

SKY TUNNEL COMMERCIAL INSTALLATION GUIDE

ALL WORK CARRIED OUT BY THE INSTALLER SHOULD BE IN ACCORDANCE WITH LOCAL LAWS & SAFETY REGULATIONS.

ATTENTION:

- Care must be taken when handling skylight components.
- Protect yourself from the ends and edges of materials since they are sharp.
- When working on the roof, ensure that the weather is dry and calm, and use appropriate safety harness.
- Prepare the tools and materials needed (*see parts list and checklist on the APPENDIX*) before going on to the roof and remember to return tools/materials used on the roof afterwards.
- **Read Installation Guide carefully prior to execution of work.**

1

First decide approximately where you would like your Sky Tunnel located in the building. You may wish to check the floor plan of the building to be able to have a clearer view on where the exact location would be.

Now, do the survey on the roof and check if there are any obstructions that may interfere with the installation such as ventilators, air conditioners, etc.

If back flashing is to be used, work out what is required before cutting any holes in the roof.

2



Using a protractor or any similar device, measure the angle/pitch of the roof. This will dictate the angle of your Rigid Tube Adaptor.

3



Rigid Tube Adaptor set at 0 degree (the riveted joints of upper and lower parts are aligned).

Knowing the angle of the roof, you may now set the angle of your Rigid Tube Adaptor. You need a protractor, level bar, and duct tape to perform this task.

4



Put the Adaptor on top of a flat level surface. Put a spirit level and protractor on top of the Adaptor (swaged part) as shown in the picture.

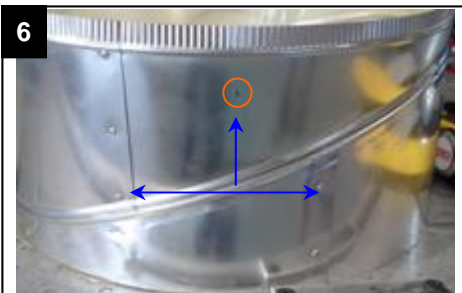
Twist upper part (with swaged) against the lower part of the Rigid Tube Adaptor until the pre-measured angle/pitch of the roof has been reached.

5



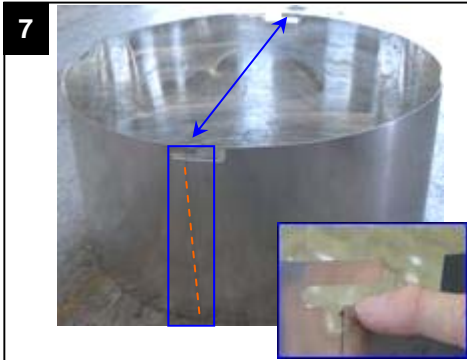
After setting the angle, put a piece of duct tape on the joints of the two parts to hold the two temporarily.

6



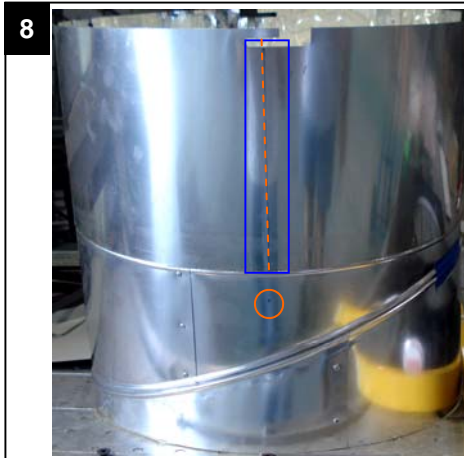
Mark the middle of the two riveted joints and take note of the distance of the two joints if you are installing more than one Sky Tunnel at this roof pitch.

The middle mark will be the lowest point of the Adaptor in the installed position while the exact opposite (12 o'clock from the mark) of it is the highest point.



Now, get the Rigid Tube Upper Ring and mark the centre on one of the notches all the way down. Mark also the exact opposite notch.

This will dictate the position of the soaker tray later on.

