



## POOL HEATING

### **Solar pool heating panels: Installation Instructions.**

The VA solar panels you have preferred will provide you much pleasure for many years despite their simple installation which takes just a few steps. Please find these steps described in this brochure. It is important for you to read these instructions before your installation which will then be easier for you. Then, you will also see the minor details in clearer light.

Please, ask your dealer for all the accessories you will need during the installation.

#### **Panel Information.**

Type	Length in mm	Width in mm	Square areas m <sup>2</sup>	Weight in kg	
				water- filled	empty
SC200	2,080	1,250	2.50	15.50	6.5
SC250	2,580	1,250	3.13	19.25	8.0
SC300	3,080	1,250	3.75	23.00	9.5
SC400	4,080	1,250	5.00	30.50	12.5
SC500	5,080	1,250	6.25	38.00	15.5

**Caution:** These dimensions apply to a panel. A space allowance for the connection has to be reserved during the installation.

### **Panel Quantity Specification.**

Pool square area on m2	SC200 quantity	SC250 quantity	SC300 quantity	SC400 quantity	SC200 quantity
12	3	2	2	1	1
16	4	3	3	2	2
20	5	4	3	2	2
24	6	5	4	3	2
28	7	5	5	3	3
32	8	6	5	4	3
36	9	7	6	4	3
40	10	8	6	5	4
44	11	8	7	5	4
48	12	9	8	6	5
52	12	10	8	6	5

**Caution:** Reckon with approx. 70% water level in your pool for correct specification of the quantity of panels.

### **Installation and Panel Assembling Instructions.**

The solar panels can either be delivered individually or in the sets, each consisting of 1 to 10 panels, always complete with the necessary accessories for panel-to-panel connection and for connection to the water circuit. Auxiliary accessories, such as woven ropes and lug, are not included in the sets.

The first step is to choose a right panel installation place so that the panels are exposed to as many sun rays as possible. The optimum panel positioning is at the angle of  $\pm 20^\circ$  from the horizon when the panels aim southward.

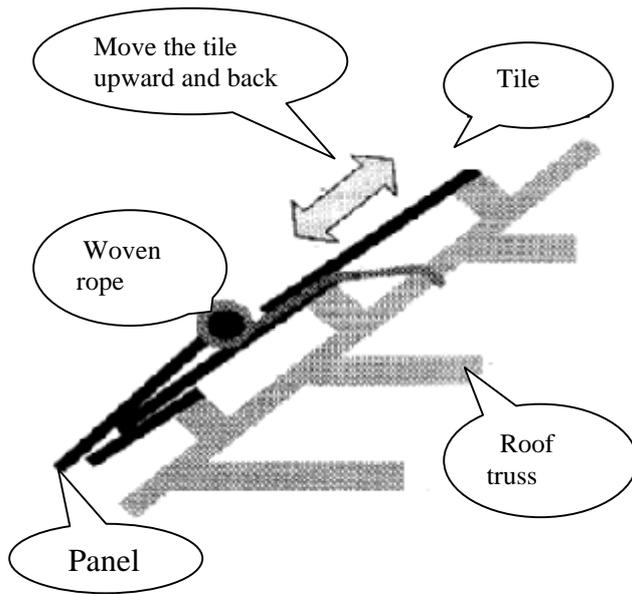
Having chosen carefully the right place for the panels and prepared everything for the installation, proceed as follows:

#### **1.) Tiled roof**

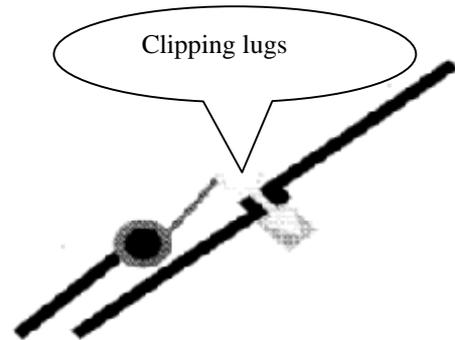
Most tiles can be shifted away or lifted to allow your access to the roof truss.

