

SOLARflo

Solar Thermal Solutions
Glazed Flat Plate & Evacuated Tube Collectors



Working towards
a cleaner future



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Building regulations, legislation, planning consent and environmental policies and strategies are driving end users, architects and designers to seriously consider the use of low carbon and renewable technologies on both residential and commercial properties.

Solar energy is a renewable power source which, when harnessed can be converted into heat to generate hot water, significantly reducing carbon dioxide emissions – one of the key greenhouse gasses contributing to Climate Change and global warming.

Andrews Water Heaters, the UK's market leader in hot water heating solutions, is committed to developing innovative products with excellent environmental credentials, to respond to the increasing demand placed on the building services industry to deliver low carbon footprint properties. Standard pre-designed packages to 900 litre cylinder capacities are available as well as bespoke tailored designs for larger solar thermal systems.

SOLARflo systems are supported by comprehensive project application engineering including;

- **Cylinder capacity recommendations**
- **Solar collector array selection**
- **Collector array configuration, layout and design**
- **Solar pump selection**
- **System controls – including anti legionella**
- **Pre and post sales support is provided including on-site installation guidance**
- **All SOLARflo packages are commissioned by Andrews Water Heaters to ensure installation integrity and control system set up to optimise solar output and performance.**

The ultimate piece of mind when embarking on a solar thermal installation!

Solar hot water heating solutions

SOLARflo offers a complete solar thermal solution for both direct-fired water heaters and commercial boiler applications. The package includes high quality solar collectors, single coil and twin coil duplex stainless steel cylinders, pump station, control unit and system expansion vessels.

Features

Solar Collectors (Glazed flat plate)

- Glazed flat plate aluminium tray solar collector
- 2.55m² gross collector area
- 2.004m² collector absorber area
- High transmission efficiency (90.8%)
- High absorption efficiency (95%)
- Low emission loss (5%)
- Solar Key Mark Approved

Solar Collectors (Evacuated Tubes)

- Direct Flow Evacuated Tube Technology

- 2.83m² (20 tube) and 4.25m² (30 tube) gross collector areas
- 2m² (20 tubes) and 3.02m² (30 tubes) collector absorber area
- High absorption efficiency (95%)
- Low emission loss (5%)
- Solar Key Mark Approved

Cylinders

- 450 to 3000 litre single cylinder capacities
- Twin-coil and single coil pre-heat unvented hot water cylinders
- Non-corrosive duplex stainless steel water chamber for longer life
- Stainless steel indirect coil(s)
- Destratification and anti-legionella functionality as standard

Pump Station

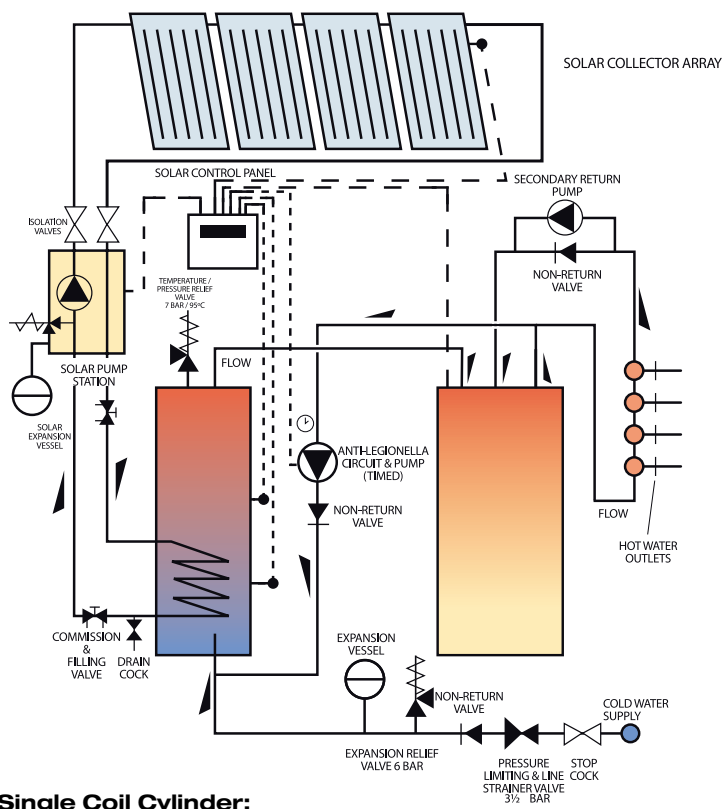
- Solar pump station c/w temperature gauges and pressure gauge, flushing and filling device and deaerator