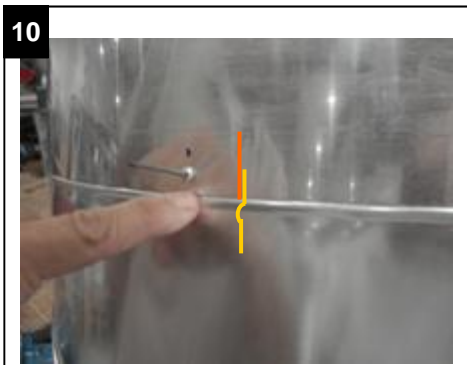


Put the Rigid Tube Upper Ring on top of the Rigid Tube Adaptor. Align the marking of the ring to the marking of the adaptor as shown on the picture.



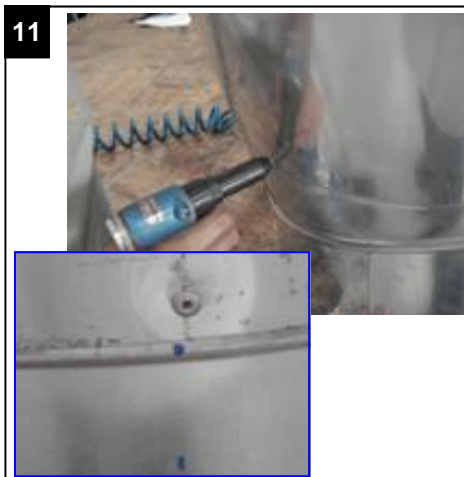
When you are assured that those marks were properly aligned, drill 6 holes for rivets.

Mark 6 equal locations of the hole around the perimeter of the bottom of the Upper Ring starting at the centre mark.



**** Important Note ****

Make sure that the Upper Ring is installed evenly and that the edge of it is just leaning on the stopper of the Rigid Tube Adaptor prior to popping the rivet.



Install the 6 rivets as required. End result should look like in the picture above.



After fixing the upper ring, connect the Rigid Tube below the Angle Adaptor as shown in the picture.



Rivet the same way as the Upper Ring is riveted to the Angle Adaptor. Put 6 rivets at the same location as on the upper ring. The Rigid Tube Assembly should look like on the picture above.



On the roof, mark the hole where Sky Tunnel is to be installed. Hole should be at least the following size:

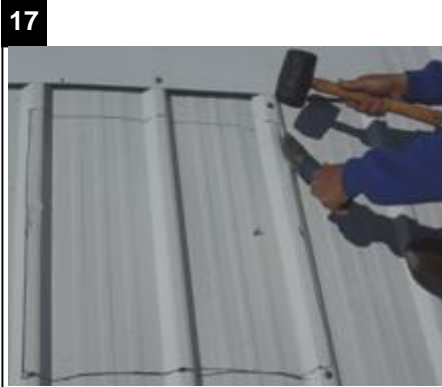
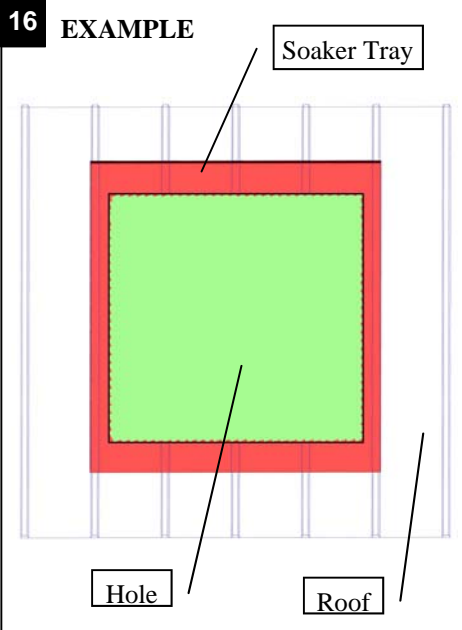
343mm ^Ø Sky Tunnel	500mm X 500mm
457mm ^Ø Sky Tunnel	550mm X 550mm
535mm ^Ø Sky Tunnel	650mm X 650mm



