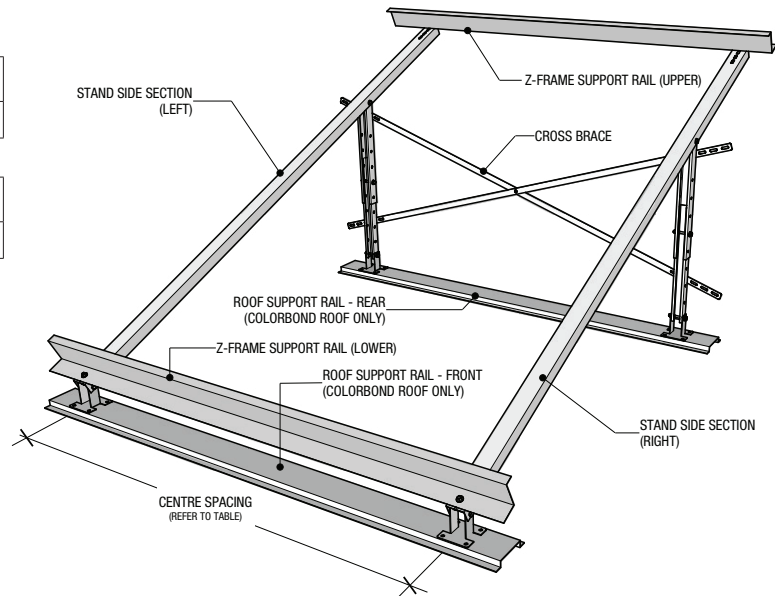


# Pumped (Split) Systems: Installing Flat Plate Collector on Flat Roof Stand (Heavy Duty)

Standard kits included with the solar thermal collector systems:

Single collector system
1 x Stand kit for single flat plate collector (K4006)

Two collector system
1 x Stand kit for two flat plate collector (K4007)



## Initial stand assembly & installation

- Attach the foot of the back leg securely to the flat roof area by one of the following methods:
  - Concrete: Fix directly into concrete using dynabolts
  - Colorbond roof (or similar): Firstly attach the foot of the back leg to the roof support rail using the supplied tek screws. Then attach the roof support rail through the roofing material and into the purlin / frame below

Ensure all possible water entry points are appropriately sealed and a barrier used between dissimilar metals (i.e. colorbond roof and galvanised foot)

*(Repeat this process for the other back leg, using the centre spacing dimensions as detailed below)*

Centre Spacing Dimensions	
1 x Flat Plate Collector	920mm
2 x Flat Plate Collector	1500mm

- Adjust the stand side section until the front foot sits over suitable fixing substrate (i.e. purlin) and repeat process outlined in step 1. (Ensure that back leg section maintains a structural angle as shown in fig 1)
- Adjust stand angle to desired position by lifting the back of the side section causing the back leg section to telescope. Once at the desired angle and the bolt holes align, fix into position using the supplied bolt, washers and nut as shown in Fig 2
- Attach double back brace to rear legs using the tek screws provided. See Fig 3

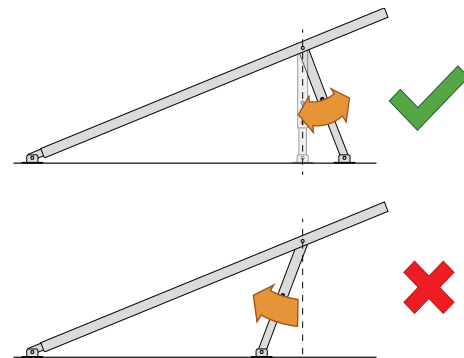


Fig 1

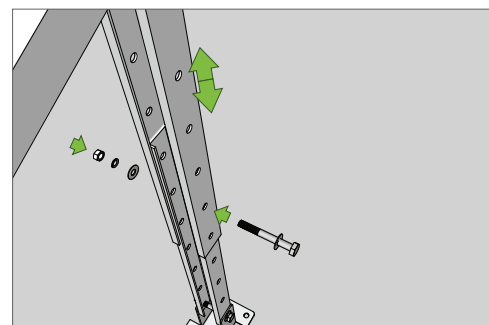


Fig 2

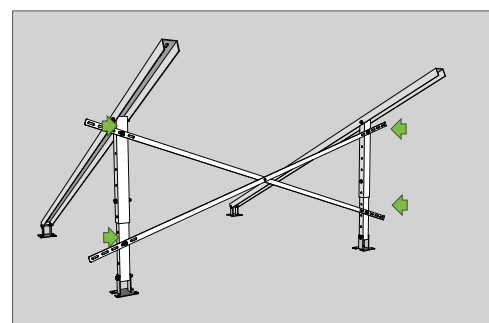


Fig 3

See the the full range of mounting angles for this frame at [www.chromagen.com.au/frame-mounting-angles](http://www.chromagen.com.au/frame-mounting-angles)

