



Tried. Tested. Trusted.



Unvented Hot Water Cylinders

Mains pressure hot water with full eco-credentials

A name you can

With an unmatched reputation for quality, reliability and innovation, the Dimplex name is well known in both public and private sectors where the brand has become synonymous with a commitment to excellence and customer satisfaction.



Wherever you go across the country, you'll find Dimplex products. But it's hardly surprising; after all, as renewables, electric space and water heating market leader, Dimplex has been in the business of providing innovative solutions to all manner of applications for over 60 years.

Recognising the need to develop and deliver solutions to meet increasingly stringent energy standards, Dimplex has made significant investment in product research and development to grow a portfolio of renewable energy technology products.

Now with one of the widest ranges of building integrated renewables available from a single manufacturer, we continue to expand our expertise and product ranges to meet the needs of our customers in both the domestic and commercial environments.

As you would expect of the market leader, all of our products are designed to comply with the relevant standards and are manufactured in industry accredited facilities to the most stringent quality standards, both European and International.

trust

As well as ensuring our products are of the highest quality, we also regard our customer support as vital. Our national network of service engineers and fully trained customer services team ensure both consumer and trade support all year round.

We believe that working with all our customers – from specifiers, contractors and end-users, has helped make us the major force that we are today.

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- Mains pressure hot water for fast filling baths and powerful showers
- Simultaneous supply of water to all bathrooms
- Long life low maintenance hot water supply



Stainless steel unvented cylinders

Mains pressure hot water with full eco-credentials

The EC-Eau™ range of unvented stainless steel cylinders from Dimplex can supply all the hot water required for the modern home, providing rapid fill baths and invigorating showers to en-suite bathrooms and other domestic appliances simultaneously. With both standard unvented indirect and direct models and models designed specifically to work with renewable energy sources, there is an EC-Eau cylinder suitable for every application. Offering low running costs, reliable hot water and fantastic flow rates, EC-Eau cylinders are available in a range of capacities, so there is a size to suit even the most demanding household.



The EC-Eau standard range of cylinders is available either for direct electric heating or with a coil for indirect heating and range from 100 to 300 litres with an external diameter of 580mm. Supplied with an external expansion vessel for improved reliability and reduced cylinder height, EC-Eau standard cylinders are flexible to site and easy to install.

To accommodate renewable energy heating systems Dimplex have developed the EC-Eau range with models specifically designed to operate with either solar thermal systems or heat pumps or both.

EC-Eau heat pump cylinders are specified with large, high surface area heat exchangers, specifically sized to match the requirements of Dimplex heat pumps, optimising heat pump efficiency

and reducing running costs. The solar models feature sizes from 175 to 300 litres with all capacities available in a choice of single or dual coil options, with increased dedicated solar storage to maximise the use of renewable energy.

Environmental sensitivity and efficient performance are key attributes across the EC-Eau range, which boasts 60mm of low GWP insulation foam and innovative measures such as recessed immersions and thermostats to reduce energy wastage. This combined with the use of 100% recyclable stainless steel inner components and a sleek black, hard wearing outer shell manufactured from completely recycled materials ensures the EC-Eau range looks as good as it performs.

EC-Eau cylinders for reliable, high performance hot water –

When you want it, where you need it

Unvented hot water cylinders such as the extensive EC-Eau range from Dimplex, provide efficient and economical, hot water delivery throughout the home. Ensuring mains pressure hot water for fast filling baths, powerful showers and constant water pressure, even when the washing machine is in use.

EC-Eau cylinders can be sited in any suitable location and on any floor of the building offering flexibility in installation as well as plentiful, powerful hot water to multiple points around the building simultaneously.