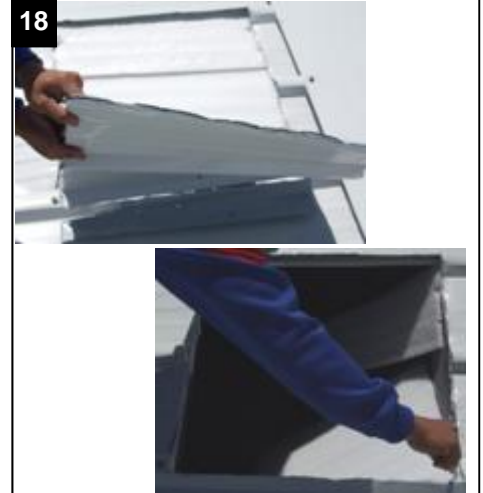
The hole should be positioned so as to cut a few ribs as possible. Always check the Soaker Tray will cover the hole plus one uncut rib on either side. See drawing on next step.

ROOF INSTALLATION

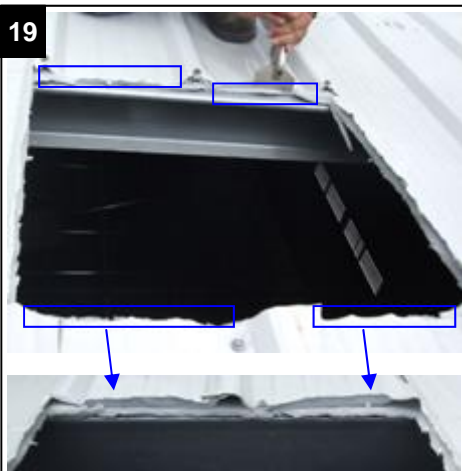
These Instructions should be used as a guide only to assist with the Installation.



Cut the Roof Sheet by following the mark/line through the use of sharpened steel and hammer or any similar device that can be used better on cutting roof sheet. Do not use an angle grinder as this leaves swarf (filing) that will cause the roof to rust.



Remove the cut roof and any insulation. Take extra precautions handling the sheet as the edge of it is sharp.



Using wide-mouth vise grips or pliers, bend up all of the lowest point on the corrugations of the roof (on top and bottom of the hole). This helps improve waterproofing.



Remove protective sheet of the Rigid Tube Assembly then install the Soaker Tray Assembly into it. Ensure that the Sky Tunnel logo is along the low side.

Twist the Tray in such way that it will fit the locking pin into the notch of the upper ring and lock it into position.



Seal around the space between the tray and the Rigid Tube Upper Ring with any sealant (black colour if available) then smooth it with your finger (using cardboard or a rag).

Sealing it will prevent insects entering the Sky Tunnel and block light passing through the space.



Fit the ceiling frame on the other end of the Rigid Tube Assembly.



Put 4 stainless steel flat head screws (provided in the kit) on every quarter position along the perimeter of the Rigid Tube and the Ceiling Frame.



Put aluminium foil tape on all riveted joints of the Rigid Tube Assembly including the joints of the Angle Adaptor.



Use a cloth whilst applying pressure to the foil tape to ensure strong adhesion.



Put duct tape around the joint of the Ceiling Frame and the tube.



Clean the Diffuser Holder Assembly with a cloth (and a soap dish) and fix it to the Ceiling Frame.

Ensure that the magnets lock onto the ceiling frame magnets correctly and are properly aligned.



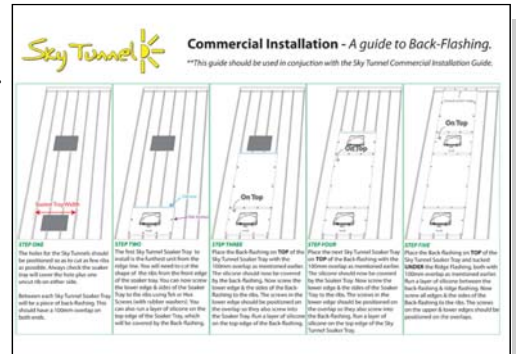
Now that the whole assembly is ready, insert it to the roof.

