



# Product Guide

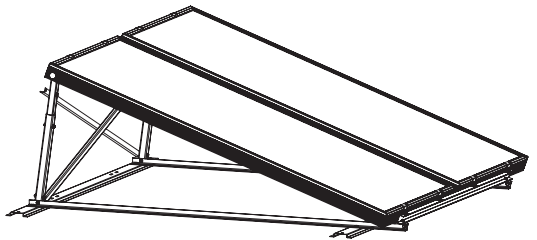
**IMPORTANT INFORMATION**  
Read This Document First

## Flat Roof Frames

Models: PK1043  
PK1044

Installation by a licensed tradesperson and in accordance with:

- AS/NZS 3500.4 "National Plumbing & Drainage Code Hot Water Supply Systems – Acceptable Solutions"
- Adherence to local authority and OH&S regulations
- Victorian PIC Requirements



For advice, repairs and service, call:

1300 365 115 (Australia)  
0800 729 389 (New Zealand)

Specifications and materials may change without notice.  
Effective for Dux Flat Roof Frames manufactured and sold after 1 April 2009.

Part No: H4111  
Version: 4111B



# Installation Guide

### Introduction

This Flat Roof Frame kit is suitable for use in non high wind areas.

If installing in a high wind area, please consider using a Dux cyclone rated flat roof frame.

### Parts/Kits Required

To be used in conjunction with Dux solar collector(s) and mounting rail kit.

The installer must supply:

- Roofing screws to attach mounting rails to the customer’s roof.
- Any flashing and/or silicone required for sealing the specific type of roof.

The mounting rail kit used for the solar collectors is attached to this assembly.

The parts supplied in the Flat Roof Frame kits are listed in the table below.

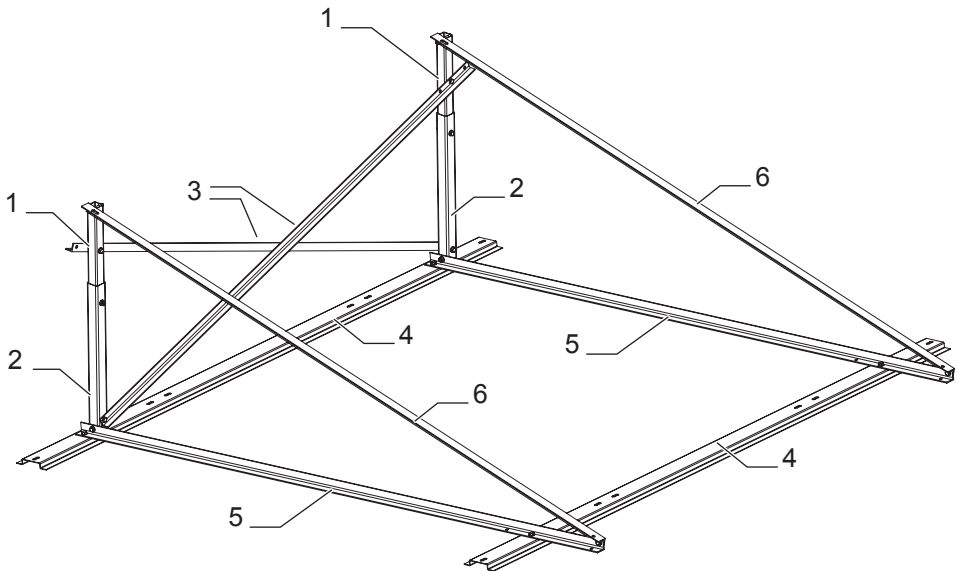
Item	Single Collector Kit Part No: PK1043		Two Collector Kit Part No: PK1044	
	Length	Quantity	Length	Quantity
M8Nut		18		16
M8x55 Hex Head Bolt	55 (Thread)	8	55 (Thread)	10
M8x20 Hex Head Bolt	20 (Thread)	10	20 (Thread)	10
M8 Washer		32		32
Outer SHS	480	2	480	2
Inner SHS	495	2	495	2
Angle Frame Base	2100	2	2100	2
Angle Frame Upper	2100	2	2100	2
Rear Cross Frame	915	2	1610	2
Base Plate	1000	2	2000	2



