MONOSOLAR - INSTALLATION INSTRUCTIONS FOR SECOND PUMP

1. Introduction

The maximum vertical distance between the MonoSolar tank floor and the top of the solar panel is normally 6.0 metres. If it is more than this, no water will circulate through the panel unless one of the items given below is included:- .
a) Drain back tank
b) Second pump - when installed, the maximum distance is increased to 11.0 metres.
The purpose of this document is to provide Installation Instructions for a second pump.

2. Contents of package

The package contains:-

- Wilo pump RS15/5 (5m head)
- 2 brass unions 1" BSPF x ½" BSPF (nut, washer & spigot)
- 2 brass fittings ½" BSPM x 10mm comp.(coupler)
- 2 wall-mounting brackets 1" x M8.
- MonoSolar PCB connector K5 (part no 07.98.66.174)
- Instruction sheet

3. Installation of the second pump

1. Using PFTE tape, etc install the fittings.
2. Fix the pump (arrow on base pointing upwards) to a wall using the 2 clips, 1" x M8), so that it is located just above the MonoSolar tank in the 10mm solar pipe circuit to the bottom of the solar panel.
3. Install the solar pipes10mm diameter in the lower panel return pipe and 8mm in the upper panel flow pipe (see diagram).

Warning! Only use 8mm copper pipe from the top of the solar panel to the MonoSolar. If a larger pipe is used, air bubbles might rise against the flow and stop the circulation.
Warning! All solar panel pipes must have a fall of 40mm/metre or better and be insulated.

4. Electrical connection of the second pump

1. Fit the connector K5 to the k5 socket on the left side of the PCB (bottom socket).
2. Install an extra cable gland in the MonoSolar cable plate and run a 3 core mains type cable from the K5 terminals (brown & blue wires) and earth terminal to the pump (L = brown wire, N = blue wire, earth = green/yellow wire).

5. Setting the speed of the second pump

Set the pump speed to the highest setting(III) to ensure that the maximum head is obtained.

6. Filling the MonoSolar (see also the MonoSolar Installation Manual)

1. Remove the vent plug on the T-piece of the MonoSolar tank. Open the water level drain valve at the MonoSolar tank.
2. Connect a filling hose to the filling tap of the MonoSolar tank and open the tap.
3. Fill the MonoSolar tank up until water comes out of the water level drain valve. Close this valve.
4. Close the vent on the T-piece, close the filling tap and remove the hose.
5. Check all pipes/connections for leaks.

7. Commissioning (see also the MonoSolar Installation Manual)

Warning:
Do not connect the MonoSolar electrically until it has been charged with water!

1. Remove plug in the end of each pump and ensure that pump shaft rotates freely. Replace plug. (Warning! Dripping water may cause stains, so use a cloth, etc).
2. When you electrically power the MonoSolar, the main pump will run continuously for approx 3 mins. The main pump will run on full capacity for

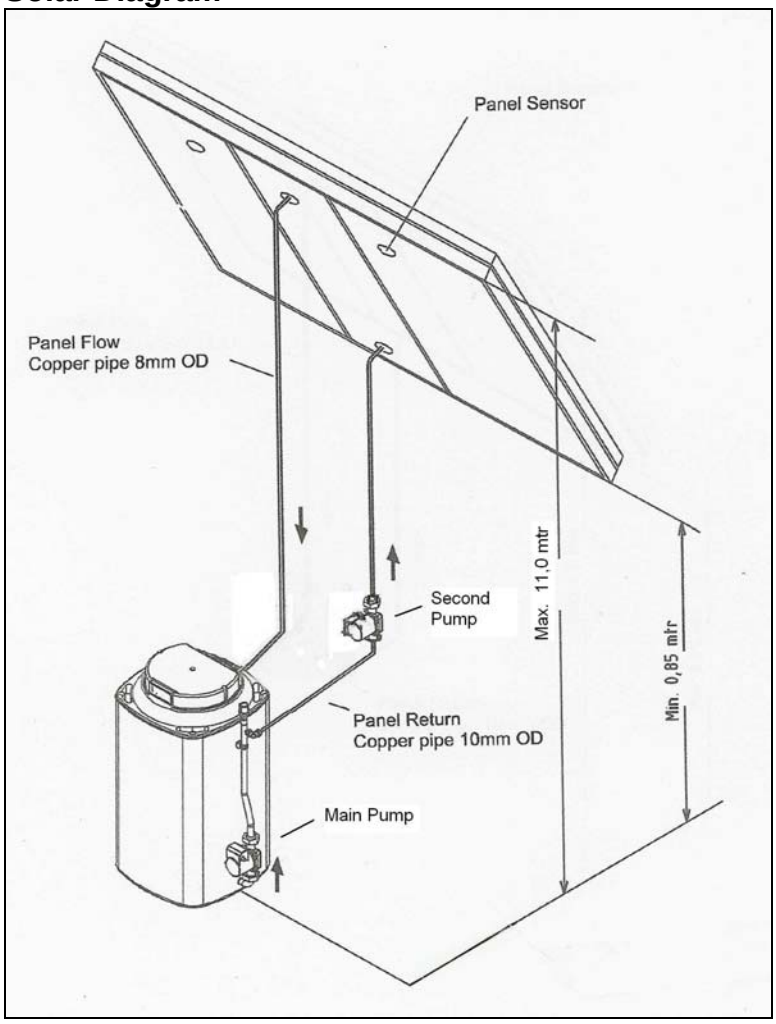
a couple of minutes to fill up the panel with water together with the second pump, then the main pump speed will start to drop and the second pump will stop. Check that the main pump is running when the second pump runs. Check, also, that there is flow by removing the air release plug from the T-piece (connects 8mm pipe to top of panel). The flow through the system can then be seen when the pump runs.

Please note:
Check the installation and the solar panel circuit for leakage.
Warning:
Do not disconnect the electrical supply when the MonoSolar is operating.

8. Maintenance

See the MonoSolar Installation Manual.

Solar Diagram



Note: All solar pipes must have a continuous fall of 40mm/m or better and be insulated (ie from the solar panel back to the tank).

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