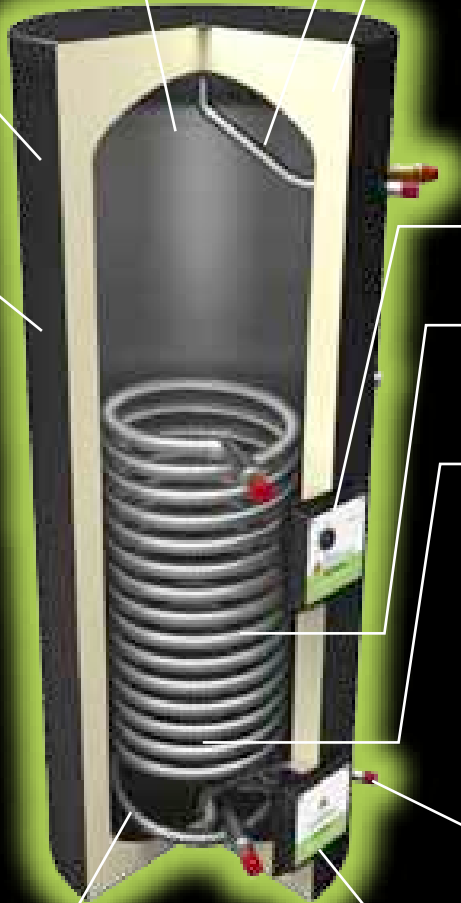
Benefits:

- **Mains pressure hot water**
 - For invigorating showers
- **High flow rates**
 - For quick filling baths and simultaneous supply of water to all bathrooms
- **Fast reheat**
 - For freely available hot water
- **Well insulated**
 - Minimises heat loss and energy consumption/running costs
- **Low maintenance**
 - No hidden costs
- **Duplex stainless steel**
 - Excellent corrosion resistance and long life
 - 100% recyclable
- **A complete package**
 - Just add pipework
- **25 year guarantee**
 - Peace of mind



Sustainable Material

- **Inner vessel manufactured from premium grade Duplex stainless steel:**
 - Lightweight yet ultra high strength and stress/corrosion resistant, ensuring long cylinder life
 - 100% recyclable
 - No need for sacrificial anode
 - 25 year warranty
- **HIPS/ABS outer cladding**
 - Produced from 100% recycled material
 - Hard wearing, flexible and damage resistant
- **CFC/HCFC free injected foam insulation**
- **High proportion of materials (excluding insulation) by volume recycled**



Environmentally Sound Performance

- **Designed for use with renewable sources of heat production – heat pumps and solar thermal systems**
- **Side hot water draw off connection, minimises heat losses through the top of the cylinder**
- **60mm of injected polyurethane foam insulation**
 - Exceeds 'CHESS' best practice standards for low heat loss and heat recovery
 - Completely void free, including insulation around immersions and thermostats
- **Recessed immersion heater and thermostat housings reduces heat loss**
- **Large surface area coil for use with heat pumps**
- **Up to 125l dedicated solar volume (ECS ST models) to maximise use of renewable energy**

Superior Operational Performance

- **High flow rates for efficient hot water delivery**
 - Powerful showers and fast filling baths
- **Corrugated coil construction maximises surface area while maintaining high usable volume**
- **Light and easy to handle for easy installation**
- **Surface mounted thermostats and sensors for easy installation and maintenance/replacement**
- **Supplied complete with inlet safety group and external expansion vessel**
- **All connections accessible from the front**

EC-Eau Heat pump cylinder shown

What's included:

- **Cold Water Inlet Set**

- consisting of:**

- Inline strainer
- PRV (3bar)
- ERV (6bar)
- Non-return valve
- Balanced cold water supply port
- 22mm connection for expansion vessel

- **Large Surface Area Coil Heat Exchanger**

- **Environmentally Friendly Insulation**

- **External Expansion Vessel, Fixing Kit and Connection Hose**

- **Tundish**

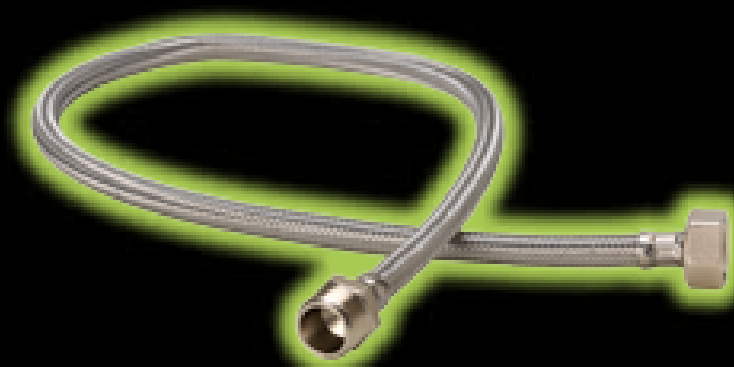
- **Installation and User Instructions**

