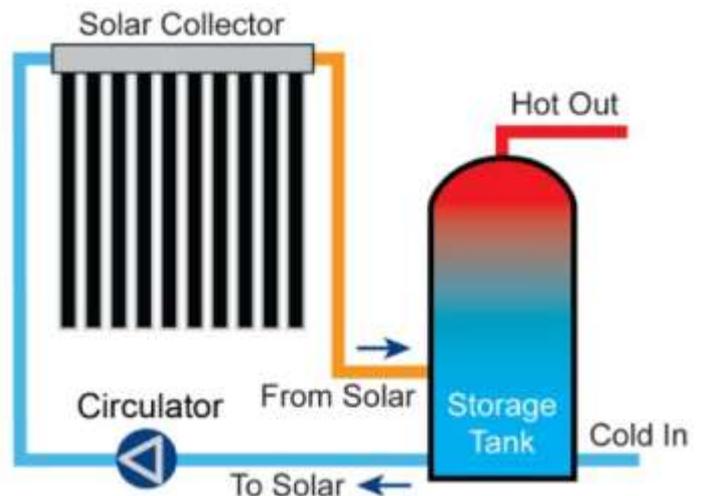


## Domestic System Information

### How does the system work?

1. The solar collector on the roof heats up as it absorbs solar energy
2. The controller senses a temperature difference between the bottom of the cylinder and the solar collector
3. The circulator pump is activated, moving water through the collector and back to the cylinder
4. The water is heated all day using solar energy and stored in the cylinder



### Understanding the controller display

The screen shows you how hot your solar heated water is and logs the total energy harvested. Change the display by pressing the up or down arrows.

COL = Temperature of Collector on roof

TSTB = Temperature of Store Base (bottom of hot water cylinder)

TSTT = Temperature of Store Top (top of hot water cylinder)

h P1 & h P2 = Operating hrs pump & element

kWh = Total solar energy harvested in kWh

MWh = Total solar energy harvested in MWh

### Automatic Boost Control

The controller has a built in timer to heat the cylinder using electricity if there is not enough solar energy. This will happen at preset times of the day, generally 5pm to 7pm, if the water isn't hot enough. Leave the black switch in the middle position for this function to operate. It can be disabled completely by sliding the switch to the left (☉) position.

### Extra Boost Control

If you immediately need to heat up the hot water cylinder water using electricity you can use the controllers' BOOST function. Push the UP arrow button until it displays COL and then push the UP arrow for 3 seconds. It will display BOOS and a timer will countdown for 2 hours of boost. This will then automatically switch off after two hours and resume normal, solar operation.



**IMPORTANT  
INFORMATION**



**READ ALL  
BEFORE FILLING  
CYLINDER**

## **Information for Apricus Installers**

Inside this folder you will find:

<b>Installation Information</b>	<b>This sheet - take away once commissioned</b>
<b>Open &amp; Closed Loop Plumbing Schematics</b>	<b>Leave these sheets in the folder with the controller manual</b>
<b>Wiring Diagram</b>	
<b>Solar Controller Quick Setup Guide</b>	
<b>Domestic System Information</b>	<b>Put at front of folder for customer to see</b>

### **Installation Information**

- ✓ Ensure pipework is installed as per the **Plumbing Schematic**. N.B. It is important that there is NOT an isolation valve on the solar return line to ensure pressure can always be released through the cylinder during stagnation or in case of a fault with the pump or controller.
- ✓ All insulation exposed to sunlight should be wrapped in UV stable tape or painted.
- ✓ Ensure insulation is pushed hard against the collector.
- ✓ Wire the controller and hot water cylinder element/s as illustrated in the **Wiring Diagram**. Ensure that ripple / off-peak control is not active for the controller and pump circuit. Using the solar timer is the most efficient way of controlling the element and ensures maximum savings. Contact us if using an off-peak tariff for element control.
- ✓ Programme the controller according to the instructions in the **Quick Setup Guide** included. Refer to the manual or contact us for any further settings or fault finding.
- ✓ Check system operation by ensuring temperature increase in cylinder as pump circulates water from collector. It is normal for collector to remain at static temperature as heat is slowly drawn from collector.
- ✓ Put sheets back in to this folder and stick close to the cylinder or controller, using the tape on the back for future reference.

Contact us if you need any further technical guidance

07 312 3382

**IMPORTANT  
INFORMATION**



**READ ALL  
BEFORE FILLING  
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## **Solar Controller Quick Set Guide (AL E HE)**

The new AL E HE solar controller comes with a Commissioning menu for basic settings. The information for this is on the next two pages. All the other settings are pre-set at the factory to be standard for most systems. The timing of the boosting period for all systems should be checked, see below. For Closed Loop system installs there are a couple of additional settings to adjust after Boost Timer Settings.

For more detailed information refer to the controller manual or contact us.

