

# **PLUMBERS INSTALLATION INSTRUCTIONS**

“For closed loop evacuated tube collector”

The collector has 4 x 8mm sliding bolts with nuts within the base frame work , these are for bracketing purposes.

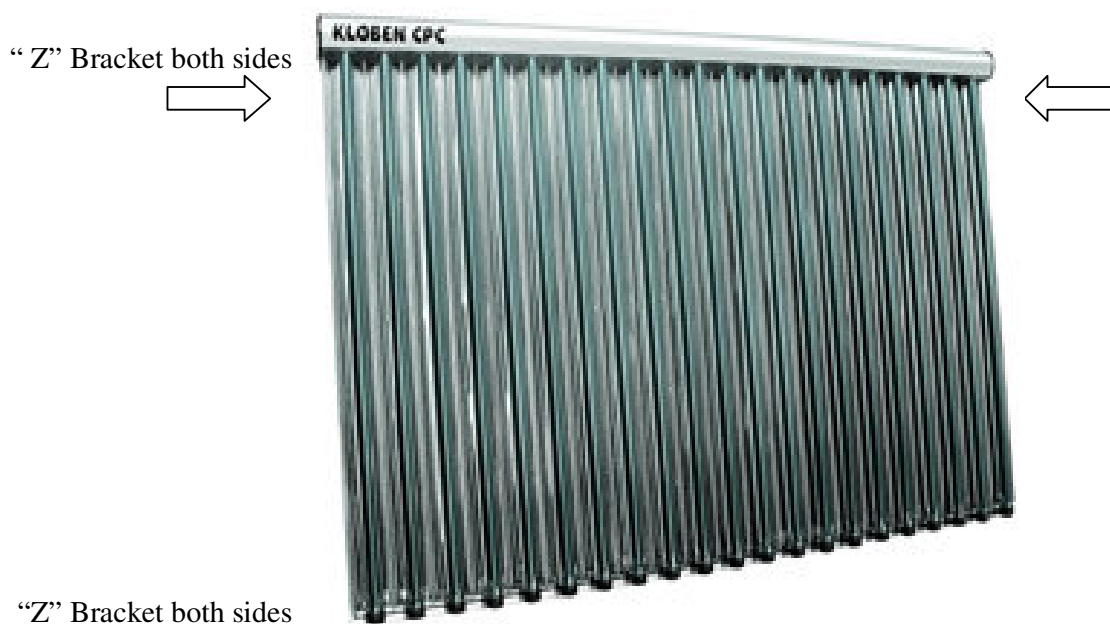
Manufacture from heavy duty stainless steel 4 pre drilled ‘Z’ brackets , attach bracket to 8mm bolt and secure to roof

The panel now should be secure, remember **CAUTION** in high wind areas.

**KEEP COLLECTOR COVERED UNTIL COMMISSIONING IS COMPLETE**

**A LINEN SHEET IS ACCEPTABLE, YOU ARE ONLY BLOCKING OUT LIGHT**

**Sensor pocket is just under Flow or Return pipe connection**



Either side of the panel can be used for water FLOW and RETURN

**NOTE: FLOW = hot water pipe from outlet of panel to integrated air bottle in pump station**

**NOTE: RETURN = cold water pipe from top of the pump-pump side to inlet connection on the panel**



A 15m sensor wire is labelled as “Collector sensor”. You can cut off the sensor head and run the sensor cable under the flashing being careful not to have the cable touching any part of the copper piping because if the pipe is hot it will cause a fault reading at the controller, then insert into sensor pocket(remember to seal pocket with silicone afterwards) on flow side of collector and join cable up again under the roof to pre run sensor cable (speaker wire)with an oil packed electrical strip connector otherwise if it is convenient run the 15metre sensor cable in one piece at that time

The remaining 2 sensors are labelled as “Tank sensor” and “Inlet sensor”  
The “tank sensor” needs to be inserted as high as possible on the hot water cylinder either into a provided cylinder sensor pocket or make a neat penetration from the cylinder casing and peel back some of the insulation carefully(USE A STANLEY KNIFE AND CUT OUT THE INSULATION AS A FOAM BLOCK) from the cylinder walls and insert the tank sensor between the insulation and the cylinder wall as tight as possible then replace foam block and seal casing hole.