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Item	Description
1	Inner SHS
2	Outer SHS
3	Rear cross frame
4	Base plate
5	Angle frame base
6	Angle frame upper

**Figure 1:** Structure parts overview.





# Installation Guide

## Instructions Overview

- The flat roof mounting frame should be loosely assembled and fixed to the roof before attaching the collector(s).
- Once the collectors are fixed to the frame, all fasteners should be tightened appropriately to ensure the frame is rigid and square.
- **Caution:** It is critical that the frame is adequately fastened to the roof.
- All bolted connections should have a washer on both sides of the assembly.

## Setting the angle of the frame

This kit is suitable to mount collector panels at three different pitches (15°, 20° or 25°).

The desired frame pitch should be set before attaching the panels. To do this, slide the inner SHS within the outer SHS and align the angle selection hole before bolting them together.



# Installation Guide

## Installation Steps

### Step 1

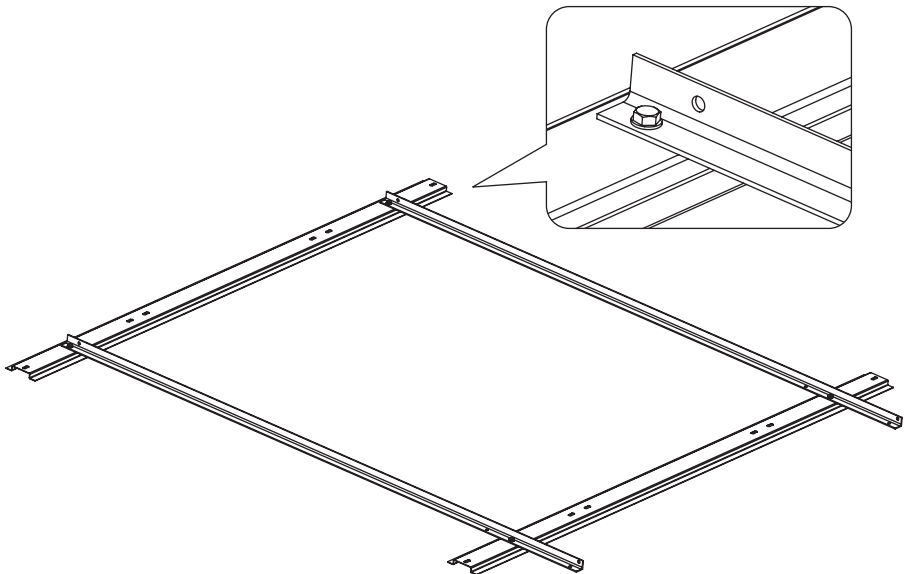
Place the base plates parallel to each other on a flat surface.

### Step 2

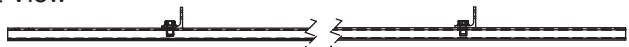
On top of these, locate two of the Angle Frames as per **Figure 2**.

### Step 3

Bolt the four sections together through the nut inserts in the base plates using a short M8 bolted joint (bolt, 1 washer connected to nut insert).



