

Installing a roof integrated collector COLLECTOR TYPE: **ZEN Renewables Thermic 2800 S**

Collector and flashing set:

The Thermic collector is designed for easy roof integration in tiled roofs. Together with the flashing set it's a 2-hour job for a roofer to install the collector into a tiled roof including the scaffolding.

APPLICATIONS: Small to large domestic hot water systems, industrial process and swimming pool heating.



POSITIONING:

The positioning of the collector will be determined by:

- Orientation: West, south and east is acceptable with a roof angle between 30° and 60°. See Information sheet collector orientation.
- Drain-back level (the lower connection of the collector should always be above the top of the drain back tank).
- The distance from the drain-back tank (the collector pipes should always be installed with a slope of >20mm/m). This to ensure that the collector circuit will drain.
- A suitable location on the roof (this should be aesthetically pleasing) not too close to the edge or other obstacles on the roof. The higher in the roof the less shade a collector will have from obstacles.
- Be sure no rafters or beams are blocking the connections of Feed, Return and Sensor.
- Always start from a full tile directly below the collector.

POSITIONING OF THE LEAD BIB:

The fine positioning of the collector will be determined by:

- The exact position of the lead bib. The lead bib will be positioned 140-160mm above the tile lath from the tile directly below the collector. The 2 marks left and right on the lead bib stand for the left and right side of the collector. Shift the lead bib to the left or right to ensure that the gaps between the tiles and the collector on the left and right side will be evenly divided. Gap 20-50mm.
- Mount the lead bib with the provided screws on each rafter.
- Shape the lead into the tiles.



PREPARING PIPE AND SENSOR CONNECTION:

- Leave the tile laths where they are unless they are blocking one of the connections. Simply cut away only a small piece of batten at the spot of the blocked connection.
- Depending on the roof construction cut out a piece of felt (80x80mm) with a knife at the location of the connections or use a hole saw of 83mm. The position of the holes can be marked out with a template or by measuring.



PLACING THE COLLECTOR:

- Do not install pipe tails to the connections on the collector because they will hinder you during the placement of the collector. The connections are easily accessible from the inside of the building with a claw wrench.
- Depending of the height and accessibility of the roof the collector will be hoisted or carried onto it's position on the roof.
- Slip the collector into the brackets on the lead bib and shift it to the left or right to line it between the marks and to ensure that the gap between the collector and the tiles on the left and right side will be evenly divided.
- Clip in the top flashing.
- Fasten the sides of the collector with the screws provided.

PLACING THE SIDE FLASHINGS:

- Do not forget to clip in the top flashing before you fasten the collector on the tile laths.
- Clip in the side flashings on the left and right side of the collector.
- Be sure that the side flashings slide under the top flashing and water will drain over the lead bib.
- Bend back the zinc clip on the lower part of the side flashing to prevent the top part from sliding down. (There will only be a zinc clip if the side flashing consists of two pieces).
- Put some screws just along the side flashing to prevent it shifting away from the collector. (Not through the flashing).



REPLACING THE TILES:

- Start by replacing the tiles on the left and right side of the collector. The gap between collector and tiles should be 20-50mm.
- To prevent the notch of the tile pushing down the side flashings, just tap it off as shown in the picture.
- After replacing the tiles along the sides, put back the tiles above the collector.
- The gap between the tiles and the top flashing should also be 20-50mm.
- If moving up the row of tiles above the collector is no option, then cut the tiles as shown on the picture.

FINISHING THE COLLECTOR INSTALLATION:

- Clean up the roof and check if any tiles are out of position.
- Bend open the water checks at the left, middle and right side of the lead bib to prevent water leakage.



JOB DONE:

- Starting time building the scaffolding 09.00h
Finished job including training roofer 11.00h
- Wish the owner a lot of solar energy.