### **Boost Timer Settings:**

1. Commissioning menu will appear when first starting the controller. Set the **Time** and adjust **S Max** – Store Maximum Temperature – set to 5°C less than maximum cylinder temperature rating (Factory Setting 70°C).
2. Once commissioning is finished scroll through display till you cannot go further, press & hold down arrow for 3 seconds for adjustments below.
3. Scroll through display using down arrow until t1 O. This is time that electric boosting will turn on, adjust according to households need, Factory Setting 17:00.
4. Scroll on to t1 F. This is time that electric boosting will turn off, again adjust to households needs, Factory Setting 19:00.
5. Two more boost periods are available on t2 O / F and t3 O / F. This can be set for a morning boost if the cylinder is small for number of occupants or they are running out of hot water in the morning. Again, set for a short period, 1-2 hours.

### **Closed Loop System Settings:**

Adjust these additional settings for Closed Loop Systems.

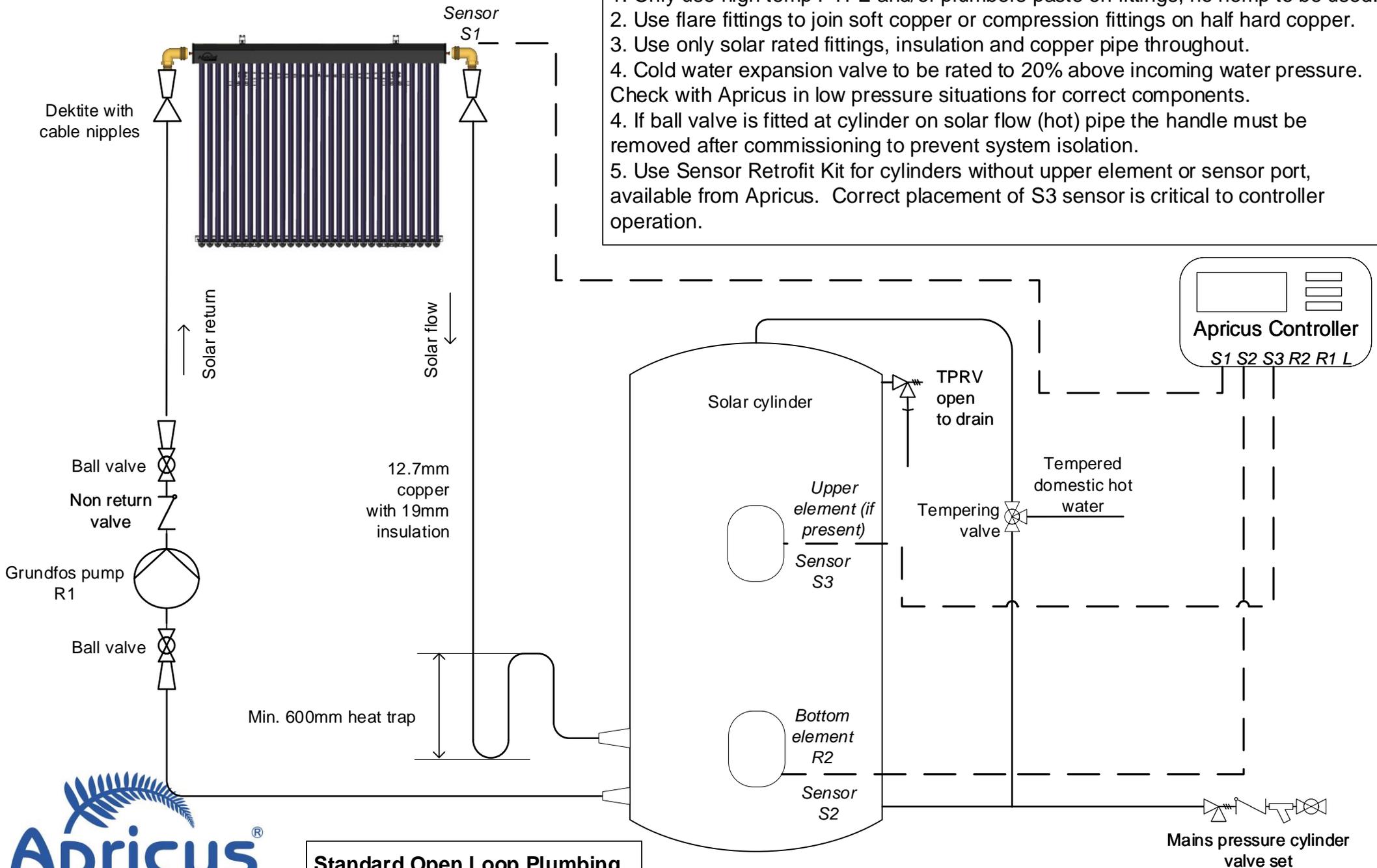
1. Scroll back up to OCF – Antifreeze option – and turn OFF, Factory Setting ON.
2. Scroll down to MEDT – Antifreeze type – and set to 1 (Propylene Glycol).
3. Scroll down to MED% - Antifreeze concentration – and set to concentration, usually 30%.

