



In association with Solar Lifestyle CC

## Mounting & Installation

### Instructions

### Flat Plate Collector



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## 1. Introduction

Congratulations on purchasing a flat plate collector, our collectors use cutting edge technology and attractive design to bring you a high quality product.

This manual must be read thoroughly and understood before undertaking to mount and install any of the flat plate collectors, If after reading this manual any aspect of the installation process remains unclear contact an Xstream representative prior to installation.

This manual serves only as a guide to the correct installation / mounting of Flat plate collectors it must be read in conjunction with the "system specific" installation manual ; it does not seek to defy logic and or the experience of suitably trained installers, use discretion.

## 2. Mounts and attachments

Before mounting the collector note that the collector has a "right Side" up sticker located on the top right side, on the top left side of the collector below the 22mm pipe protrusion there is a thermal probe pocket, if a temperature differential intelligent solar controller is to be used in the installation it is strongly recommended that these instructions are followed and the collector is mounted in the correct orientation to allow for a more accurate temperature reading.



### 2.1 Mounting components



S BRACKET



U BRACKET



FLAT ROOF FRAME

(Panel Clips)

S bracket: Suitable for Tiled roof application.

U bracket (with hanger bolt): Suitable for Tiled roof and sheet roof application.

Flat roof frame: Suitable for flat roof application, Panel clips provided to attach collector to frame.

## 2.2. Tiled roof installation

Measure the roof and estimate collector placement, mark off where the bottom of the collector will be placed, remove the tiles that fall right above the bottom edge of the collector and insert 2 x S brackets so that the "hooked" part of the "S" cups around the timber baton, place the two S brackets roughly 700mm to 1000mm apart, this distance will vary depending on the collector size, once a suitable distance has been measured replace the tiles carefully, so that the opposite "hooked" part of the "S" bracket is all that is visible, this will provide a slot for the bottom of the collector to be placed in.



Once the bottom of the collector is secure, use the U brackets (2 of) to secure the top, locate the timber trusses on the side or on top of collector, insert the U bracket over collector edge and use the hanger bolt to secure the U bracket to the timber beneath the tile. Note that due to the varying timber structures it will not always be possible to align the U brackets to the timber structure using the top edge of the collector; in this instance side mounts would be acceptable, provided the mounts are placed at least three quarters of the length of the collector (1333mm from bottom of collector). (See below pictures for variation)



### 2.3. Sheet roof installation

Measure the roof and estimate collector placement, determine the location of the structural timber beneath the sheeted roof, place two U brackets 700mm – 1000mm apart roughly where the bottom of the collector is expected, ensure that the two u brackets intersect the structural timber beneath the sheet, using the hanger bolts, secure the u brackets in place, slot the bottom of the collector into the u brackets and repeat the process at the top or side of the collector, note that due to the varying timber structures it will not always be possible to align the u brackets to the timber structure using the top edge of the collector, in this instance side mounts would be acceptable, provided the mounts are placed at least three quarters of the length of the collector (1333mm from bottom of collector). (See above pictures for variation)

### 2.4. Flat roof installation

(See instruction manual on assembly of Flat roof frame)

Secure the Flat roof frame to the structure (various attachments available on request), attach two panel clips to the bottom profiled channel of the frame, place the collector onto the frame, ensure that the edge of each panel clip slots into the profile of the collector, repeat this process using the top profiled channel of the frame.



## 3. Collector Installation

### 3.1. Plumbing Connections

Only DZ rated brass compression type fittings may be connected directly to the collector (soft /silver solder and or brazing may not be used on the collector itself), the collector connections (“in and out” Supply/ return) should always be cross directional (i.e. water supplied to collector enters the collector through the bottom right connection and leaves the collector through the top left connection), the two connection points not used to transport fluid to and from collector should be stop ended, if more than two collectors are to be connected in parallel, suitable expansion loops must be added between the collectors, no more than 6 x 2sqm Collectors may be connected in this configuration, however multiple banks of 6 collectors may be connected in series.

When tightening the compression fittings two shifting spanners or a shifting spanner and water pump pliers must be used to avoid damaging the collector pipe work.



### 3.2. Breather holes and vent caps

Located at the top and bottom of the collector are four breather holes (two either side), (8mm brass rivnuts), these “breather holes” allow air flow through the collector and limit condensation from occurring within the collector. These holes must never be covered or used for the purpose of mounting, supplied with every collector (clear plastic bag in box) are two Vent caps, these caps are to be screwed into the two breather holes located at the top of the collector, these vent caps prohibit the ingress of water and debris whilst allowing moist air to escape.

