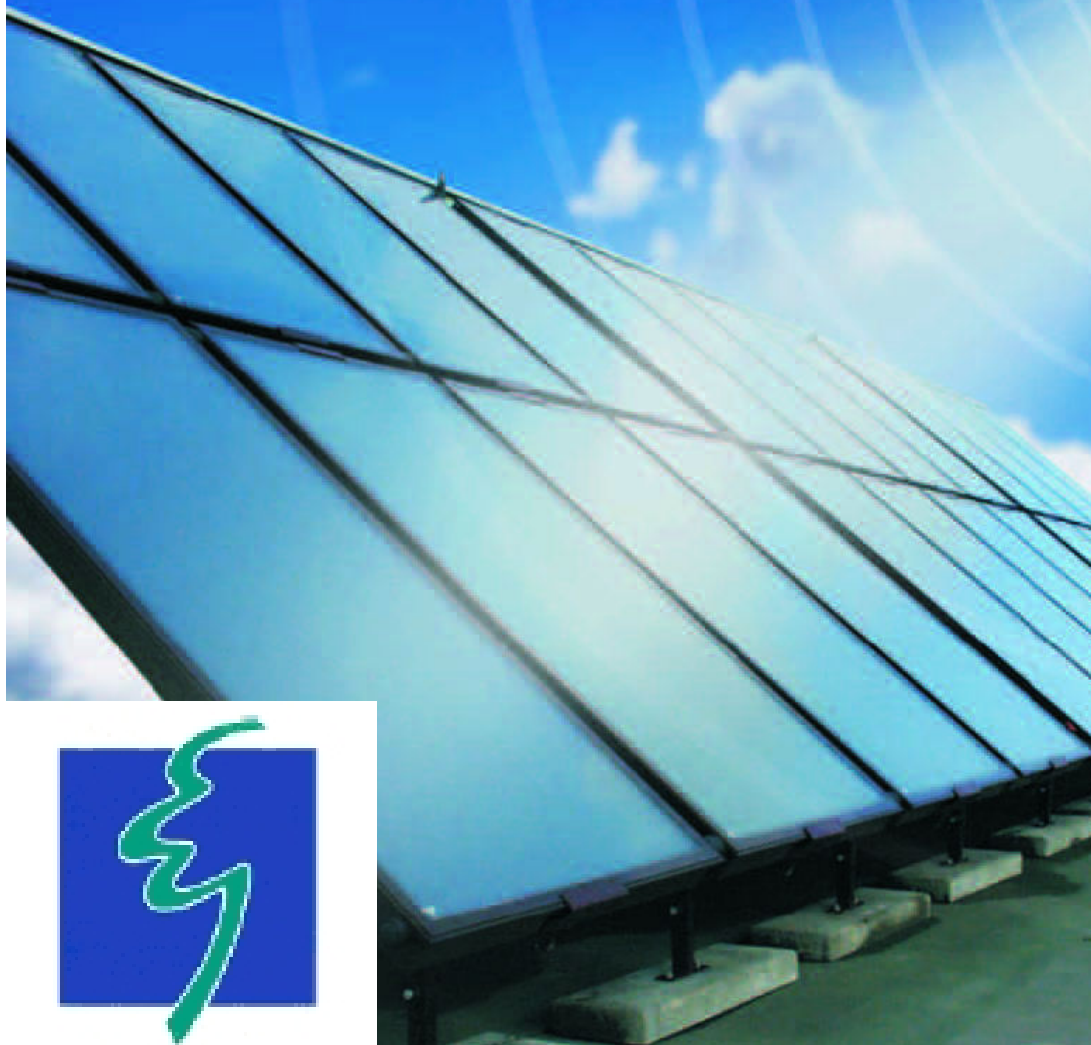


# eco hometec

twin coil stainless steel hot water cylinders





## SOLAR THERMAL ENERGY – HOW DOES IT WORK?

Solar thermal water heating is a very simple concept.

