

IMAGINATION SOLAR LTD



Installation Guide A4:

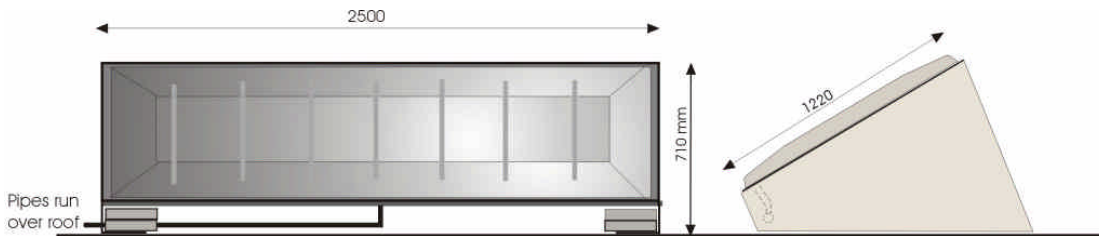
Mounting Panels On a Flat Roof or Wall



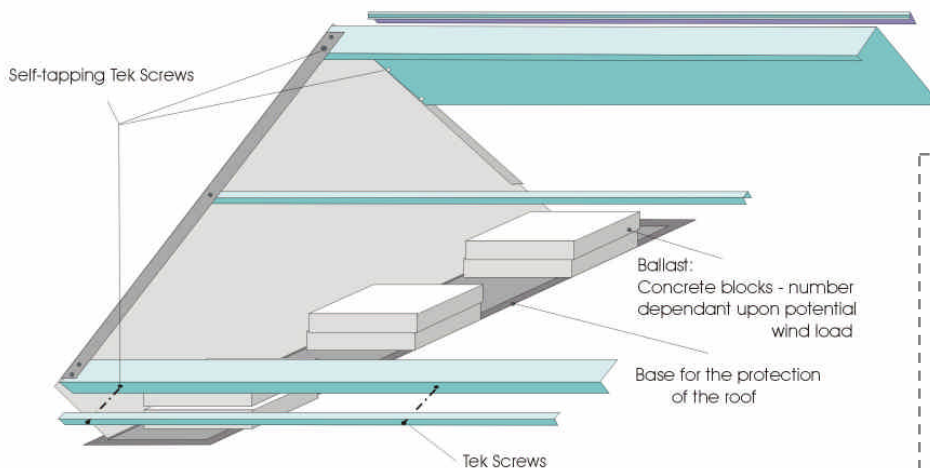
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A4.1 Mounting collectors on a flat roof or wall

The aluminium frame supports the collector at 35° to the flat roof. The frame is not bolted to a flat roof, but held down by ballast, so the integrity of the flat roof need not be compromised. When installing flat roof mounted collectors it must be considered as to how pipes will run from the back of the collector, into the building whilst ensuring drainback. It is recommended that these are run inside 110mm or 68mm UPVC pipework for protections from weather, birds and vermin. Rest the pipes on concrete blocks and fix down with pipe clips of a minimum 1:20 gradient.



mounting of the collector

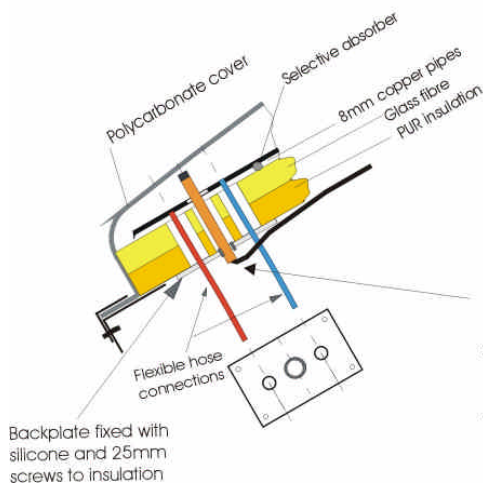


Ballast:
 Dense concrete blocks (not breeze blocks) should be used for ballast – a suitable standard size is 440 x 215 x 100mm.

For up to two storeys use 12 blocks in rural areas and 10 blocks in urban areas as a guideline. In particularly windy or heavy-weather prone areas then more ballast should be used, subject to allowable roof loadings.