Front View



Note: The angles are parallel, not mirrored

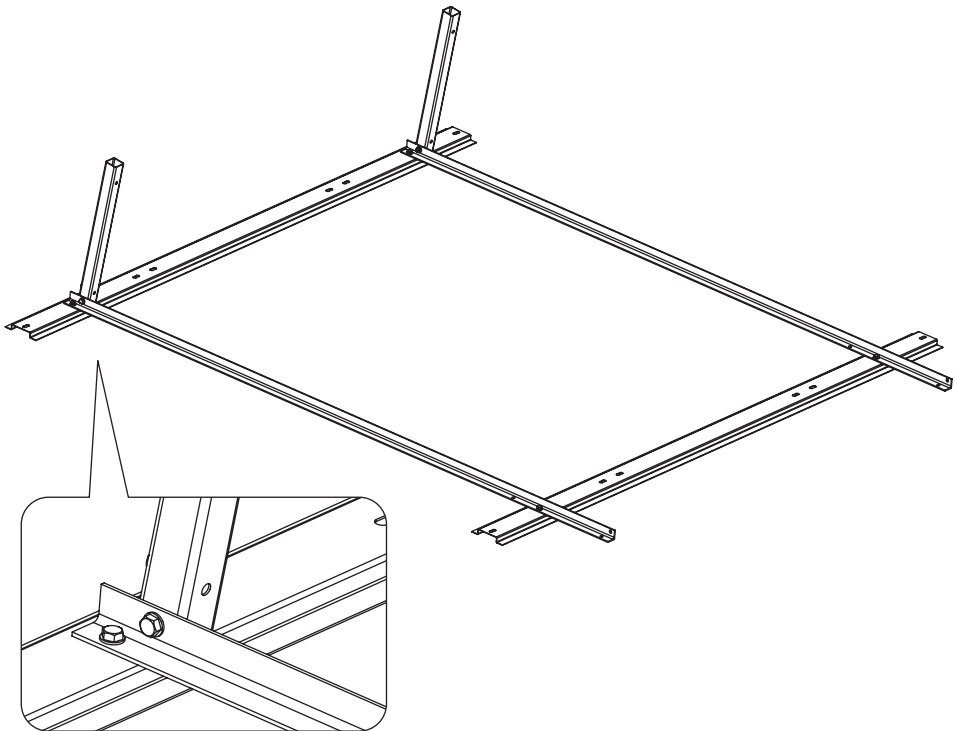
**Figure 2:** Base assembly layout.



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## Step 4

Bolt the Outer SHS sections to the Angle Frame Base using a long M8 bolted joint, as per **Figure 3**.



**Figure 3:** Attaching the Outer SHS section to the frame. Notice the use of the inner bolt hole.



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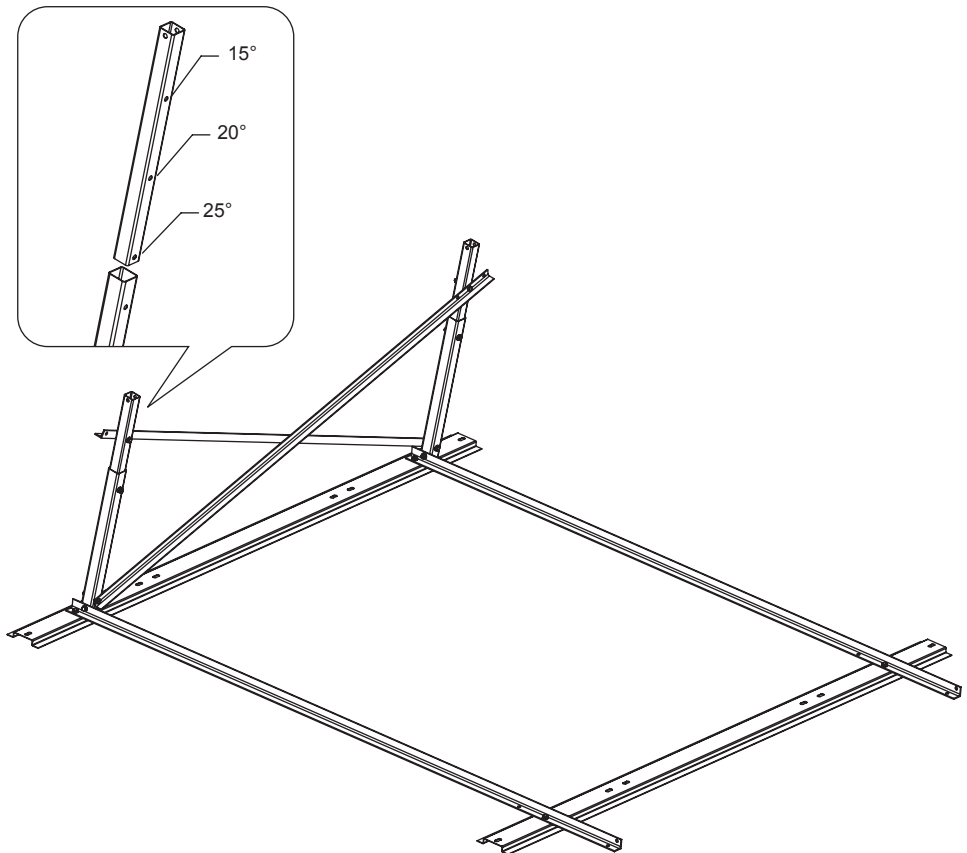
## Step 5

Attach the Inner SHS sections and Rear Cross Frames with long M8 bolted joints.

