



INSTRUCTIONS

FOR INSTALLING AND USING

the Solarlogic Maxi
and Solarlogic Maxi IE
pump groups

July 2010



Index

Product description	3
Main components and product data	4
Pump data and assembly	5
Solarlogic controller features and specification	6
Installation instructions and diagrams	7
Installation and trouble shooting	8
Contact details	8

Product description

Description

Solar pump station supplied with Solarlogic controller with molex plug in electrical connection for the solar pump

The Solarlogic Maxi has been designed for the integral mounting of the Intaeco Solarlogic controller. It also provides larger internal dimensions for the future changeover to high energy efficient pumps, both 130mm and 180mm. From January 1st 2013 EUP (the energy using products initiative), an energy efficiency index will be applied to pumps with a 0.27 (calculation rating) and below. These pumps will require a larger internal area within the insulation jacket.

The Solarlogic Maxi pump group for the circulation of glycol mix fluids through solar thermal heating applications, provides;

- filling and flushing connection points,
- fluid flow regulation
- system temperature and pressure readings,
- check valve for anti-gravitation
- safety pressure relief valve and discharge connection
- point of connection for expansion vessel and isolation
- isolation of upper and lower system levels and pump

Models

The Solarlogic twin line pump group is for RETURN and FLOW pipe connection, pumps into the solar collector, and flow back to the pump group, through the isolation valve and through the air separator. Flow into and through the hot water storage heat exchanger and return to the pump.

Connections are for 22mm copper pipe (compression)

OR

3/4" male threads with made for purpose flat face on the upper or solar panel side of the group are intended for connection to Intaeco annular type pipe size DN16

OR

A combination of both 22mm on the lower pump station connections, for 'hard' piping to the storage cylinder with 22mm copper, and 3/4" male upper connections for connecting onto DN16 stainless steel flexible pipes.



Main components and product data

Main components

Flowmeter, flow rate regulation and graduated scale, regulation range 2-12 lt/min and isolation valves for filling/flushing of the unit, connection 3/4" M with safety caps.

Pump, WILO solar STAR ST 15-6 Eco, connections 1" bsp male-130mm Class TF110, VDE, CE. A version fitted with Grundfos Solar pump is also available to OEM customers only.

Return side isolation valve DN 20 with integrated bracket, connection 3/4" M always open on one side.

Check valve activation: closure at 90° and opening at 45°. Integrated high temp check valve

Check valve opening 2kPa (200mm c.a.)

Safety group, with safety valve 6 bar certified TUV according to SV 100 7.7 - Directive 97/23/CE, vertical threaded connection to expansion tank 3/4" M bsp with flat gasket connection

Pressure gauge range 0-10 bar

Thermometer on return side, colour blue, range 0-160°C
Thermometer on flow side, colour red, range 0-160°C

Airstop deaerator, on the flow side
Traps air automatically, manual vent



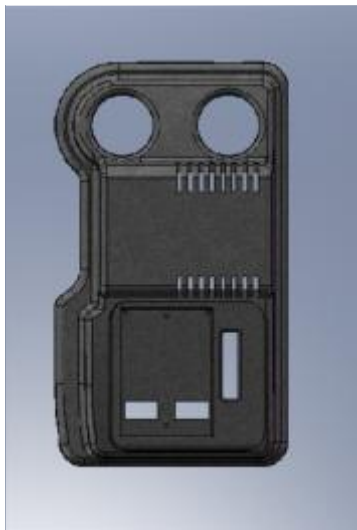
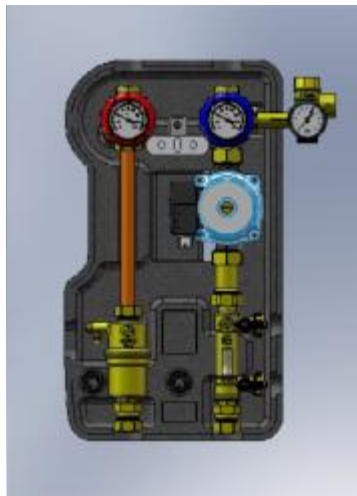
Steel wall fixing bracket, front end retainer and safety screw