First, think it over where you exactly want to fit the panels so that they are exposed to the maximum daylight/solar radiation impact. Using the woven ropes or lugs that can be ordered with your dealer, clip the panels to the chosen points.

Some of the roof tiles are fix-secured, and this is why you will have to use the clopping lugs to secure the panels on the roof. Make a through hole in tile down to the truss, sealing it then with silicon which will inhibit water infiltration. For an illustration thereof see the figures "A", "B". Frames can be fitted under the individual panels for the installation.



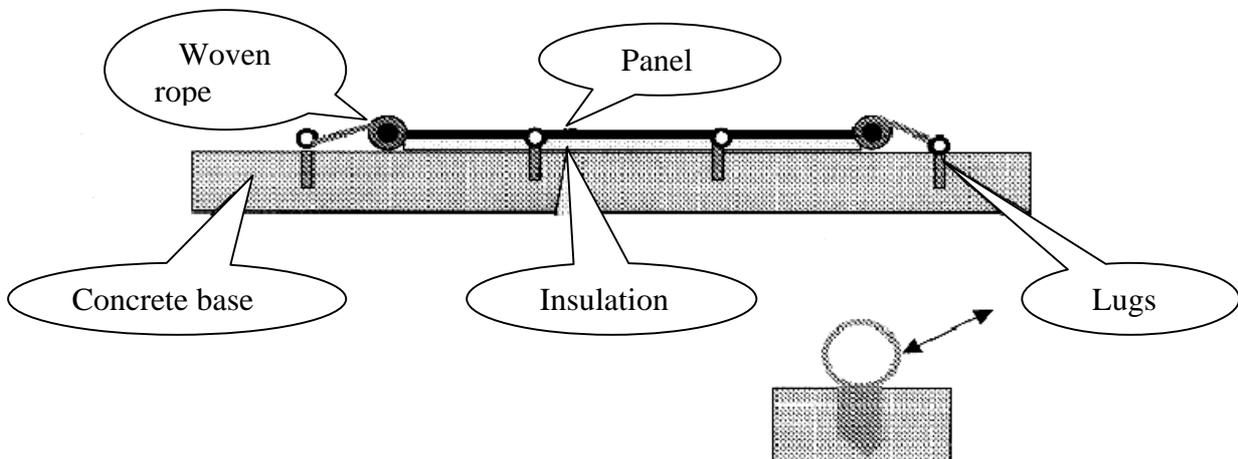
**Fig. A**



**Fig. B**

## 2.) Concrete roof

Given the concrete roof, our recommendation is to use also the clipping lugs which will help secure firmly the panels on the pre-selected position. Frames can be used under the individual panels for the installation. Proceed in line with Figure "C".



**Fig. C**

## 3.) Steel roof

Installation is similar to the panel installation onto the concrete roof.

## 4.) Various other types of surfaces

Note: Of course, there are also other types of the surfaces on which you will mount the solar panels, and this is why our recommendation is to use all the clips necessary for securing safely the solar panels.