Be sure that the tube and the Diffuser Holder does not catch on the Roof Sheeting, it might damage the unit.

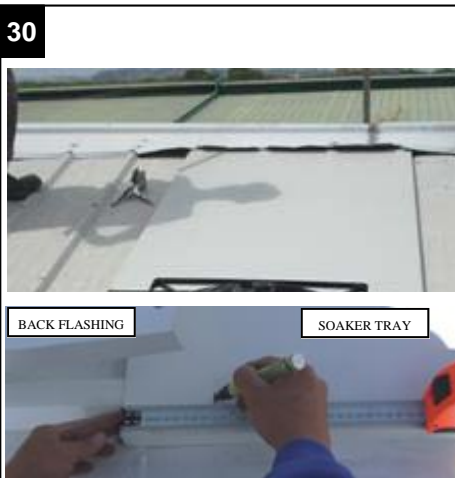
RECOMMENDED INSTALLATION PROCESS

Steps 29 - 36 can be followed for installing the Sky Tunnels with a Back-flashing system.

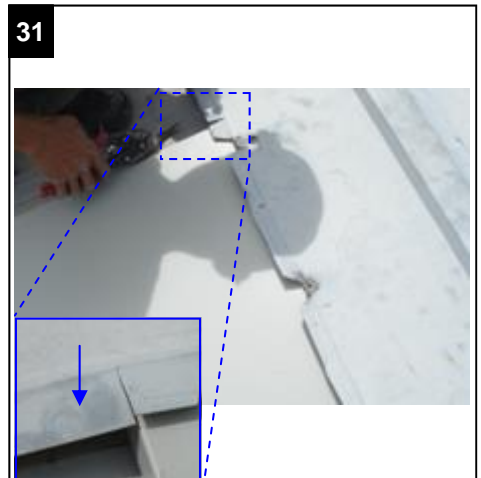
For further clarification and details of this system look for the Information Sheet titled **“Sky Tunnel Commercial Installation - A guide to Back-flashing.”**



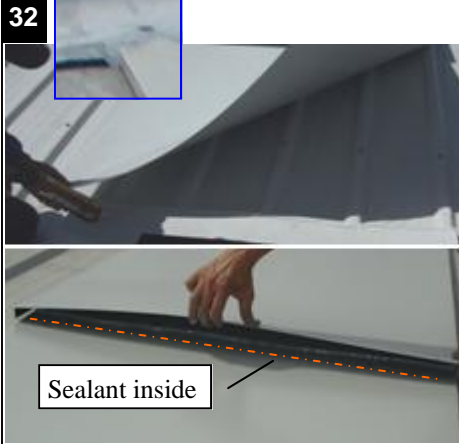
You may use a back flashing (a flat roof sheet folded on both sides with the same height as the Soaker Tray) to seal in the Roof Parts Assembly out of the water flow during rainfall.



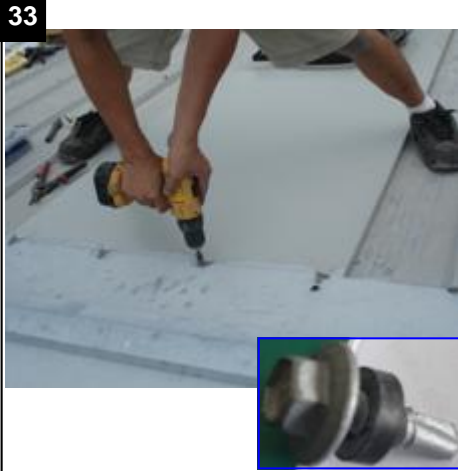
Insert the flashing end for about 100mm underneath the Ridge Capping (peak of the roof) and on top of the Soaker Tray (100mm) for the other end.