**Important:** At this stage the angle of the panel must be selected. See **Figure 4**.

## Step 6

The bottom mounting point of the rear Cross Frame is on the lower end of the Outer SHS.



**Figure 4:** Adding the Inner SHS part and selecting the panel angle.

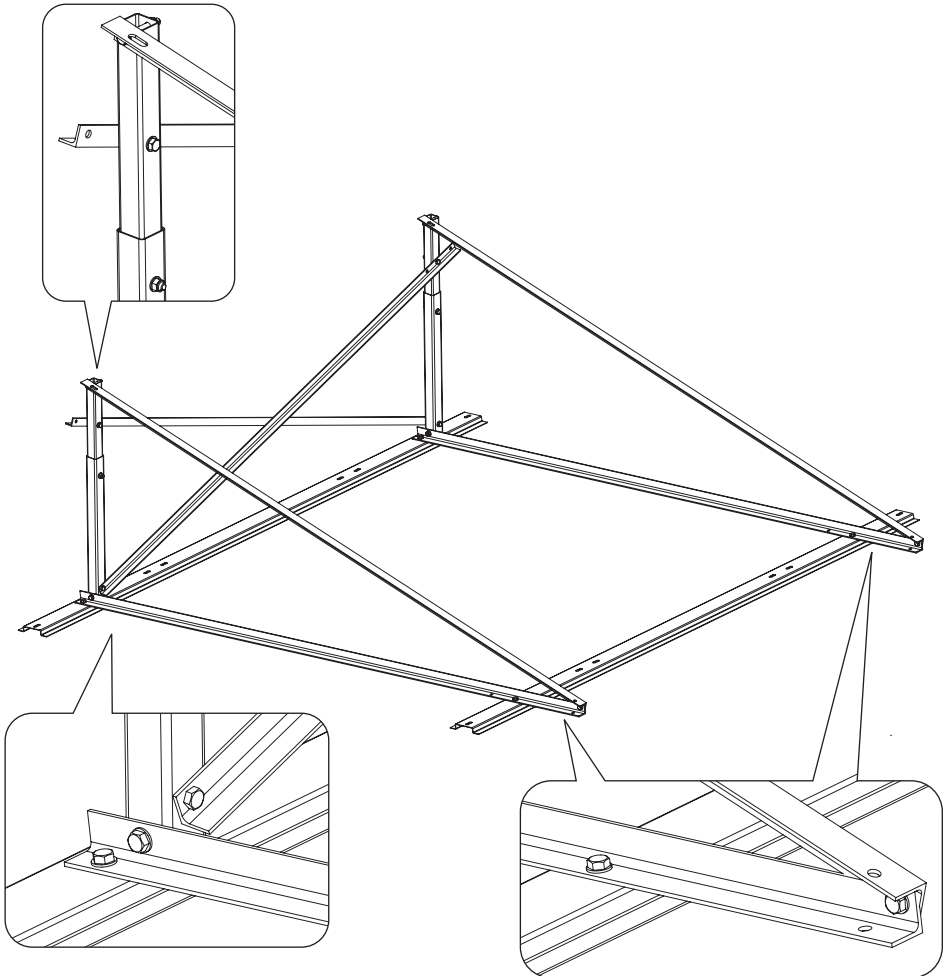


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## Step 7

Bolt the two remaining upper angle frame sections to the base assembly as per **Figure 5**.

A short bolted joint is used on the lower attachment and a long bolted joint on the top attachment. Note that the slot of the angle should be at the upper side.