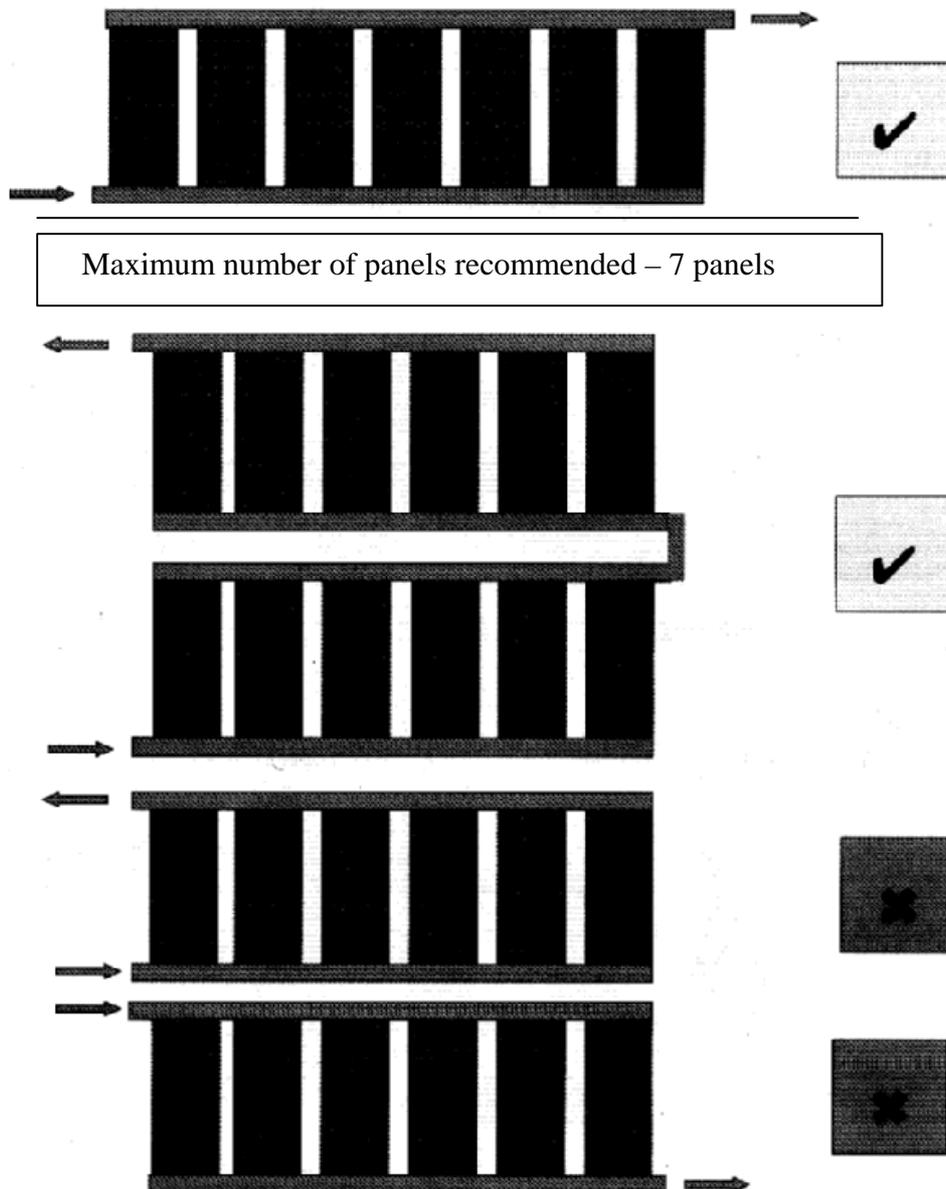
Note A: Thorough mounting is mainly important in respect of a strong wind.

Note B: In the event of a concrete or steel surface our recommendation is to use a pad under the solar panel which will thus be better protected from damages.

Note C: See Figure "D" illustrating the panel mounting method.

Note D: Never use metal strips to clip the solar panels. Panels might be burned through and destroyed by action of the high temperatures.