## Flat plate panel attachment

5. Using the supplied M8 bolts, washers & nuts, securely fasten the Z-frame rail to the side section through the lowest slotted hole as shown in fig 4.
6. Place the bottom L-support rail flush within Z-frame support ensuring tight fit (Fig 5).
7. Mount flat plate panel/s on frame (Fig 6) ensuring 2nd L-support is placed underneath top of panel/s for support as shown in fig 7.
8. If multiple panel installation connect panels using barrel unions provided.
9. Place 2nd Z-frame support rail over the top of the panel/s & securely fasten to the side section through the upper hole using the supplied M8 bolts, washers & nuts (Fig 8).
10. For multiple panel installation, to ensure tight fit at centre position, tek screw through middle of Z-frame rail/s (at the gap position between panels due to barrel unions) lifting L-support rails so that panel is tight up against Z-frame as shown in fig 9.
11. Repeat point 1-6 for each row of panels (maximum 4 panels/array)

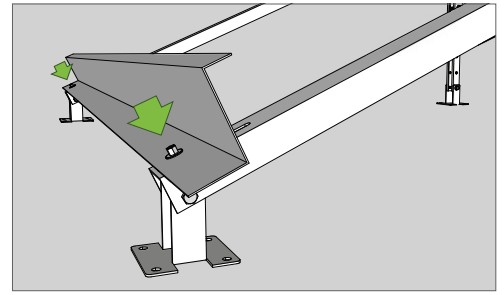


Fig 4

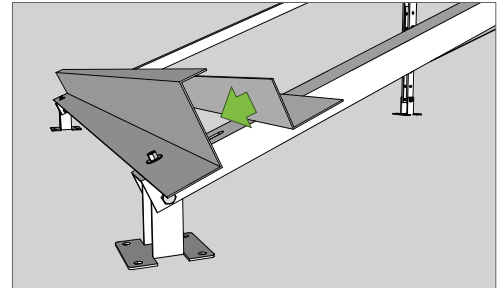


Fig 5

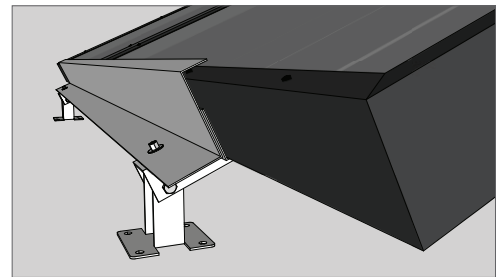


Fig 6

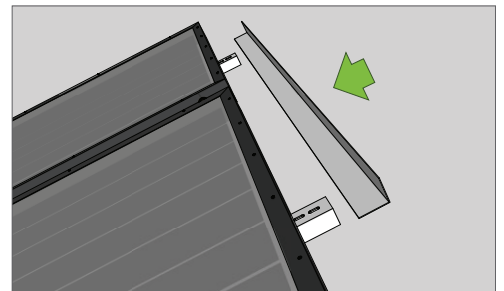


Fig 7

## Frost Protection

Frost valves are required for all solar hot water systems installed in Victoria and areas where the temperature drops below 10°C.

## Solar flow and return lines

Run the solar flow and return lines from collector/s to tank using insulated copper (or suitable high temp material) with a gradual fall to the storage tank.

Approved flashings must be used when penetrating the roof, following the flashing manufacturer's recommendations

## Sensor wire

The solar sensor wire will need to be run with the flow and return lines from collectors to tank. Make sure the sensor wire is inserted into the sensor fitting and sealed. Make sure the sensor wire is protected from damage. If this wire is cut or broken it will need to be replaced.

**Ensure the sensor wire does not come into contact with the collector or tank flow and return line, as very high temperatures can interfere with the sensor wire and cause the solar controller to malfunction.**

**Care should be taken to ensure that the sensor wire is protected from damage. The use of protective conduit is advised in high traffic areas and to protect against damage by wildlife / rodents.**

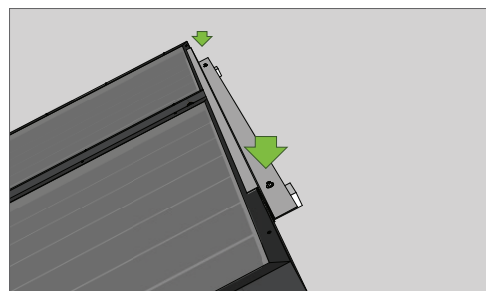


Fig 8

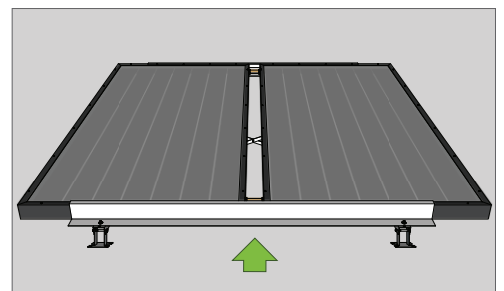


Fig 9

NOTE: Illustrations within this document are indicative only.



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