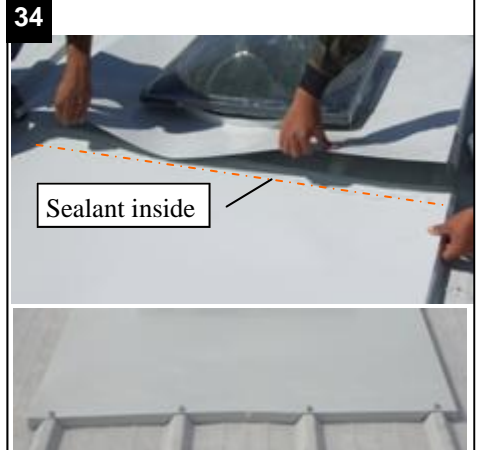
Cut the corner on where the Ridge Capping and the back flashing draw, then bend it down. Do this on both side of the Ridge Capping.



Apply a bead of Roofing Sealant underneath the Ridge Capping then on its cut corners. Apply Roofing Sealant as well on every overlap of the back flashing to the Soaker Tray in between.



Bolt the back flashing and the Ridge Capping together using Hex screw. It is recommended to use Self Drill Hex Metal Screw with Seal (14x20).



Put another back flashing (close on one end) underneath the low end of the Soaker Tray. On the close end of the flashing, cut it on according to the corrugation of the roof to make it fit.



Bolt the Soaker Tray to the roof with Hex screw (used in step 33) on every highest point of the roof sheet. Put an extra screw also at the both middle edge of the tray. Do the same thing on the back flashing.

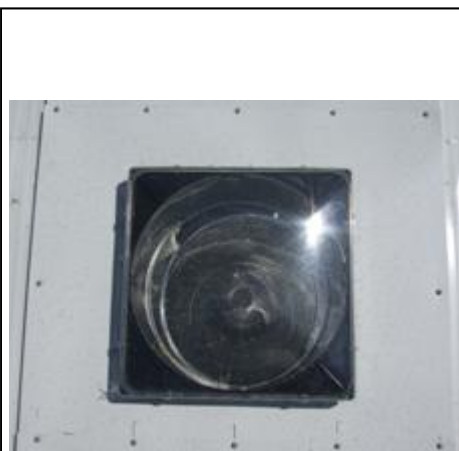


Clean any filings created by drilling holes on the roof sheets. This will tend to corrode the roof in time.

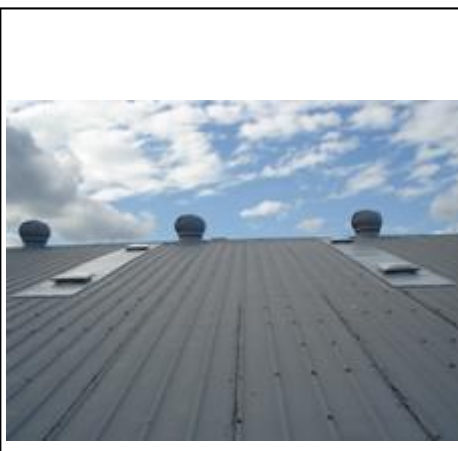


Remove the protective film after all activities have been carried out.

FINISHED



Sample picture of complete installation of Sky Tunnel .



Dek Roof with 4 Sky Tunnels.



This is how they look like inside the room.

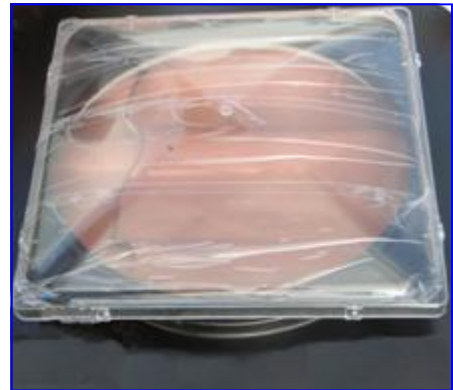
SKY TUNNEL WAREHOUSE KIT - PARTS LIST

DESCRIPTION

I. ROOF PARTS

1. Soaker Tray - Metal Flashing
2. Clear Dome - Already fixed to the breather frame
3. Breather Frame - Already fixed to the Soaker Tray
4. Tabs (Blank/Blank & Blank/Vent)

