

# Solar Panel Cover



26th km old National Road Athinon - Thivon  
196 00 Mandra Attikis

**T:** +30 210 5558844, +30 210 5556465

**F:** +30 210 5556268

**E:** [info@solair.gr](mailto:info@solair.gr) | [sales@solair.gr](mailto:sales@solair.gr)

[www.solair.gr](http://www.solair.gr)



## **COVER YOUR SYSTEM AGAINST OVERHEATING WITH MINOR EXPENSES**

What happens to your solar thermal system when you are away on vacation or for a very long time?

### **What are the consequences in its life span and performance?**

During the summer period when normally most of the people is away on vacation there is no hot water consumption, but this doesn't mean there is not hot water production.

The sun does not feature a switch off mode (nobody wants that) while we are absent and respectively the solar thermal system can't be switched off. So while we are away from home the tank continues heating the water and the temperature rises, as no one consumes hot water. Very

The above mentioned phenomenon is responsible for the following:

- **Salt ingress over the surface where closed and open circuit meet.**

Because of the high temperature in the closed circuit great salt ingress is created over the surface where the 2 circuits meet. So the heat transfer surface is covered little by little by a thick salt layer and the tank's performance is decreased.

- **Enamel micro cracks increase**

The pressure caused by the high temperature and the water expansion allows the increase of micro cracks over the enamel coating. This leads to anode protection strain and dramatic life span decrease. So if the magnesium anode would provide a 2 year protection this period is now decreased by half.

- **Closed circuit depletion**

Since the temperature in the open circuit reaches 100°C or above the heating transfer stops and the closed circuit bears all the thermal burden. This leads to extreme temperature increase in the closed circuit, liquid steaming and safety valve relief. As a consequence we have less liquid in the closed circuit, which leads to performance reduction and in case we do not replace the liquid we risk the tank's freezing.

- **Intense and constant safety valve function that might lead to its operating destruction or malfunction.**

As previously mentioned because of the high temperature and pressure the safety valve operates intensively to discharge the system. The high temperature that exits through the water from the safety valve creates salt. A constant and intense safety valve operation leads to its malfunction. For the solar thermal system this would mean extreme strain, life span reduction and even system's destruction risk as well.

- **Maintenance expenses increase**

Intense salt ingress, extreme anode consumption, safety valve strain and closed circuit depletion lead to solar thermal system's maintenance cost increase.

- **Plumbing strain**

When we will again demand hot water in our tub we will allow in our house plumbing steam of high temperature, as the pressure in the tank is far higher than normal. This steam will strain and expand our plumbing tubes and in case that happens frequently it might harm the tubes.

- **Burn risk**

Another consequence of the high temperature in the tank, the worst one, is the risk of severe burn. In most installations there's thermo mixing valve lack, which means that steam or, in case we are lucky, hot water will come in contact with naked skin when opening the tub. Adults might take this factor into consideration but minors won't, so a severe burn might occur.

## **SOLUTION**

For a solar water heater the solar panel is responsible for the temperature collection. So the only thing we have to do, when we are long away from home, is to cover the solar panel / panels with a special reflective cover that won't allow the solar radiation over the solar panel's surface.

This cover should be fastened on the solar panel in a way that it won't allow the wind to blow between the panel and the cover (sail), because this might lead to cover's destruction or even solar panel's removal in the worst case scenario.

## **PROLONG THE LIFE SPAN AND MAINTAIN A STABLE PERFORMANCE IN YOUR SOLAR WATER HEATER.**

The solar panel cover V2C is a two layer fabric. The first layer is a reflective one, which reflects back the solar radiation, and the second layer operates as an insulating material for the first layer. It features adjustable fasteners so as a firm covering can be obtained, without leaving any tolerance against air access in between. It can be quickly and easily installed. It is also supplied with a storage package.

### **PROTECTION AGAINST:**

- **OVERHEATING**
- **THERMAL EXPANSION**
- **DUST & SEDIMENT**

### **HIGHLY RECOMMENDED FOR:**

- **LONG PERIOD HOME ABSENCE**
- **SUMMER COTTAGES**
- **DURING SUMMER FOR SYSTEMS WITH EXCESSIVE SOLAR PANELS**