Hose end connections, filling/flushing device, 3/4" hose union

Insulation jacket, black ppe density 40 kg/m³, plain

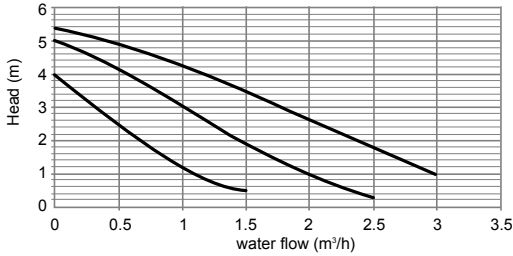
Data:

Fluid	water to glycol ratio max 50%
Safety valve	6 bar
Pressure gauge	0-10 bar
Thermometer gauge	0-160° C
Min. press. to open check valve	2 kPa (200mm c.a)
Electric supply	230-240v 50 Hz
Max. run temperatures	130°C
Max. peak temperatures	150°C



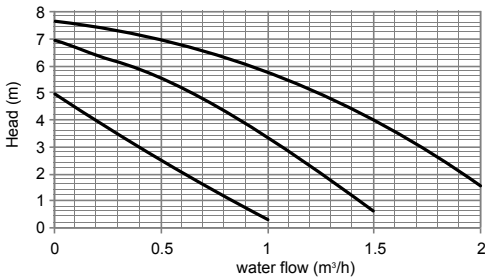
Pump data and assembly

Components Pump - Wilo ST15.6 ECO



The WILO solar circulating pump has a molex plug in connection. Lead and plug are provided.

Components Pump - Wilo ST15.8 ECO



The solar circulating pump data

Tolerances according to EN 1151-1:2006

Product	Speed	P1 (500l/h) W	I (500l/h) A	Capacitor μ F/VDB
ST./6 ECO	max	49	0.22	2/400
	med	43	0.19	
	min	36	0.16	

Product	Speed	P1 (500l/h) W	I (500l/h) A	Capacitor μ F/VDB
ST15/8 ECO	max	86	0.37	3/400
	med	53	0.26	
	min	47	0.21	



The controller push fits into the Solarlogic Maxi IE housing.

Solarlogic controller features and specification

solarlogic

solar temperature differential controller

Description

The solarlogic solar temperature differential controller is designed for use with solar thermal systems. With 13 pre-programmed system configurations and further options reserved for individual OEM requirements, the solarlogic has the ability and flexibility to cater for the most demanding system requirements.

Key features:

- anti-legionella function
- pump speed control
- winter cold start feature
- 3 relay switching
- 3 temperature sensors included (4th is optional)
- 13 solar system configurations - basic through to "East-West"
- 2 cylinder control options
- input for time sync to "off-peak" electric tariffs
- optimised back up heat - electric/CH boiler or both
- heat quantity measurement
- system operating temperatures readout
- collector or cylinder cooling functions & high temperature protection
- easy to install using spring clamp terminals (no screws)

Key specifications:

Class II, IP20 (stand-alone product)
 0° - 50°C, 85% RH non condensing condition at 25°C

Controller dimensions:

110mm wide, 155mm high, 45mm deep.

Display:

85mm wide x 43mm high

Simple to install and operate

No matter how feature packed a product is, if it's difficult to install, programme and use, in reality, it's of little use. That's where the solarlogic is different. It's true that the design incorporates market leading functionality, but its main strength and appeal lies in the fact that it's simplicity itself to set up.

When ready for installation, the controller presents three different views, the wiring view, the installer's setting view and finally, the user's view.

Because the screen is the widest currently on the market, it's capable of presenting all the relevant information each user needs, presented in an easy-to-digest way, giving a clear overview & understanding of the installation and settings.