**Figure 5:** Addition of remaining Angle Frame sections.



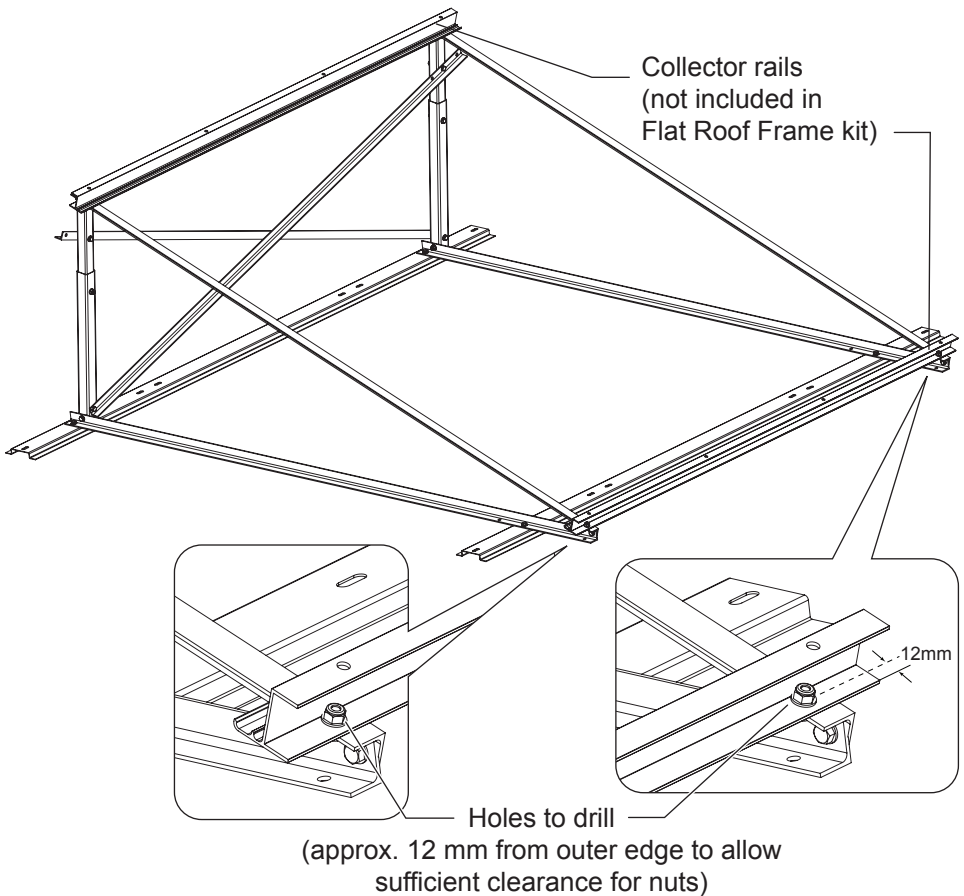


# Installation Guide

## Step 8

Drill holes suitable for M8 bolts at the two bottom ends of the collector rails as shown in **Figure 6**.

Attach the lower collector rail to the Angle Frame as shown using two short bolted joints.



