

Solar pump station



Integrated Solar Station 1.1

- A 2 – line solar station, which includes cut off for both flow and return
- All other fittings required for the safe use of the system are housed within the unit including:
 - Safety devices
 - Gravity brakes
 - Full thermal insulation
 - Wall mounting holes
 - System controller
 - Flow meter
 - Filling and flushing unit.



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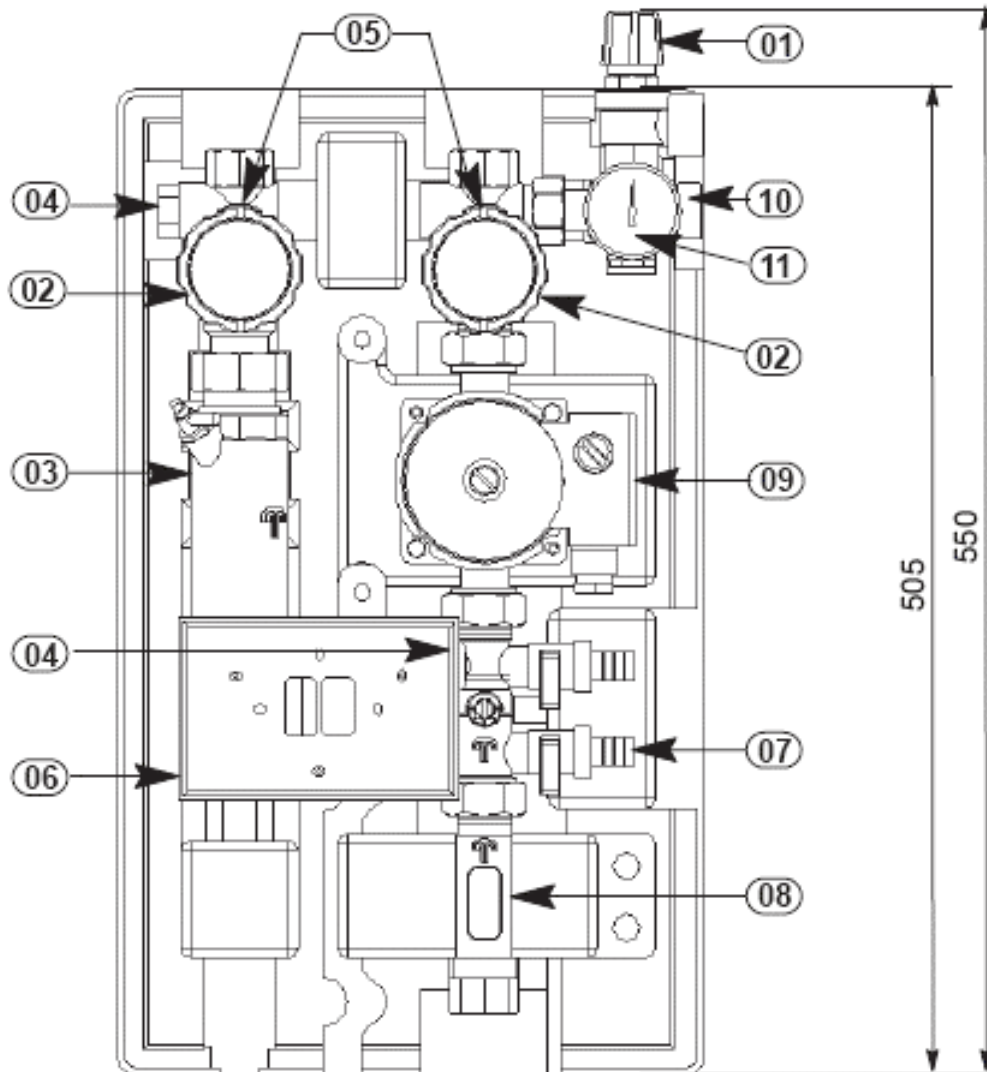
Compact range

Overview

- System bleeding
- Integrated solar regulation
- Flowmeter
- Special solar pump
- Compact heat insulation
- Shut-off valve with gravity braking
- 6 bar safety valve
- Manometer
- Connector expansion vessel
- Filling and flushing connector
- Pre-installed control unit mounting.



Integrated Solar Station parts



1. Safety valve
2. Stopcock with thermometer
3. Air separator with manual release
4. Lateral connection for flow temperature sensor
5. Gravity brake
6. Console for controller
7. Combined filling / flushing unit
8. Flow meter
9. Circulating pump
10. Expansion tank connector
11. Manometer

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Gravity brakes

Overview

- Integrated with the cut-off valves in the flow and return
- Resistance of 400mm WS
- Stops the heat transfer fluid from circulating in the system and in the individual pipes
- Both brakes are made of temperature resistant PVC-U.



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Safety devices

Overview

- Safety valve, manometer, expansion tank connector all integrated with the return
- The fittings are then only subject to only minimal thermal loading as the temperature of the return pipe is considerably lower than that of the flow pipe.



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Thermometers

Overview

- These show the flow and return temperatures of the solar station.



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Flushing / filling unit

Overview

- Combined unit used for both flushing and filling
- Fitted with 2 KFE valves so the system can be filled and drained easily
- These two valves function as flow and return.



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Flowmeter

Overview

- An adjustable rotameter with quantity restriction
- The display and adjustment range is from 2 to 16 litres per min
- This allows collector arrays up to 45m² to be adjusted to the correct flow rate
- The minimum flow rate is 2.5l/min for all collectors in the series
- The rotameter allows the flow rate to be displayed very precisely
- Normally installed in the vertical position



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Circulating pump

Overview

- The pump, motor and transformed are combined in one unit and adjusted to work together.
- Has 3 settings which allow the correct pressure to be maintained within the system.



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Air separator

Overview

- This is in the flow pipe and releases air from the whole solar circuit
- If there is high temperature and low pressure air will be released by the fluid
- These bubbles are carried through the system
- These then collect in the air separator where they can then be released using the hand ventilator.



Air separator

System bleeding

- **no roof bleeding required!**
- expanded cross-section reduces flow speed
- bleeding in “calming zone”
- upstream installation:
 - high temperature promotes air separation
- hand aspirator for bleeding.