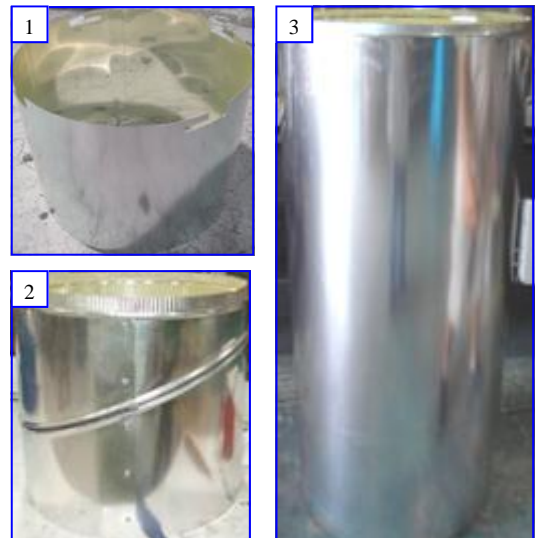
I. ROOF PARTS



II. RIGID TUBE ATTIC PARTS

1. Rigid98 - Upper Ring
2. Rigid98 - Angle Adaptor
3. Rigid98 - 1000mm Length

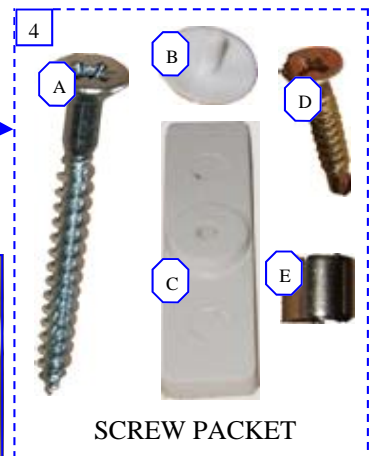
II. RIGID TUBE ATTIC PARTS



III. CEILING PARTS

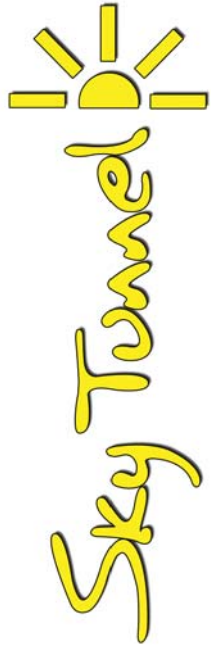
1. Ceiling Frame
2. Diffuser/Diffuser Holder
3. White Plastic Locking Ring
4. Screw Packet - Includes:
 - A. Ceiling Frame Screws
 - B. Screw Caps
 - C. Plastic Lugs
 - D. Locking Ring Screw
 - E. Diffuser Magnet (auxiliary)