- **Optional Extras**

- Titanium elements
- 5 year warranty
- Only to be fitted by an authorised contractor



Expansion vessel mounting kit



Expansion vessel hose



Thermostat



Tundish



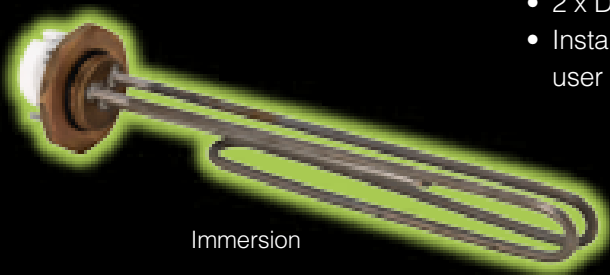
Two port valve



Expansion vessel



Inlet group



Immersion



Temperature and pressure valve

EC-Eau is supplied complete with all the fittings required to complete installation

● Indirect Cylinders

- Inlet control set
- Temperature and Pressure relief valve
- Expansion vessel and mounting kit
- Tundish
- 1 x 3kW immersion heater
- Two port valve
- Dual thermostat
- Installation and user instructions

● Indirect Solar Cylinders

- Inlet control set
- Temperature and Pressure relief valve
- Expansion vessel and mounting kit
- Tundish
- 1 x 3kW immersion heater
- Two port valve
- 2 x Dual thermostats
- Installation and user instructions

● Direct Cylinders

- Inlet control set
- Temperature and Pressure relief valve
- Tundish
- Expansion vessel and mounting kit
- 2 x 3kW immersion heaters (1 on 100l)
- Installation and user instructions

● Direct Solar Cylinders*

- Inlet control set
- Temperature and Pressure relief valve
- Tundish
- Expansion vessel and mounting kit
- 2 x 3kW immersion heaters (1 on 100l)
- Dual thermostat
- Installation and user instructions

● Heat Pump Cylinders

- Inlet control set
- Temperature and Pressure relief valve
- Tundish
- Expansion vessel and mounting kit
- 1 x 3kW immersion heater
- Dual thermostat
- Installation and user instructions

**And Solar Heat Pump Cylinder*

Specifications

● Materials

- Inner cylinder – Duplex stainless steel
- Outer casing – Black HIPS/ABS (from recycled materials)
- Inlet/outlet – Stainless steel
- Coils – Corrugated stainless steel
- Insulation – 60mm PU foam (GWP=1, ODP = 0)

● Max Operating Conditions

- Potable water temperature – 70°C
- Heating water temperature – 90°C
- Operating pressure – 3bar

● Cold Water Supply

- Minimum dynamic pressure – 1.5 bar
- Maximum pressure – 12 bar
- Minimum flow rate – 15l/min

● Connections

- Cold water inlet – 22mm stainless steel
- Hot water outlet – 22mm stainless steel
- Coil flow/return – 22mm / 28mm stainless steel
- Sensor – surface mounted
- T&P valve – ½" F BSP
- Immersion heater – 1¾" F BSP

● Immersion Heaters

- Indirect (standard and solar) – 1
- Direct (standard and solar) – 2 (1 on 100l standard)
- Heat pump – 1

● Thermostatic control

• Standard Cylinders

- **Indirect**
 - 1 x integrated surface mounted twin thermostat
 - 1 x integrated immersion heater thermostat and thermal cut out
- **Direct**
 - 2 x integrated immersion heater thermostats and thermal cut out (1 on 100l)

• Solar Cylinders

- **Indirect**
 - 2 x integrated surface mounted twin thermostat
 - 1 x integrated immersion heater and thermal cut out
- **Direct**
 - 2 x integrated immersion heater thermostats and thermal cut out
 - 1 x integrated surface mounted twin thermostat