**Figure 6:** Attaching the lower collector rail.

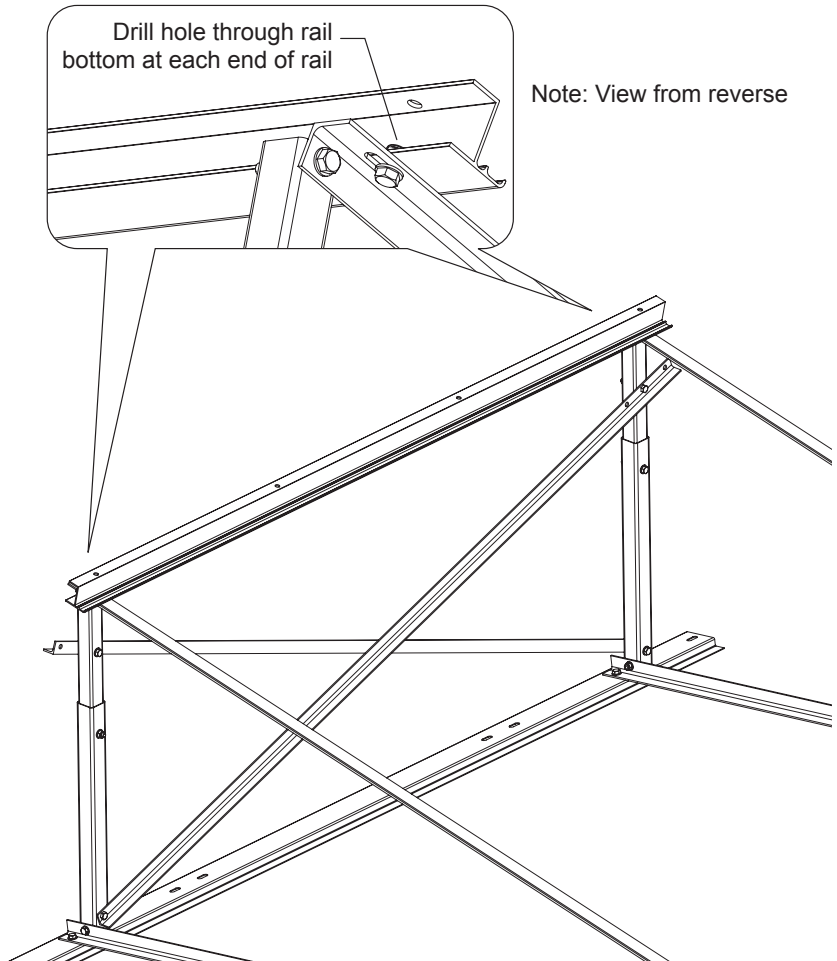


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## Step 9

Attach the upper collector rail to the slot of the top of the frame using two short bolted joints as per **Figure 7**.

**Note:** The slot of the angle accommodates two different sizes for AP and CB collectors.



**Figure 7:** Attaching the upper Collector Rail (CB-type collector location shown).



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## Step 10

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The frame should now be checked for squareness and fixed to the roof.

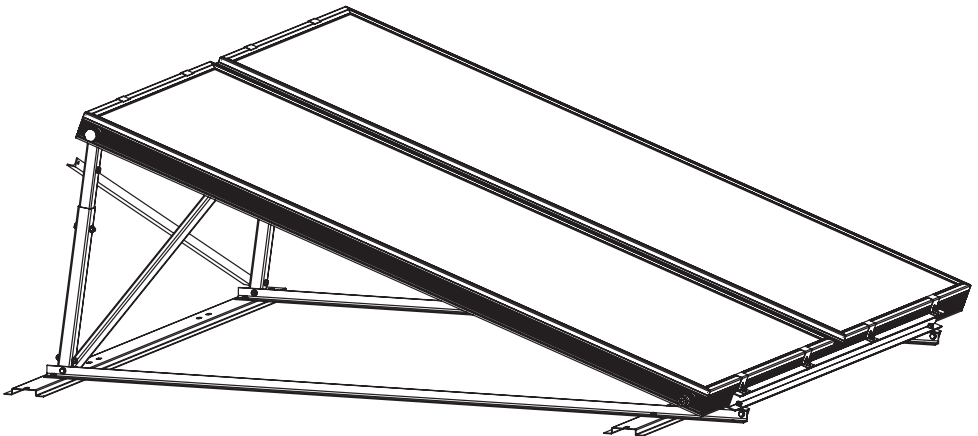
The installer shall provide the suitable fasteners to attach through the mounting rails to the roof. The fixing locations should be structurally secure and appropriately sealed.

## Step 11

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Place the collectors onto the frame and attach the connections between the two panels. The collectors should be evenly spaced about the centreline of the assembly. See **Figure 8**.