The sun's energy is absorbed into the solar collector on the roof of the property. The collected solar energy heats a water/glycol mix that is pumped between the collector and the solar heating coil in the eco hometec Solarcyl, which heats the water contained in the cylinder.

The system is normally controlled by a programmable solar controller that simultaneously measures the temperature differential between the cylinder and the collector. Sensor points are provided in the eco hometec Solarcyl to allow this measurement.

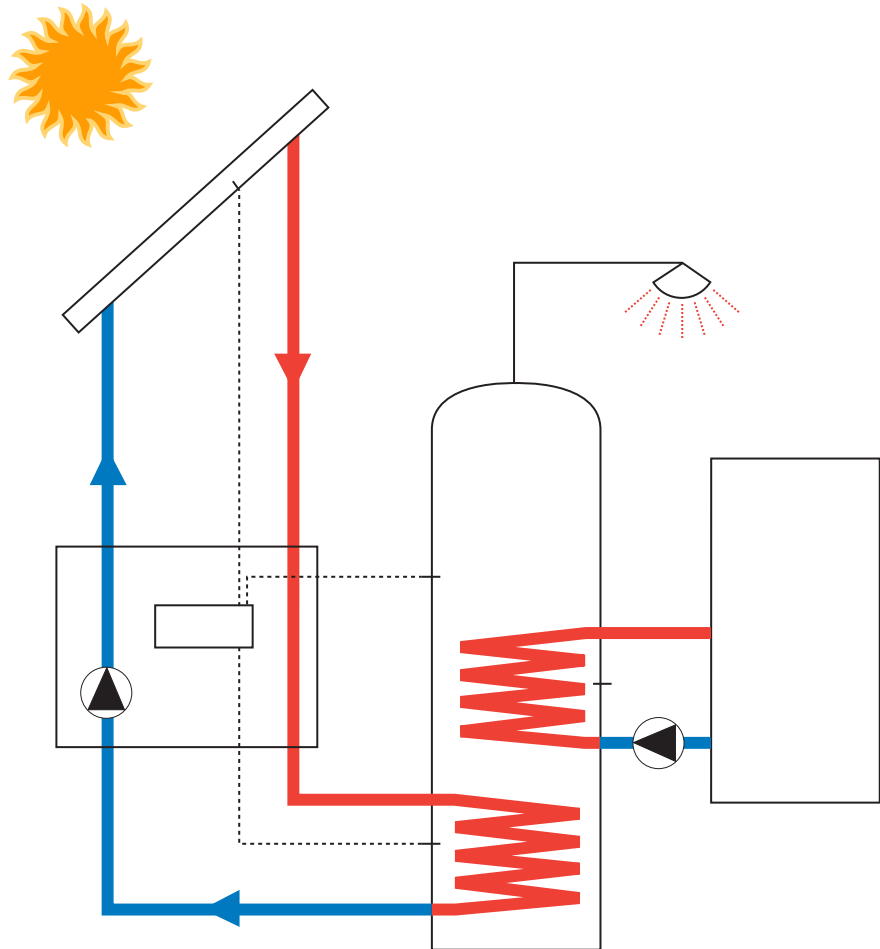
A target temperature is set on the controller which the solar system will aim to achieve provided solar energy is available.

During the summer months, up to 100% of hot water can be produced by solar energy. Even in winter, solar can provide a pre-heat to the water which can reduce traditional energy consumption by up to 30%.

Over a full year, up to 60% of hot water can be generated using solar energy.

At certain times the energy available from the sun will be insufficient to fully heat the cylinder to the desired temperature. In these instances an auxiliary power source will be required to maintain the desired temperature of the cylinder.

eco hometec offers two types of Solarcyl. The twincoil has an upper auxiliary heating coil for connection to a boiler. The solar direct has an additional immersion heater above the solar coil and is designed for properties with electric heating.