Roof structure must be adequate for the weight of ballast to be used. If not then an un-ballasted mounting method must be used, fixed to roof mounting points or with loads transferred by brackets to adjacent external walls.

Fitting the Light Sensor (if applicable)



- 1 Push the sensor inside the collector, till it hits the transparent panel cover, then pull it back 5mm.
- 2 Mark the depth on the pipe, remove it then cut the pipe 1.5mm longer then marked. Score the pipe with a knife and snap it, do not saw.
- 3 Insert the sensor again.

A4 Figure 1: Mounting and fixing detail

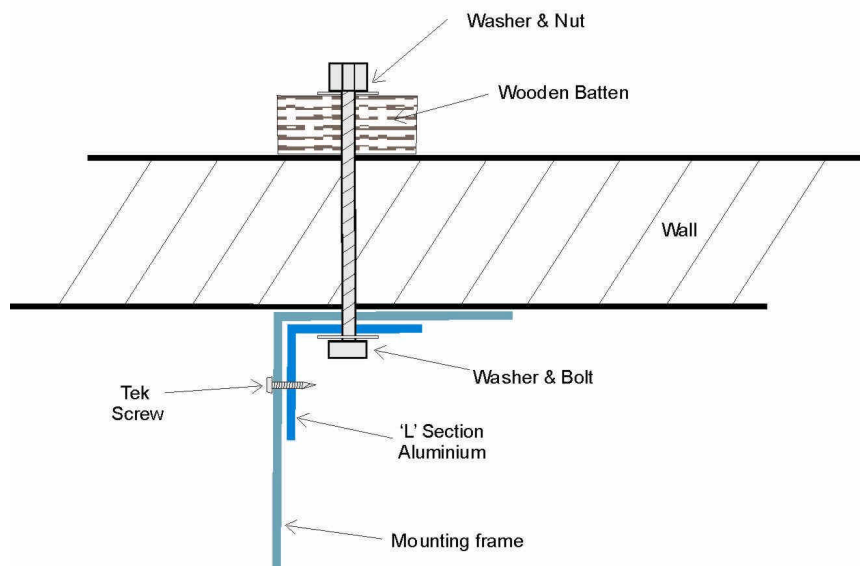
A4.2 Using Frame for Wall Mounting



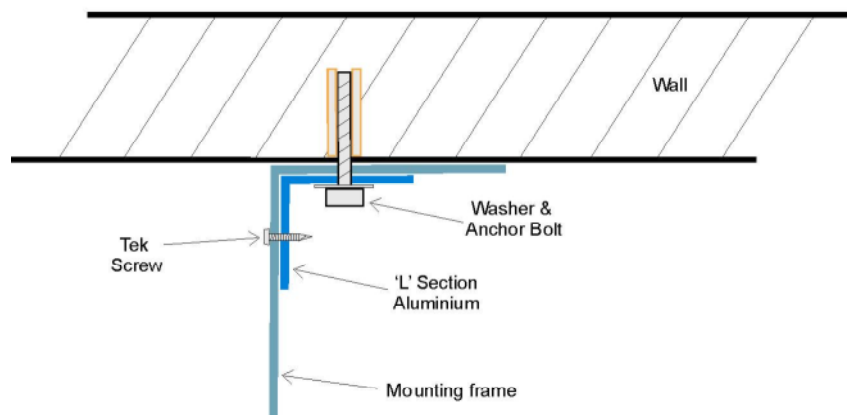
The same frame may also be used for wall mounting collectors, for example on the gable end of a south facing wall if required. The panel is held at an angle of 55 degrees to the horizontal, such that the frame does not project more than 710mm from the wall at the base.

The frame is bolted securely to the wall, preferably right through into the loft space where possible. An extruded aluminium 'L' profile is used to spread the load over the frame externally. Internally a wooden batten is used to spread the load over the internal wall of the loft space. Total weight <50kg.

If the wall is a substantial solid (not cavity) wall then large anchor bolts may be used. Consult structural engineer to confirm suitability of wall.



A4 Figure 2: Frame bolted through wall



A4 Figure 3: Frame fixed using anchor bolts