Control Unit

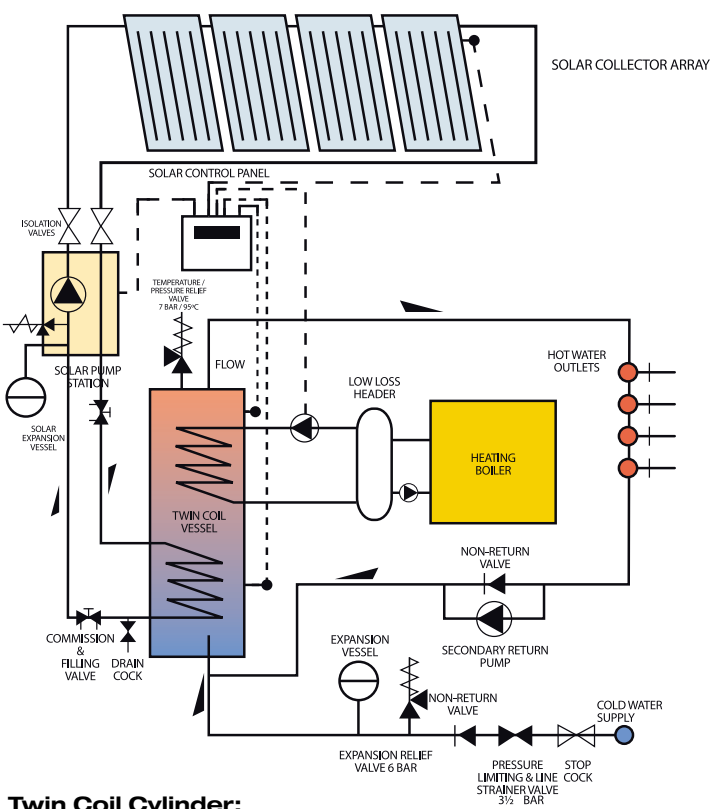
- Differential temperature control
- Variable set points to enable system optimisation
- Primary heating appliance control
- Anti legionella functionality

Other equipment included

- Solar collector mounting accessories for pitched roof, flat roofs and fascia capability
- Cold water expansion kit
- Solar heat transfer expansion vessel with membrane temperature rating of 100°C
- First fill of solar heat transfer fluid
- Primary heating appliance (direct-fired water heater or commercial boiler) as an option



Single Coil Cylinder:
 Pre Heat Schematic for Direct Fired Water Heater and Calorifier applications



Twin Coil Cylinder:
 Schematic for Commercial Boiler applications



Specification



Collector array dimensions

Cylinder Capacity (L)	450	550	700	900
Number of Solar Collectors (Glazed Flat Plate)	4	5	6	7
Gross Collector Area (m ²)	10.2	12.8	15.3	17.9
Collector Absorber Area (m ²)	8.8	11.1	13.3	15.5

Number of Solar Collectors (Evacuated Tubes)	2	2	3	3
Gross Collector Area (m ²)	5.7	7.1	9.9	12.8
Collector Absorber Area (m ²)	4.0	5.0	7.0	9.0



Collector configurations

- For glazed flat plate collectors the maximum number of collectors in series connection is 6 off
- For evacuated tube collectors the maximum number in series is 5 off 3.02m² (30 tube) collectors
- Beyond these, series branches of collectors must be connected in parallel circuits to reduce thermal expansion and limit system pressure loss.



Baxi Commercial Division
 Wood Lane, Erdington,
 Birmingham B24 9QP
 Email: andrews@baxigroup.com
www.andrewswaterheaters.co.uk

Sales:
0845 070 1056
 Technical:
0845 070 1057