## ECO HOMETEC UNVENTED HOT WATER CYLINDERS

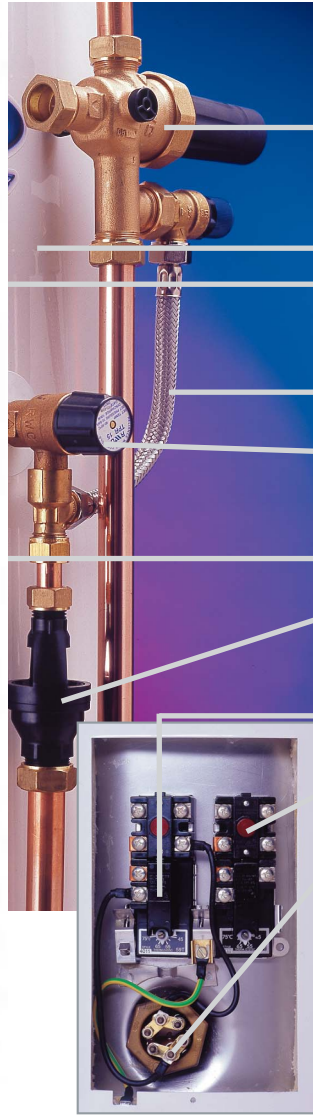
The eco hometec Solarcyl is a stainless steel unvented hot water cylinder which has a 25 year guarantee.

Unvented cylinders are connected and supplied directly from the cold water mains supply, resulting in hot and cold water being delivered to all outlets within the dwelling at mains pressure, fast filling baths and power showers are a reality – feed and expansion tanks associated with a conventional cylinder and tank installation are not longer required. eco hometec unvented cylinders offer high performance water heating and hot water delivery flow rates of up to 55 litres per minute. A very large surface area of the solar heating coil mean that the maximum heating advantage can be achieved from the solar system.

Unvented cylinders are now commonplace in the UK and are taking over from traditional gravity fed (vented) cylinders as the product of choice for many installers in both new build properties and retro-fit units in existing properties.

The eco hometec Solarcyl can be fitted as either a bubble top (BT\* with internal air gap expansion) or fully flooded cylinder (FF\*\* separate expansion vessel required). Fully flooded units offer a superior hot water performance when solar gain is low, whilst bubble top units offer space-saving solutions when the dedicated area for water storage is tight.

**\*As a general rule, eco hometec would recommend that Solarcyls are fitted using the fully flooded option as a greater amount of usable hot water from the upper heating coil is available.**



## CYLINDER SPECIFICATION

- Hot water connection – 22mm compression fitting (removable dip tube)
- eco cylinders are designed to be installer friendly. “Multibloc” valve supplied loose for on-site installation. Comprises line strainer, 2.1 bar pressure reducing valve, balanced cold water port, non return valve, 8 bar expansion relief valve
- Casing – white epoxy coated steel
- Cylinder material – stainless steel F18MT 1.35mm thick
- Heating coil connections – 3/4" BSP female
- Solar sensor bosses and pockets supplied to accept 6mm sensor
- Flexible hose supplied to carry expansion relief discharge to tundish
- Temperature and pressure relief valve, factory fitted. 90°C, 10 bar
- Every cylinder factory pressure tested to 16 bar, maximum working pressure 8 bar
- Insulation – CFC free fire retardant PU foam, 40-50mm
- Tee-piece and tundish (22mm outlet) supplied

## ELECTRICAL SPECIFICATION

- Thermostat – factory fitted, adjustable 40°C-70°C
- Thermal cut-out, operates at 85°C
- Immersion heater – 3kW single phase 240V
- All cylinders have one immersion at low level
- Solar Direct has second immersion above coil

## SELECTION & SIZING GUIDE INCLUDING ORIENTATION

The capacity of the cylinder on a solar installation must be based not just on the size of the cylinder but also on the amount of hot water required from the cylinder when the solar gain is very low.