• Solar/Heat Pump Cylinder

- 2 x integrated surface mounted twin thermostat
- 1 x integrated immersion heater and thermal cut out

• Heat Pump Cylinders

- 1 x integrated surface mounted twin thermostat
- 1 x integrated immersion heater and thermal cut out

● Safety Components

- Pressure reducing valve and strainer – 3 bar
- Expansion relief valve – 6 bar
- T&P valve – 7 bar / 90°C
- Factory pressure tests – 12 bar
- Expansion – external

● Approvals

- KIWA

● Guarantee

- Inner cylinder – 25 years
- Immersion heaters – 2 years excluding the effects of limescale
- Other components* – 2 years

*Excluding expansion vessel membrane



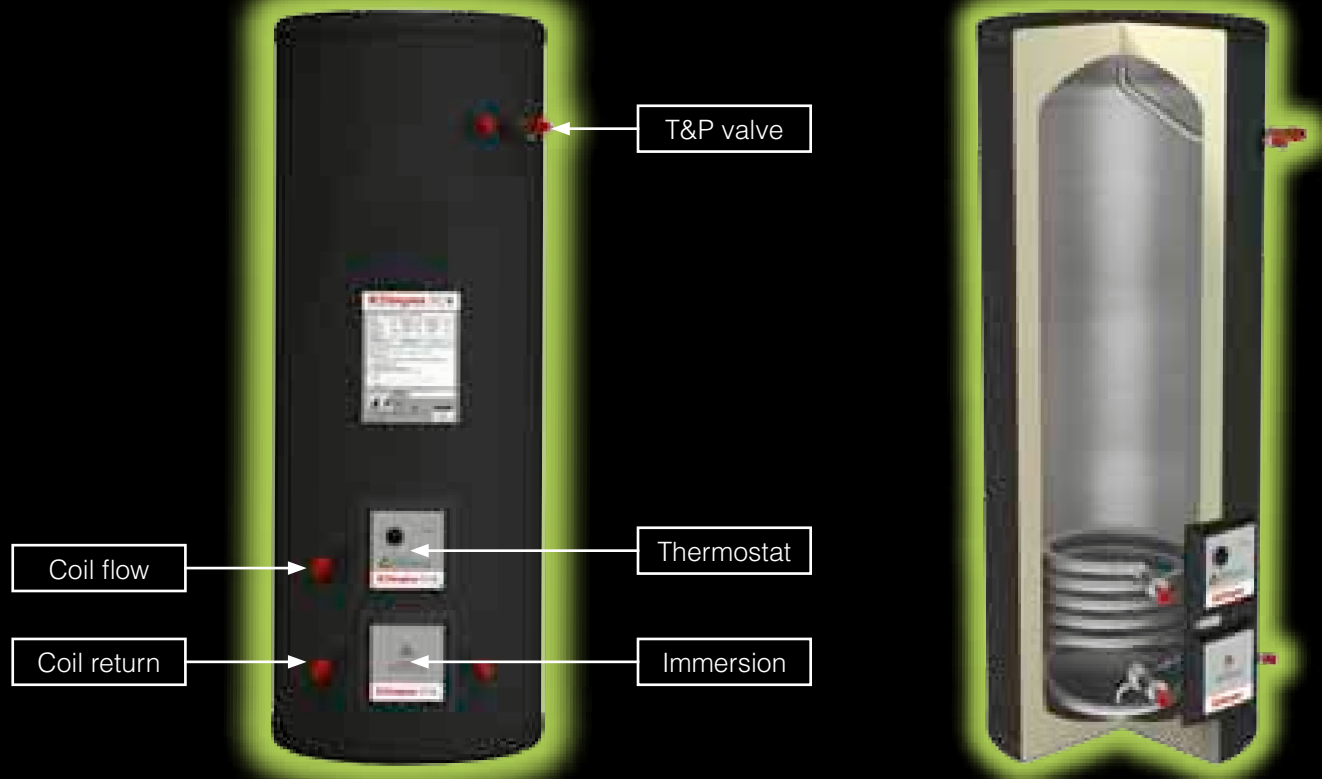
EC-Eau indirect and direct

Unvented stainless steel cylinders



- Mains pressure hot water for fast filling baths and powerful showers
- Simultaneous supply of water to all bathrooms
- No cold water storage tank required freeing up valuable living space
- Long life low maintenance hot water supply
- Attractive, hard wearing, easy to clean outer coating
- 60mm of CFC-free foam injected insulation for excellent heat retention – minimising heat loss and energy consumption
- Stainless steel inner cylinder with 25 year guarantee
- Supplied with an expansion vessel and all the necessary safety equipment required by governing legislation

