Short blade cross cut saw to cut through battens
- Electric grinder with masonry disks to cut roof tiles or slates, where necessary
- Electric power extension lead
- Folding steps (for access to loft, and interior work)
- Keyhole plaster saw
- Craft knife
- Trowel, sand & cement (for corrugated tiled roofs)
- Structural grade timber 90mmx35/40mm thick, for supporting any roof members requiring modification.
- 1 box of 80mm (3 inch) bullet head nails
- Additional verge tiles, extra width verge slates, lead flashing – dependant upon the type of roof
- Rivet gun and aluminium rivets (Supplied with kit)
- Tin Snips
- 1x4mm drill bit (for drilling the bottom seams of the pipe prior to riveting)

2. Confirm that all items ordered are in the package(s)

- Carefully remove the Sky Tunnel and the pipes from their respective packages and confirm that the correct model and any optional components ordered have been delivered. In the event of any damage or short delivery please contact Sola Skylights immediately.

3. Position & orientation of the Sky Tunnel

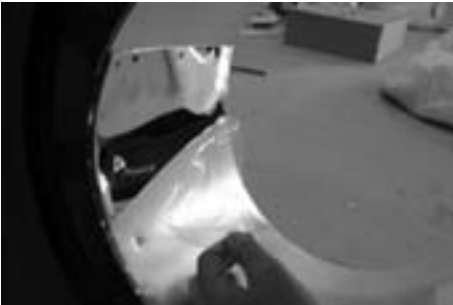
- To optimise transmission of available daylight, the Sky Tunnel dome assembly is best positioned on a south facing pitched roof that is not overshadowed by tall buildings or large trees.
- The location of the roof dome should be directly above, or as near possible to, the ceiling diffuser.
- The dome assembly should be installed as high as possible on the roof.
- When deciding the exact location **IT IS IMPORTANT** to check the position of rafters, roof supporting struts and joists. Rafter or joists may require modification with structural grade timber. The STR350 model sits between 400mm rafter centres. The STR400, STR500 & STR550 models sit between 600mm rafter centres.
- Check whether there are any obstructions in the attic such as water tanks, central header tanks, pipe work or electrical wiring.
- Once the exact location has been determined, drill a small hole in the internal roof structure, and another through the external roof covering. Push a dowel through each hole to assist with locating the site at a later stage.
- If you need advice, call our Helpline (during office hours) on 0800 389 7361.

4. Installation procedure – Roof Assembly

- Fit two of the black vent tabs in the shaped holes at the top and bottom of the moulded support rim. For trickle vent option, fit four or more vent tabs depending on the level of ventilation required. Close off the remaining holes using the black blank tabs supplied.



- **Remove the protective film from the inside surface of the aluminium reflector.**



- Position the polycarbonate roof dome onto the black, moulded support rim (which is pre-fixed to the soaker tray) and secure it using the four galvanised 20mm long self tapping screws supplied in the screw pack. Please note that the dome has a protective film covering its external surface and this must be removed **AFTER** the flashing/dome assembly has been fitted to the roof.



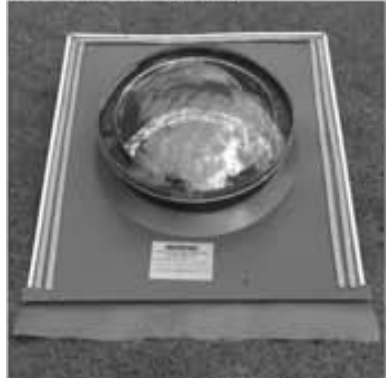
IMPORTANT

**ENSURE DOME IS SECURED WITH
SELF DRILLING SCREWS**

- For tile and slate pitched roofs, fold out and flatten the lead flashing on the bottom edge of the soaker tray.



Tile roof assembly



Slate roof assembly

- Having located the dowel pushed through earlier, saw through the tile/slate battens and cut the roofing felt/insulation to form a hole suitable for the Sky Tunnel model to be fitted. Roof members may require modification.



- An area of roof measuring approx 1x1 metre needs to be cleared of tile/slate to allow for the dome/soaker tray assembly.