The “inlet sensor” needs to be placed in the bottom of the cylinder just above the electrical element or approximately 150mm above the **BOTTOM** of an internal heat exchanger.

The system components are now installed all you have left to do is commission the sytem



## Commissioning system

### Turn on the power to the solar controller

With the filling station fill it with good quality water/glycol ,connect the 20mm pipe end from the **filling station** pump connection to the top of the right side of the solar station supply ball valve(turn valve on) located underneath the RELIEF valve . **Turn the BLUE handle located above the pump ¼ turn clockwise.**

With the remaining pipe from the top of the **filling station** connect this to the supply ball valve(turn valve on) at the bottom right of the solar station , its just below the flow valve.

Connect the supplied stainless steel pipe connector to the 20mm connection next to the Relief valve and attach to the galvanised bracket , connect expansion vessel to the base of the galvanised bracket assembly.

**Remember at this point the collector(s) should still be covered** , next turn the pump filling station on , the water/glycol will be pumped to the top filling valve,then upto the panel and back down through the solar station then to the heat exchanger and

back to the ball valve at the bottom of the solar station and return to the ( tank return) top of the filling station .

Watch carefully in the tank return pipe that the water/glycol coming out has no aeration or bubbles in it , this is the **key point to the exercise-run for 20 minutes to be sure**

When you are satisfied there is no air bubbles in the system (turn off) the bottom supply ball valve on the solar station first( keep pump filling station running) look up at the pressure gauge on the solar pump station when that reads between 300-400kpa turn off the top valve on the solar station at this point turn off the pump also.

If you have overpressurized the system to say 400kpa use the relief valve to bleed the excess from the solar station until the gauge reads in the range of 300kpa.

**You can now take the protective covering off from the collector.**

You now need to set the flow rate as per the specified flow chart.

The solar controller will allow you to manually run the solar pump for this purpose ,at the bottom of the controller press where it indicates “PUMP” as you do this use a HEX key to adjusting clockwise to set the flow rate , congratulations!!you have successfully commissioned your system installation.

**Flowrates** = Litres per minute (L/PM)

KT14 is 2.5m<sup>2</sup> = 2.0 L/PM

KT18 is 3.0m<sup>2</sup> = 3.0 L/PM

KT21 is 3.8m<sup>2</sup> = 4.0 L/PM

KT28 is 5.0m<sup>2</sup> = 5.0 L/PM

**CHECK FOR LEAKS    CHECK FOR LEAKS    CHECK FOR LEAKS**

The leaks if any may take awhile to come through.....

**If** the system loop has any leaks in it the pressure will drop below the specified pressure range ,the tell tale sign is the pump becomes noisy you will need to fix the leak and repeat the commissioning process

The Alpha solar controller power indicator is lit-up , if it is a reasonably bright day it will generally take about 10-20 minutes for the first heat cycle to start.

**ALWAYS READ THE INSTRUCTIONS MANUAL FIRST**

When the first heat cycle starts it means the temperature in the collector is 12 degrees higher than the temp of the base sensor of the HWC , when this happens the solar pump station will activate and begin to cycle hot water through the solar loop

When the temperature in the collector drops to 6 degrees different to HWC temp the solar pump will shut off and the collector will have time to reheat and start the process again until the desired storage temperature has been reached.

If you are connecting to an enamelled lined cylinder such as a Rheems for example you will need to go into the controller software and change the default setting from 80 deg C to 70 deg C..... please see agent/distributor code for access

**FROST FUNCTION FOR INSTALLATIONS WITH GLYCOL-WATER**  
**ONLY is default setting to OFF**

On the “Antifrost function” the sensor at the collector detects the temperature is at 4 degrees , the pump turns on and through reverse heat exchange sends warmer water from the cylinder coil to the panel to raise the collector temperature , avoiding the water freezing

This manual is a guide to help you with the installation process , you should find it helpful

ANY QUESTIONS CALL ME ON 07-5712493 or 0272299388

**Please refer to the following pictures for all the pipeline connections.**