Contact us if you need any further technical guidance

07 312 3382

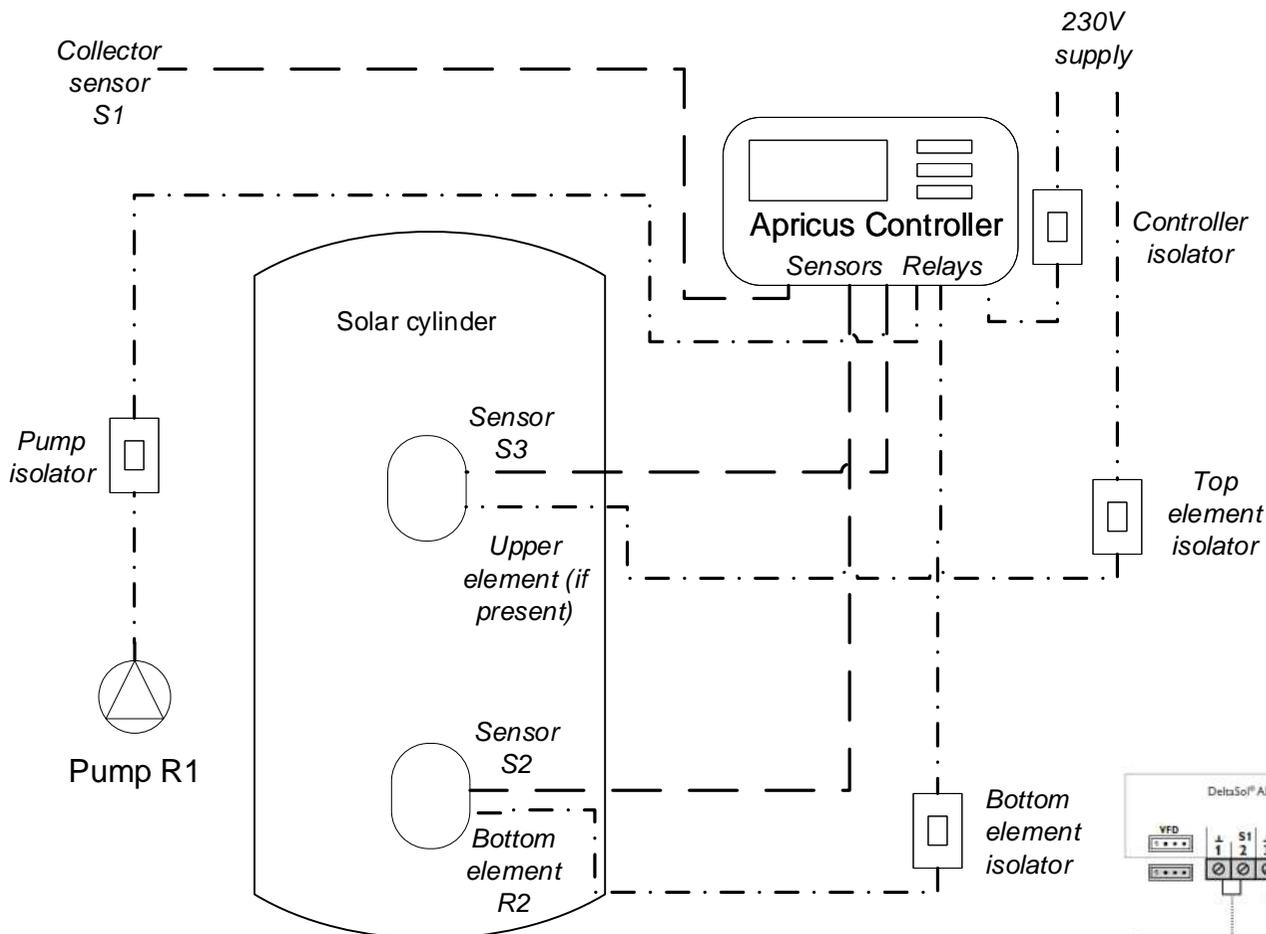
**Important Information for Installers:**

1. Only use high temp PTFE and/or plumbers paste on fittings, no hemp to be used.
2. Use flare fittings to join soft copper or compression fittings on half hard copper.
3. Use only solar rated fittings, insulation and copper pipe throughout.
4. Cold water expansion valve to be rated to 20% above incoming water pressure. Check with Apricus in low pressure situations for correct components.
4. If ball valve is fitted at cylinder on solar flow (hot) pipe the handle must be removed after commissioning to prevent system isolation.
5. Use Sensor Retrofit Kit for cylinders without upper element or sensor port, available from Apricus. Correct placement of S3 sensor is critical to controller operation.