III. CEILING PARTS



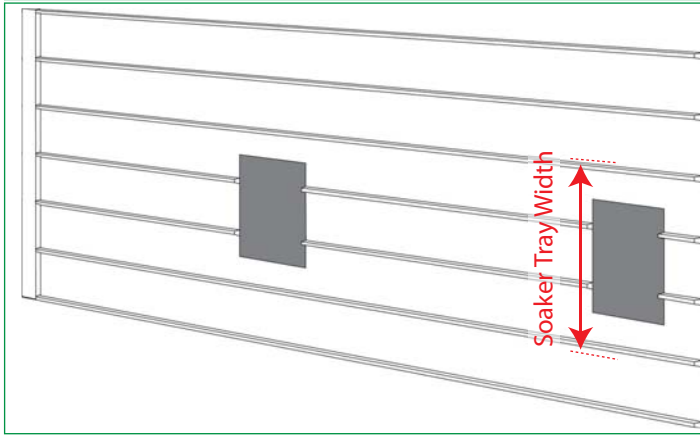
INSTALLATION TOOLS/MATERIALS CHECKLIST

TOOLS / MATERIALS REQUIRED		
1.	ROOF PARTS BOXED KIT <i>(INCLUDED IN WAREHOUSE KIT)</i>	
2.	CEILING PARTS BOXED KIT <i>(INCLUDED IN WAREHOUSE KIT)</i>	
3.	RIGID98 TUBE ATTIC PARTS <i>(INCLUDED IN WAREHOUSE KIT)</i>	
4.	PROTRACTOR	
5.	SPIRIT LEVEL	
6.	DUCT TAPE (OR ANY ADHESIVE TAPES)	
7.	ALUMINIUM TAPE <i>(INCLUDED IN WAREHOUSE KIT)</i>	
8.	RIVETER	
9.	RIVETS <i>(INCLUDED IN WAREHOUSE KIT)</i>	
10.	ELECTRIC DRILL - CORDLESS	
11.	HAMMER	
12.	TAPE MEASURE	
13.	CAULKING GUN / SILICONE GUN	
14.	WEATHER SEALANT / SILICONE	
15.	MARKER	
16.	UTILITY KNIFE (CUTTER BLADE)	
17.	SHEAR CUTTER / TIN SNIPS	
18.	RAGS	
19.	DILUTED SOAP/DETERGENT	
20.	TEK / HEX HEAD SCREWS	
21.	WIDE MOUTH VISE GRIPS/PLIERS	
22.	SHARPENED STEEL TOOL	
23.	SAFETY HARNESS WITH ROPE	
24.	LADDER	
25.	BACK-FLASHING - <i>IF THAT SYSTEM IS BEING UTILIZED.</i>	



Commercial Installation - A guide to Back-Flashing.

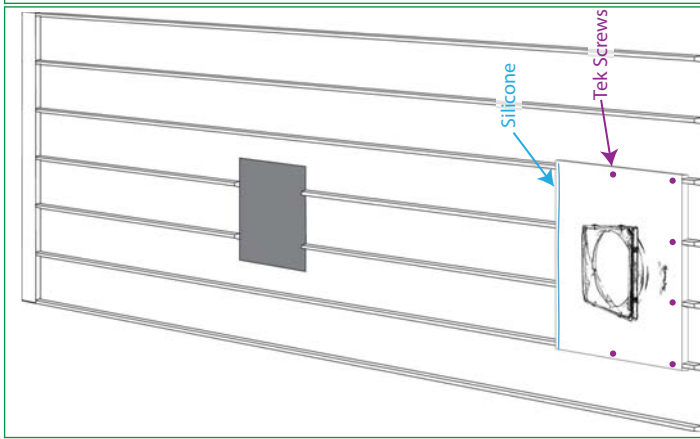
***This guide should be used in conjunction with the Sky Tunnel Commercial Installation Guide.*



STEP ONE

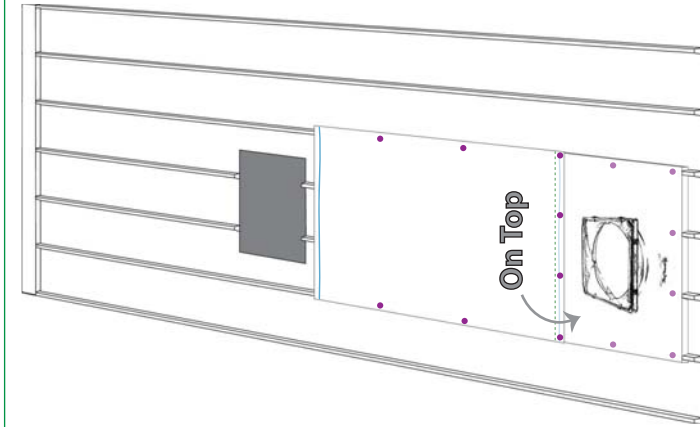
The holes for the Sky Tunnels should be positioned so as to cut as few ribs as possible. Always check the soaker tray will cover the hole plus one uncut rib on either side.