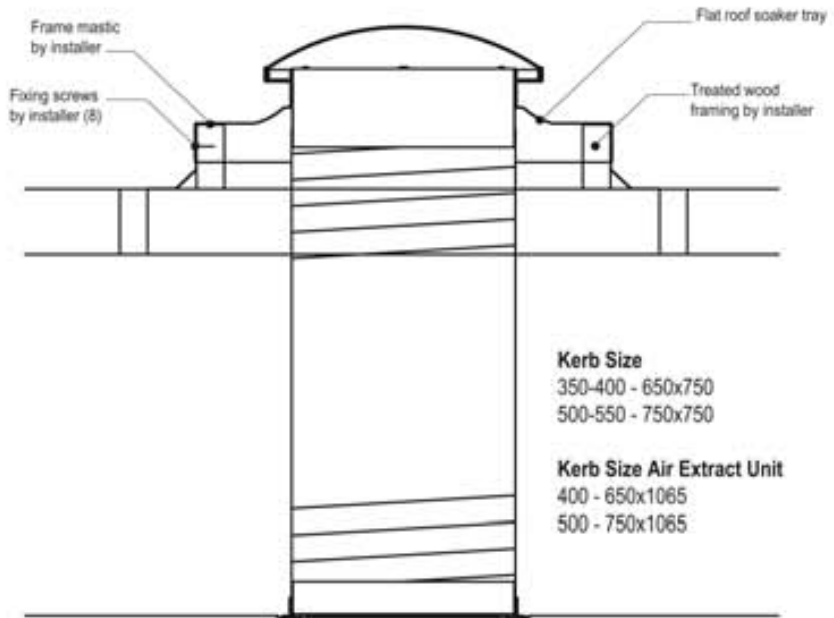
Sky Tunnel model	Minimum hole required (mm)
STR350	360 to 375
STR400	410 to 425
STR500	510 to 525
STR550	560 to 575

- Position the complete assembly on the tile/slate battens. The bottom of the soaker tray should sit flat on the tiles/slates below.

- Secure the assembly to the tile/slate battens using the 4x25mm (1 inch) galvanised flat head nails. The nails must be partly hammered in adjacent to the tray edge, and tapped over to secure the tray.



- For roofs with corrugated tiles, position and secure the tiles (if necessary cutting to fit) over the soaker tray. Place the bottom right and left edge tile lips so that they sit on TOP of the lead flashing. Tamp down the lead flashing. The edges of the tiles can be pointed with cement render.
- For slate shingle roofs, remove the protective paper from the adhesive strips on the top surface of the soaker tray. Position and secure the slates (cutting to fit where necessary) over the soaker tray. Extra wide verge slates may be required to bridge over the soaker tray. Place the bottom right and left edge slates so that they sit on TOP of the lead flashing. When fitting each slate, press it down onto the adhesive sealing strips. Tamp down the lead flashing.
- For other roofing materials and historic roofs, refer to Sola Skylights for advice. For advice on lead flashing details contact the Lead Sheet Association.
- **Remove the protective film from the dome before leaving the roof.**
- For flat roofs the installer can either self build an up-stand (recommended height 150mm) or use the optional 150mm uPVC up-stand for flat roof applications, available from Sola Skylights. (Apply a bead of frame mastic on top of the treated wood framing before fixing the flat roof soaker tray).



- To install the Air Extract Unit. An area of roof measuring about 1 x 1.5 metre (39 x 39 inches) needs to be clear of tiles/slates to allow for the dome/soaker tray assembly. The assembly should be located above the NEAREST point to where the ceiling diffuser will be positioned and as high as practicable on the roof.

5. Installation procedure – Pipe Assembly

- Rivet the seams of each pipe to form a rigid tube. (The tubes will be riveted together at a later stage)



- When the 45 degree angle adapter is fitted into the pipe run, note that it is adjusted by rotating the two sections in opposing directions until the required angle is attained.