**Standard Open Loop Plumbing Schematic**  
V4 11 13 18

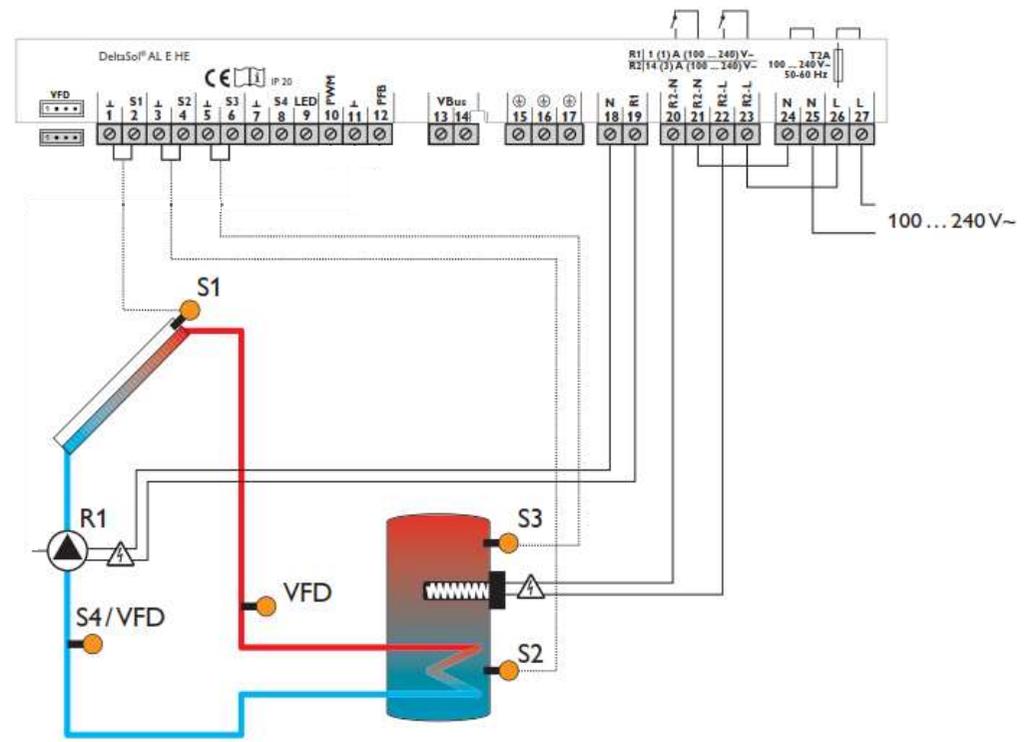




- Notes:**
1. Ensure ripple control or night rate is not on solar circuit & bottom element.
  2. Controller can be wired with two separate supplies for controller & pump, and hot water cylinder. See controller manual for details.
  3. Ignore PWM connections for pump
  4. If no upper element use Sensor Retrofit Kit from Apricus to create sensor pocket for S3



**Domestic Wiring Diagram**  
V4 – 13 11 2018



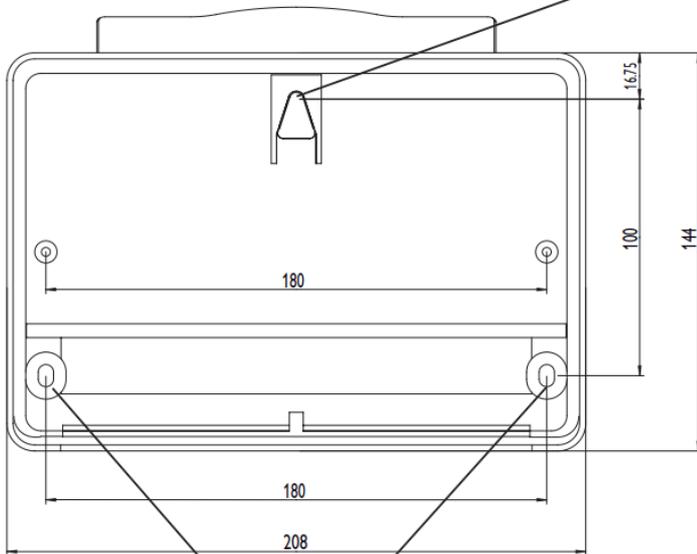
230V supply to Controller

230V supply to Top Element

Sensor cables

Controller Isolator

Upper fastening



Lower fastening

Controller Flush Box  
Sensors 230V

Bottom Element Isolator

Pump Isolator

Top Element Isolator

Cylinder Bottom Element

Solar Pump

Cylinder Top Element



Domestic Controller Pre-line Wiring  
& Flush Box Positions  
Twin Element Cylinder  
V1 – 02 11 17