



P.O. Box 1703
SOMERSET WEST
7130

Solar pool heating D.I.Y instruction manual

1. You can install these panels on a pitched or a flat roof.
2. When installing on a pitched roof - north is best.
3. East and west is also fine, but if you have a choice between the two, install on the west side because your afternoon sun tends to be hotter than your morning sun.
4. Also make sure that there are no surrounding buildings and trees that may shade your panels.
5. Place panels in series on the roof.
6. Drill 6mm holes in the very top ridge of the roof .
7. It is 1 hole per panel, above and to the middle of the panel.
8. Take the 6mm nylon nails (supplied), dip it in silicone and hit the nails into these holes, leaving 1cm of the nail sticking out. See Figure 1.
9. Take the galvanised builders wire (supplied) and count 20 little (riser) pipes from the sides towards the middle and connect the wire there around the thick (header) pipe, from there circle the nail in the roof and then on to the other side of the header by the 20th riser. The panel should hang like a picture now.
10. Do this to all the panels making sure that the header pipes makes a long straight line.
11. Now that your panels are hanging, start connecting them to each other with the straight couplings supplied, creating a panel bank.
12. The following rules should be followed when you glue:
 - Sand down the fitting on the inside (not too much, just make it rough), using the sandpaper supplied.
 - Sand around the pipe (also just making it rough).
 - Make sure both surfaces (pipe and fitting) are clean.
 - Apply the pvc weld (supplied) evenly to the inside of the fitting as well as the outside of the pipe.
 - Push the fitting onto the pipe, immediately after applying the glue, allowing a little ridge of glue on the side of the fitting.
13. At the pump you need to cut the pipe coming out of the filter and leading back to the pool.
14. If there is a chlorinator, cut before the chlorinator.

15. Unscrew the piping coming out of the selector on the filter.
16. Take the thread connector (supplied) and put plumbers tape (supplied) around the thread.
17. Lubricate onto the plumbers tape with a little bit of silicone.
18. Screw this thread connector into the selector.
19. Start running your black pipe (supplied), remembering to sand and glue.
20. Cut the black pipe with a hacksaw to the desired lengths as you go along.
21. Run this pipe towards the wall using the elbow bends as you desire.
22. If the pipe that runs to the house wall is more than 2m, you should use 40mm class 6 irrigation pipe. Fittings and hose clamps for these pipes is supplied.
23. Drill 6mm holes into the wall and put the brackets (supplied) onto the wall.
24. Fasten 2 brackets next to each other at the bottom of the wall and repeat +/- 1.5m up the wall. 6 Brackets in total for a single storey.
25. These brackets are used to fasten your upright pipes to the wall. Get your vertical spacing between the brackets from your control valve.
26. Building the control valve: connect the 2 "T" pieces (supplied) with short pieces of pipe to either side of the ball valve (supplied). Connect the spring-loaded, non-return valve (supplied), with a piece of pipe on top of one of the "T" pieces, on the supply line to the panels. (sanding the valves before applying the glue). See figure 2.
27. Place this control valve upright against the wall and run the pipes further up the wall towards the gutter.
28. Use elbow fittings to go around the gutter and on to the roof.
29. The supply line to the panels comes via the non-return valve directly from the selector on the filter.
30. The supply line should be connected to the bottom of your panel bank, connecting a stopper or end cap (supplied) at the other bottom end.
31. Connect your return to the pool line (pipe) on to the opposite top end of the panel bank. Ending it off with another end cap on the opposite top end of the panel bank.
32. In at the bottom of the bank and out at the top: Hot water rises and it also gets rid of the air.
33. This is to ensure a circular motion and also not to create an airlock.
34. Run your return line down the side of the panel bank, turn the corner and run along the bottom of the panel bank towards the supply line.
35. Run this line next to the supply line over the gutter and through the brackets in the wall.
36. Connect the return line onto the other "T" piece on the control valve.
37. Run the return line out at the bottom of the "T" piece and in to the chlorinator or the return line to the pool.
38. The chlorinator must be last in line.
39. Allow the glue to dry for 24 hours before running water through the system.
40. Set your pump timer to run from 9am to 4pm in winter and 8am to 5pm in summer.
41. When starting up for the first time, you will notice a lot of air bubbling into the pool – the air is forced out. This might occur periodically for a day or two.
42. It will take +/- 3 days for the pool to reach an optimum heat level (depending on the weather).

43. Operating the control valve: Closing the valve will circulate the water through the panels – thus heating occurs. Opening the valve will bypass the panels (water takes the shortest route) and the heating is off. The non-return valve is to ensure that there is water in the system at all times, added weight against wind load. 14Kg per panel when filled.
44. Happy swimming!