It is generally recognised that fitting a larger capacity cylinder than would normally be the case in a conventional hot water system will, over the course of a year, increase the solar efficiency of the cylinder. A large cylinder that heats up fully during a day with high solar radiation, may well, dependant upon individual hot water demands, provide hot water well into the following day without alternative energy sources being deployed. eco hometec unvented cylinders are supplied as bubble top units that do not require an expansion vessel. This system will save space in the installation area. \*eco hometec cylinders are also adaptable for use with an expansion vessel that will increase the usable capacity of hot water by 20%. eco hometec would generally recommend this option with solar cylinders as it will substantially increase the hot water available from the upper coil and lead to much greater user comfort in the winter months.

Application	Twin Coil Bubble Top	*Twin Coil Fully Flooded	*Solar Direct Bubble Top	*Solar Direct Fully Flooded
1 bed 1 bath + shower	RI210TC	RI170TC	RI210SD	RI210SD
2 bed 1 bath + shower	RI250TC	RI210TC	RI2150SD	RI210SD
3 bed 1 bath + shower	RI330TC	RI210TC	Fully Flooded	RI2150SD
4 bed 1 bath + shower	RI330TC	RI250TC	Fully Flooded	RI2150SD
4 bed 1 bath + 2 showers	RI330TC	RI330TC	Fully Flooded	2xRI210SD
5 bed 1 bath + 2 showers	2xRI210TC	RI330TC	Fully Flooded	2xRI250SD

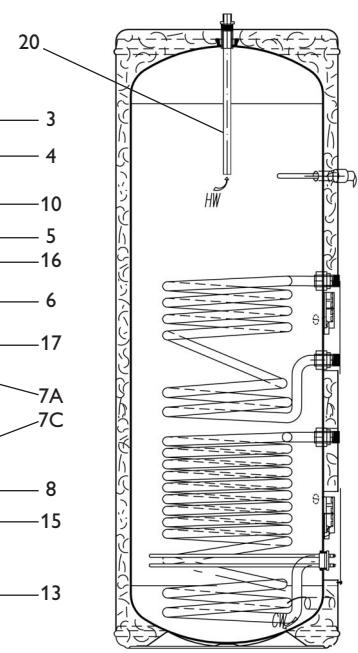
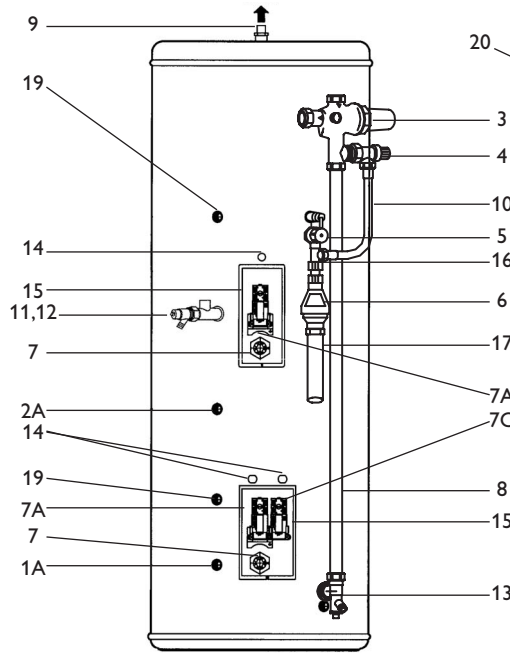
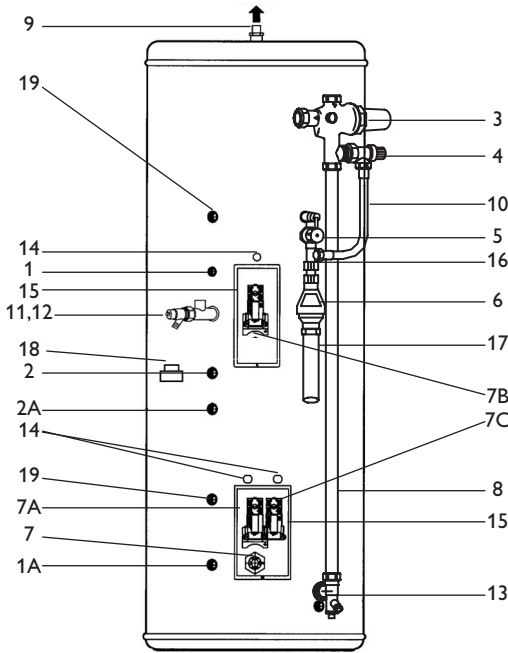
Product Code	Solar Coil Area m <sup>2</sup>	Aux Coil Area m <sup>2</sup> Element	Standing Energy Loss kWh/24h	Dedicated Solar Volume (Vs) ltr	Total Volume (Vt) Bubble Top ltr	Auxilliary Volume (Va) Bubble Top ltr	Auxilliary Recovery Bubble Top mins	*Total Volume (Vt) Fully Flooded ltr	*Auxilliary Volume (Va) Fully Flooded ltr	*Auxilliary Recovery Fully Flooded mins
20RI170TC	0.47	0.47	2.04	67				200	133	41
20RI210TC	0.92	0.47	2.45	97	210	113	35	250	153	47
20RI250TC	0.92	0.47	2.83	97	250	153	47	300	203	62
20RI330TC	0.92	0.72	3.14	117	330	213	46	380	263	56
20RI210SD	0.92	3kW	2.45	97	210	113	145	250	153	196
20RI250SD	0.92	3kW	2.83	97	250	153	196	300	203	260