**Note:** In a single panel application, simply centre the panel on the frame.



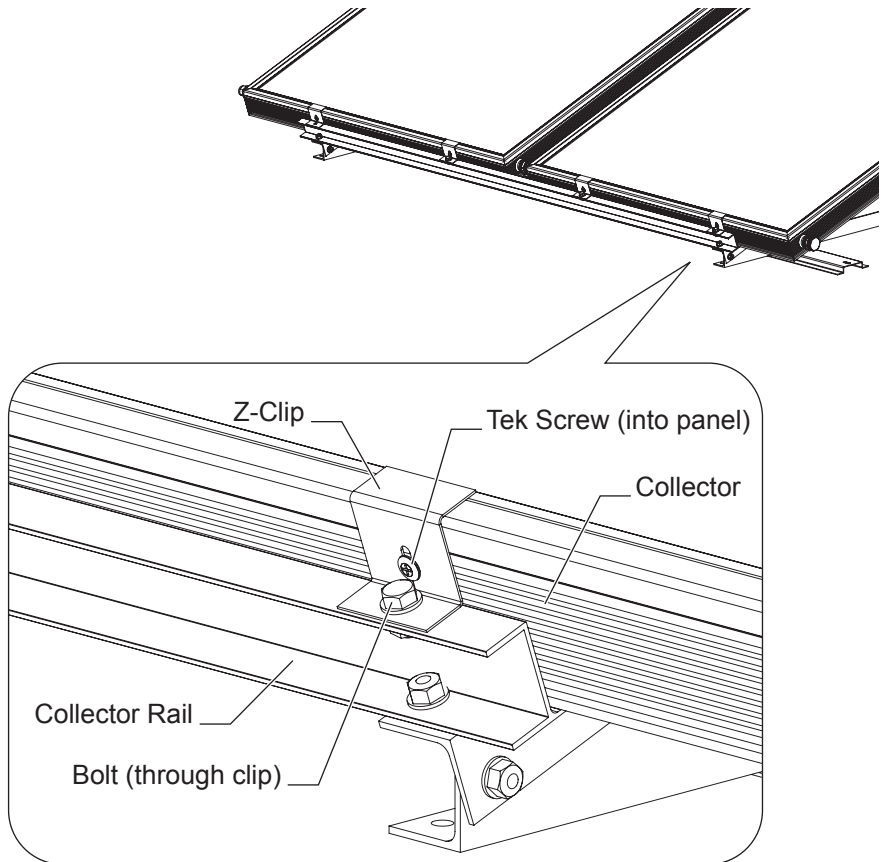
**Figure 8:** The collectors are placed on the frame in the correct positions.



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## Step 12

Add the Z-Clips to the Collector Rails to hold down the panels. They are both bolted down to the collector rail and fastened to the collector with Tek screws. See **Figure 9**.



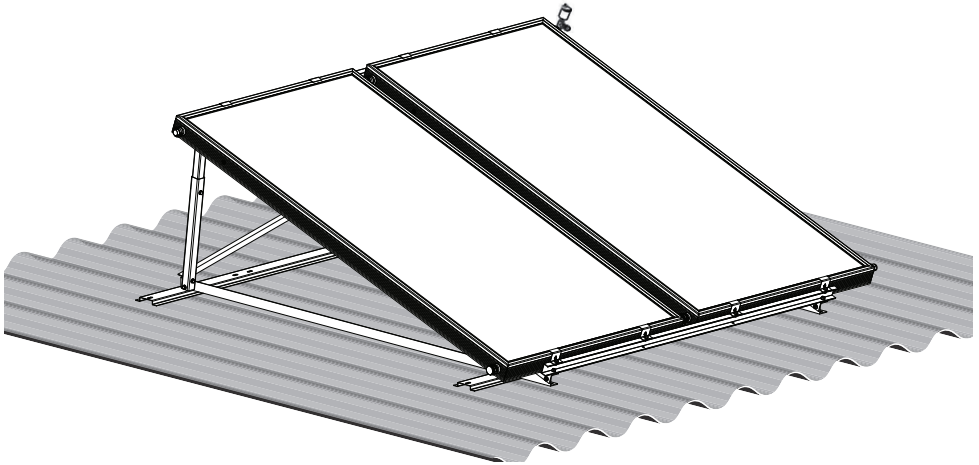
**Figure 9:** Attaching the Z-Clips.



## Step 13

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Check the frame for squareness and rigidity, then tighten all the bolts.



## Step 14

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Continue to install the solar heater according to the product installation guide supplied with the heater.



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