See Fig D for the installation instructions

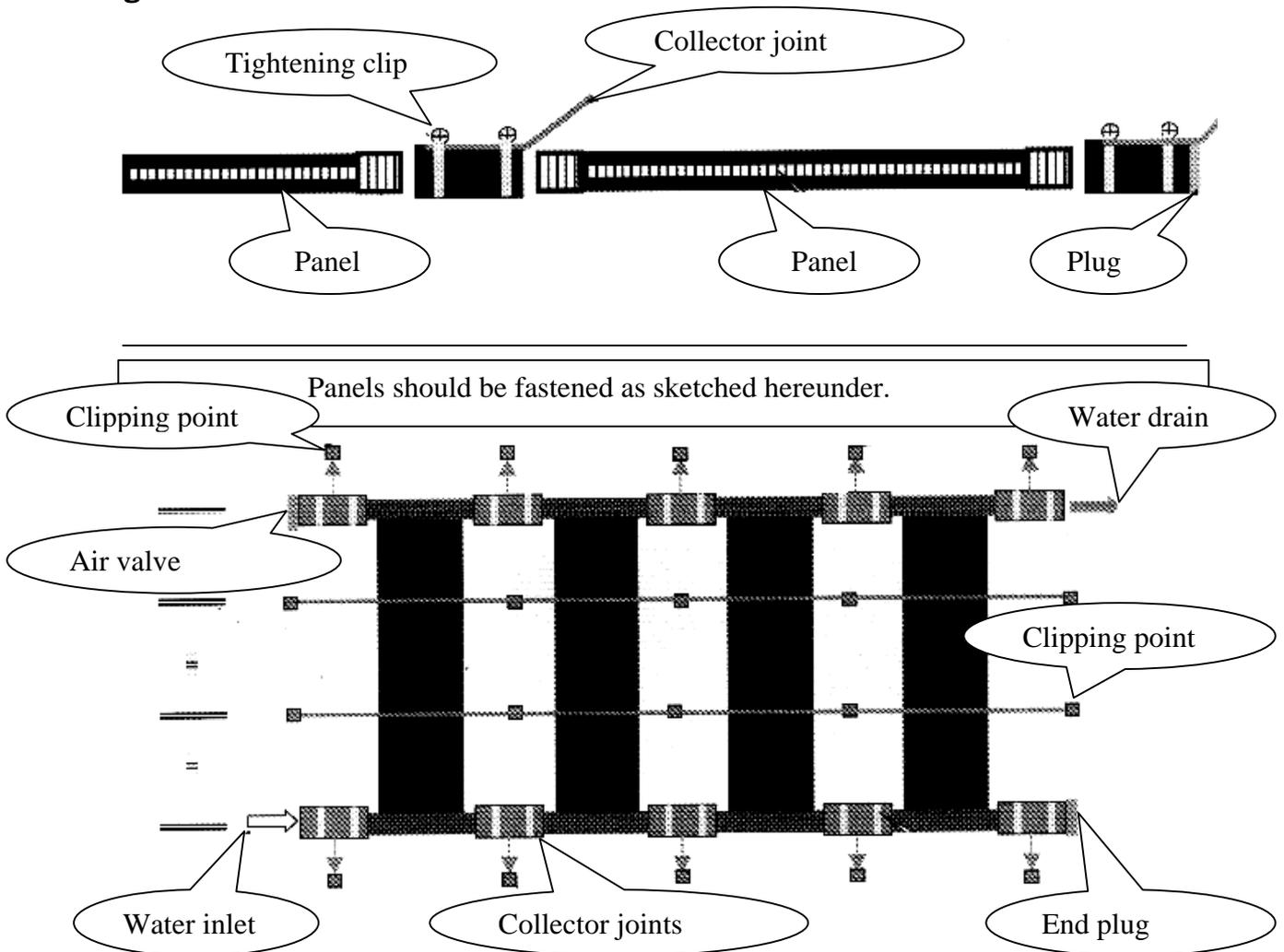


### 5.) Panel Attachment

With all the panels in place one has to attach them to each other, using the rubber collector joints. Such joint is illustrated in the Figure "E".

Note: It is important to position the input and output correctly and allow thus the water flowing throughout the entire surface of the solar panels. A blind and air valve are delivered to be fitted to the openings other than input and output that have to be installed just straightaway at the beginning.