**SOLAR INDIRECT**  
Twin Coil Single Immersion Heater

**SOLAR DIRECT**  
Single Coil Twin Immersion Heater

**CUTAWAY**  
Twin Coil shown



KEY	Part No	
1	Return 3/4" BSP Boiler	
1A	Return 3/4" BSP Solar	
2	Flow 3/4" BSP Boiler	
2A	Flow 3/4" BSP Solar	
3	Pressure Reducing Valve (Includes Item 4)	510511
4	Expansion Valve	510505
5	Temperature and Pressure Relief Valve	550853
6	Tundish	219002
7	Immersion Heater	71259
7A	Immersion Heater Thermostat	80020
7B	Thermostat Boiler	80030
7C	Thermostat Solar	80030
8	Cold Feed Tube	
9	Hot Water Outlet 22mm	

KEY	Part No	
10	Flexible Hose	202108
11	Secondary / Return 1/2" BSPF Fit 1/2" F x 1/2" M x 15mm Tee piece (Not supplied)	
12	Commissioning Valve / Fitting (1/2" MI Drain Cock)	250440
13	Elbow / Drain Cock	250445
14	Cable Entry	
15	Electrical Box	
16	Tee Piece	250006
17	Discharge Pipe (Not supplied)	
18	Motorised Valve (Not Factory Fitted)	92000
19	Solar sensor bosses	81019
20	Dip Pipe (removeable)	

Product order code	Capacity litres Bubble Top	Approx weight full kg (Bubble Top)	*Capacity litres Fully Flooded	*Approx weight full kg Fully Flooded	Lower immersion heater	Dimensions mm			Connection height from base					
						H	D	A	1	1A	2	2A	5	
<b>Solar Direct</b>														
20RI 210-SD	210	250	250	307	3kW	1400	580	70		225			545	1050
20RI 250-SD	250	292	300	359	3kW	1600	580	70		225			545	1222
<b>Twin Coil</b>														
20RI 170-TC			200	247	3kW	1150	580	70	725	225	490	390		895
20RI 210-TC	210	255	250	312	3kW	1400	580	70	950	225	745	545		1050
20RI 330-TC	250	297	300	364	3kW	1600	580	70	950	225	745	545		1222
20RI 330-TC	330	391	380	460	3kW	2090	580	70	1155	225	745	545		1697

**eco hometec (uk) ltd.**

Unit 11e, Carcroft Enterprise Park, Carcroft, Doncaster, DN6 8DD  
Tel. 0044 1302 722266 Fax. 0044 1302 728634  
www.eco-hometec.co.uk email:sales@eco-hometec.co.uk