Between each Sky Tunnel Soaker Tray will be a piece of back-flashing. This should have a 100mm overlap on both ends.



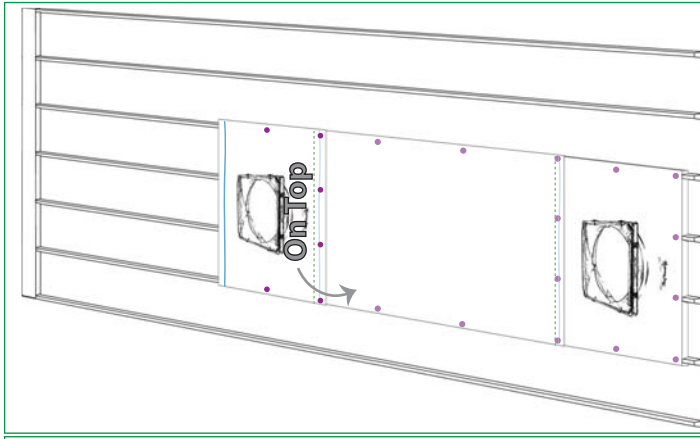
STEP TWO

The first Sky Tunnel Soaker Tray to install is the furthest unit from the ridge line. You will need to cut the shape of the ribs from the front edge of the soaker tray. You can now screw the lower edge & sides of the Soaker Tray to the ribs using Tek or Hex Screws (with rubber washers). You can also run a layer of silicone on the top edge of the Soaker Tray, which will be covered by the Back-flashing.



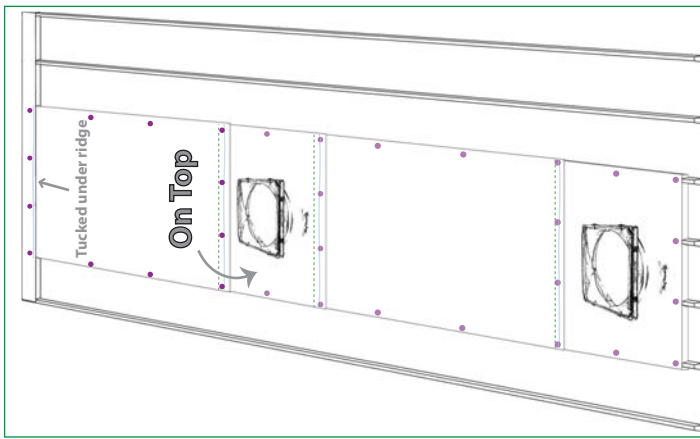
STEP THREE

Place the Back-flashing on **TOP** of the Sky Tunnel Soaker Tray with the 100mm overlap as mentioned earlier. The silicone should now be covered by the back-flashing. Now screw the lower edge & the sides of the Back-flashing to the ribs. The screws in the lower edge should be positioned on the overlap so they also screw into the Soaker Tray. Run a layer of silicone on the top edge of the Back-flashing.



STEP FOUR

Place the next Sky Tunnel Soaker Tray on **TOP** of the Back-flashing with the 100mm overlap as mentioned earlier. The silicone should now be covered by the Soaker Tray. Now screw the lower edge & the sides of the Soaker Tray to the ribs. The screws in the lower edge should be positioned on the overlap so they also screw into the Back-flashing. Run a layer of silicone on the top edge of the Sky Tunnel Soaker Tray.



STEP FIVE

Place the Back-flashing on **TOP** of the Sky Tunnel Soaker Tray and tucked **UNDER** the Ridge Flashing, both with 100mm overlap as mentioned earlier. Run a layer of silicone between the back-flashing & ridge flashing. Now screw all edges & the sides of the Back-flashing to the ribs. The screws on the upper & lower edges should be positioned on the overlaps.