**Fig. E**



## **Solar Panel-to-pool Attaching Instructions.**

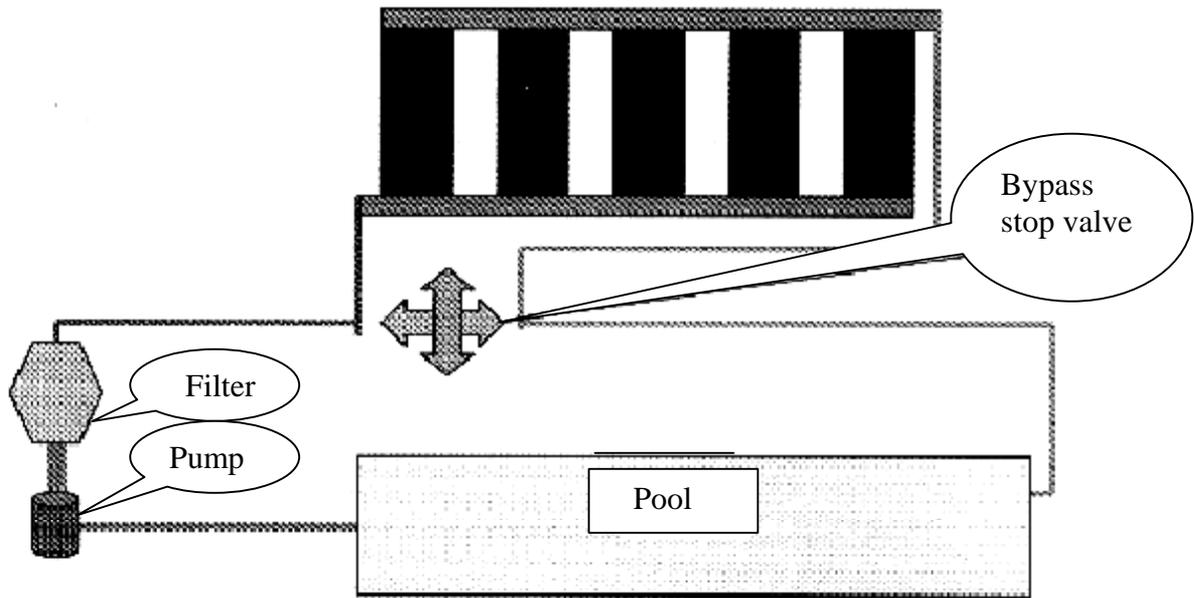
### **Installation Instructions.**

Now, with the panels fitted correctly in place, one has to attach them to the filtration circuit.

Make sure that clean water from filtration will flow into the solar panels.

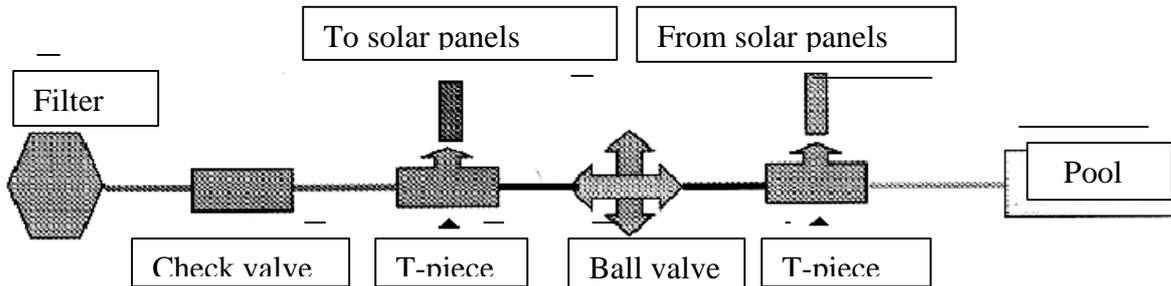
A solenoid valve and a differential thermostatic solar controller can also be added to the solar circuit. Then, the solar system can be turn on/off automatically, depending on the pool water temperature setting.

**Fig. F**



Find a suitable location for connecting the solar system to the water circuit between the filter and pool. See Fig. "F".

**Fig. G**



The last thing one has to do is to connect the pipes from the solar panels to the filtration system. These pipes should have at least 55mm and/or 63 mm in diameter. Where possible, our recommendation is to bury the whole system's lines in earth or lead them through interiors. Where the pipes are not buried, make sure they are fastened properly, embedded (best option) into the wall. It is vital as the pipes, when full of water, are very heavy and might suffer damage.

Connect the panel feeding cold water (to be heated) to the bottom outlet and hot (heated water outflow to the upper outlet). In this way only the system will work properly. With all the piped connected make sure once more that all the joints are fitted as they should be.

With whole system put in operation turn first the filtration circuit on directly, without any flow to the solar panels. With the whole system flooded use the valve to change over to the flow through solar panels.

Check the system for any leaks.

Our congratulations on your having finished the installation, which you much pleasant experience in your well heated pool.