Fitting the controller

The controller has its own purpose made insulated housing module which sits between the back and front insulated covers. The module is detachable for installation access. The controller push fits into the housing and is wired through the removable rear access panels.



wiring interface



installer's interface



user's interface

Installation diagrams & instructions

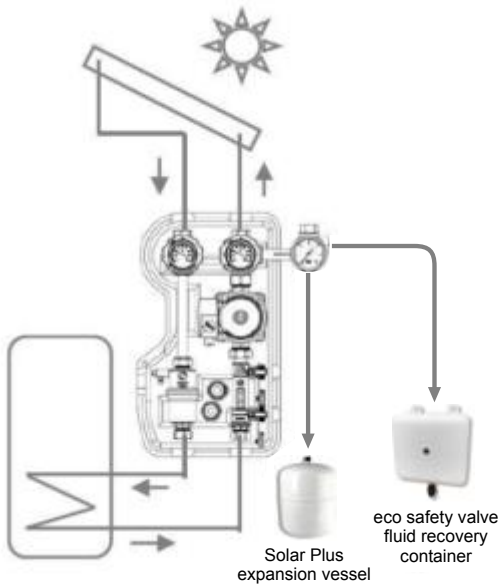
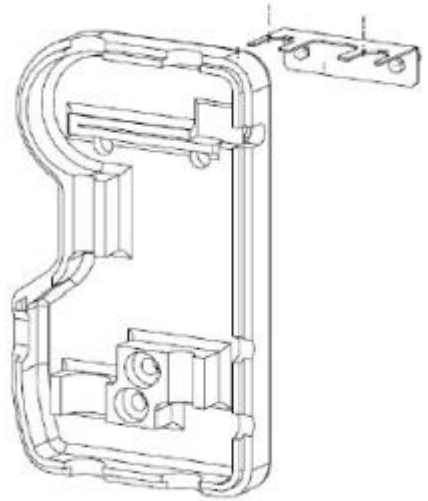
Before commencing any work, and prior to filling, please ensure that the solar collectors are covered. High temperature fluids are a serious safety hazard.

Drill the wall with a nib 8mm drill and fix the fixing stirrup to the wall with the supplied brackets and screws. If the brackets are not suitable for the wall type, replace them with the proper model.

Insert the back of the insulation cover on the fixing stirrup, taking care to insert it completely. If necessary, line up the cover using a spirit level, then clamp the brackets in place.

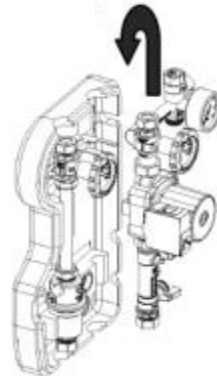
Now connect the flow and return pipes.

Note - when using compression fittings on solar systems, some recommend that brass liners are fitted inside the copper pipe before making the connection to improve the integrity of the seal. Intaeco part code SF22561



Assembly

The Solarlogic controller mounts directly onto its purpose made housing.



Installation and trouble shooting

The expansion vessel should be sized by the installer. Connect by using a suitable vessel connection kit: Intaeco ref: Vessel Connection Kit SOVK A200.

Note - make sure to balance the expansion vessel charge pressure to match the system pressure when cold.

Note—safety valve discharge, recommend connection to a suitable discharge recovery tank. Intaeco ref; Eco safety valve liquid recovery container with drain valve EVPG-550001

Check all system connections before starting the flushing and filling operations.

Flush the system first with water and pressure test for leaks.

Close the valve just below the pump to gate the system circuit and then connect the fill hoses and open the filling valves.

Fill the system with the glycol mix with an approved pump (Intaeco Solarfill) capable of pressurizing to 5 bar, and circulate to flush all air from the system. This flush cycle could take 20 mins or more. Manual pump fill is NOT recommended.

Make sure air is out of the pump chamber by quickly opening the valve just below the pump to allow through flow and push air out. Also release any air that is trapped in the air separator (this should be repeated until there's no air in the system).

Pressurize to the desired system pressure by closing the outlet valve, and regulate (for example to 1.5 bar, then the expansion vessel charge should be the same)

Replace the front insulation cover

Check electrical connections

Ready to run pump—switch on.

Trouble shooting

Should the pump not function, first make sure that the feeder cable is well connected. Unscrew the central screw and then unblock the rotor with a screwdriver. **ATTENTION:** The rotor, like other hydraulic components may be hot. If the pump is noisy, make sure that there is no air in the circuit - if so, repeat the run-up operations. If necessary, increase the device pressure until the maximum pressure is reached, or decrease the pump speed, so that it's adequate to the device characteristics.

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