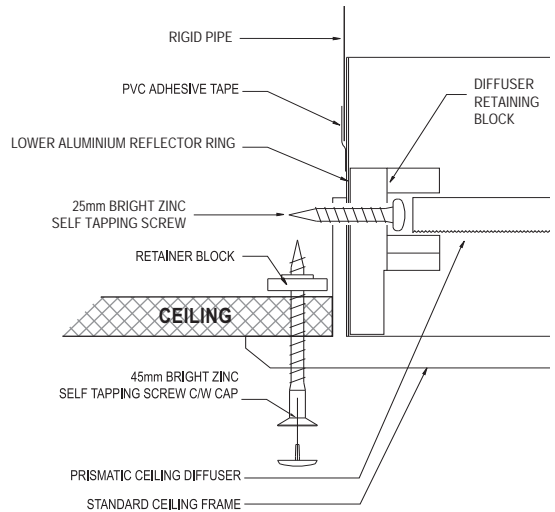


- From the relative positions of the soaker tray and the ceiling dowel decide upon the sequence in which the pipes are to be connected, working downwards from the roof. If, for example the site chosen for the ceiling diffuser is some distance from the soaker tray's location in the roof (in the centre of the room, perhaps), it would be advisable to fit a 625mm (or longer) pipe first, using the 45deg angle adaptor to bring the run into the vertical, just above the planned site. If, on the other hand, the chosen location is nearer to the soaker tray's location, it would be appropriate to use the 45 deg angle adaptor as the first connection to the soaker tray.
- Attach the first pipe to the upper aluminium ring (in the bottom of the soaker tray) using the rivets provided. (Note that, in all cases, the crimped end of the pipe should be uppermost). **As each length of pipe is completed, remember to remove the protective film from the inside of the pipe, but keep the open end of the pipe protected against dust and fingerprints.**
- Successive pipes should be added as necessary, bringing the run down towards the site chosen for the ceiling diffuser. After assembling one pipe into another they should be either drilled and then riveted together, or screwed together using small stitch screws. The final run of pipe is installed after the ceiling diffuser assembly has been installed. The final pipe should be within 50mm of the ceiling.
- When the Ceiling Diffuser Assembly has been installed, connect up the final run of pipe to the lower aluminium ring using the rivets supplied.
- When the final pipe has been connected up all joints should be sealed using the tape provided. On long runs of unsupported pipe take care to provide support from adjacent rafters or joists, by means of vertical drop wires and perforated strapping.

6. Installation procedure – Ceiling Diffuser Assembly



- Clear away any insulation where the diffuser is to be installed. Using the ceiling frame as a template, mark out the position of the hole required, with a keyhole saw.



- Note that the hole should have a diameter approx. 6mm greater than the up-stand rim of the ceiling frame. For example, the diameter of the rim on a standard STR400 model is 412mm, so the hole should be about 418mm diameter to allow for easy fitting.
- Locate the ceiling frame into the hole and secure with the 4x45mm zinc plated screws and white plastic retainer blocks supplied in the screw pack. The blocks are positioned on the top side of the ceiling plasterboard. Fit the white plastic caps to the screw heads.



Cut out the circular hole with a keyhole saw.

- From inside the room push the aluminium ring through the ceiling opening and sit it on the ceiling frame. The aluminium ring then needs to be fitted inside the final downcoming pipe, (which may need cutting as necessary) and riveted. This is then attached to the ceiling frame up-stand with bright zinc 20mm self tapping screws and spacer brackets.
- Slightly flex the polycarbonate diffuser panel and pass it through the ceiling frame. Allow it to drop into position. If ventilation is required place the diffuser on the top section of the diffuser retaining block. If ventilation is not required place the diffuser on the bottom section of diffuser retaining block.

7. Final points and finishing off

Please take the time to tick off the following points to ensure that your Sola Skylight has been fitted correctly, according to the instructions supplied.

Have you...

- Removed the protective film from the inside surface of all pipes, both stainless steel rings and the dome ?
- Ensured that all joints have been fully sealed with the tape provided ?
- Removed finger prints, dust or debris from inside the pipes ?
- Ensured the diffuser panel is smooth side up i.e. prismatic side facing downwards, to throw out the light ?

The Sola Skylight is crafted to be maintenance free, so should not require any further work.

Should you experience any difficulties, please contact our Helpline on 0800 389 7361, during office hours.

Finally, thank you for buying a Sola Skylights product.

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