EC-Eau indirect cylinders



DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P valve (mm)	Coil Return (mm)	Coil Flow (mm)	Thermostat (mm)	Immersion (mm)	Weight Empty (mm)	Weight Packaged (mm)
ECSi100-580	810	580	580	190	325	430	208	23	33
ECSi125-580	960	580	730	190	325	430	208	25	36
ECSi150-580	1130	580	900	190	325	430	208	29	40
ECSi175-580	1280	580	1050	190	405	430	208	32	44
ECSi210-580	1504	580	1275	190	405	430	208	36	49
ECSi250-580	1780	580	1550	190	405	430	208	42	55
ECSi300-580	2080	580	1850	190	405	430	208	47	51

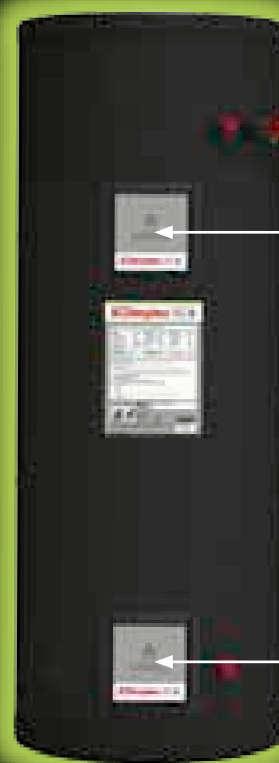
All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Coil size (kW)	Coil surface area (m2)	Expansion vessel (l)	Number of immersions	Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECSi100-580	100	14 ⁽ⁱ⁾	0.5	12	1	22 ⁽ⁱ⁾	0.9
ECSi125-580	125	13 ⁽ⁱ⁾	0.5	12	1	25 ⁽ⁱ⁾	0.95
ECSi150-580	150	12 ⁽ⁱ⁾	0.5	12	1	33 ⁽ⁱ⁾	1.10
ECSi175-580	175	18 ⁽ⁱ⁾	0.8	19	1	27 ⁽ⁱ⁾	1.12
ECSi210-580	210	19 ⁽ⁱ⁾	0.8	19	1	31 ⁽ⁱ⁾	1.41
ECSi250-580	250	18 ⁽ⁱ⁾	0.8	24	1	40 ⁽ⁱ⁾	1.51
ECSi300-580	300	18 ⁽ⁱ⁾	0.8	24	1	49 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

EC-Eau direct cylinders



T&P valve

Immersion 2

Immersion 1

DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P valve (mm)	Immersion 1 (mm)	Immersion 2 (mm)	Weight Empty (kg)	Weight Packaged (kg)
ECSd100-580	810	580	580	208	-	20	30
ECSd125-580	960	580	730	208	570	23	33
ECSd150-580	1130	580	900	208	650	26	37
ECSd175-580	1280	580	1050	208	750	29	39
ECSd210-580	1504	580	1275	208	820	33	44
ECSd250-580	1750	580	1550	208	1265	39	52
ECSd300-580	2080	580	1850	208	1495	46	50

All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Number of immersions	Expansion Vessel (l)	Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECSd100-580	100	1	12	88 ⁽ⁱ⁾	0.75
ECSd125-580	125	2	12	122 ⁽ⁱ⁾	0.95
ECSd150-580	150	2	12	150 ⁽ⁱ⁾	1.10
ECSd175-580	175	2	19	199 ⁽ⁱ⁾	1.12
ECSd210-580	210	2	19	218 ⁽ⁱ⁾	1.41
ECSd250-580	250	2	24	284 ⁽ⁱ⁾	1.51
ECSd300-580	300	2	24	313 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

EC-Eau solar cylinders

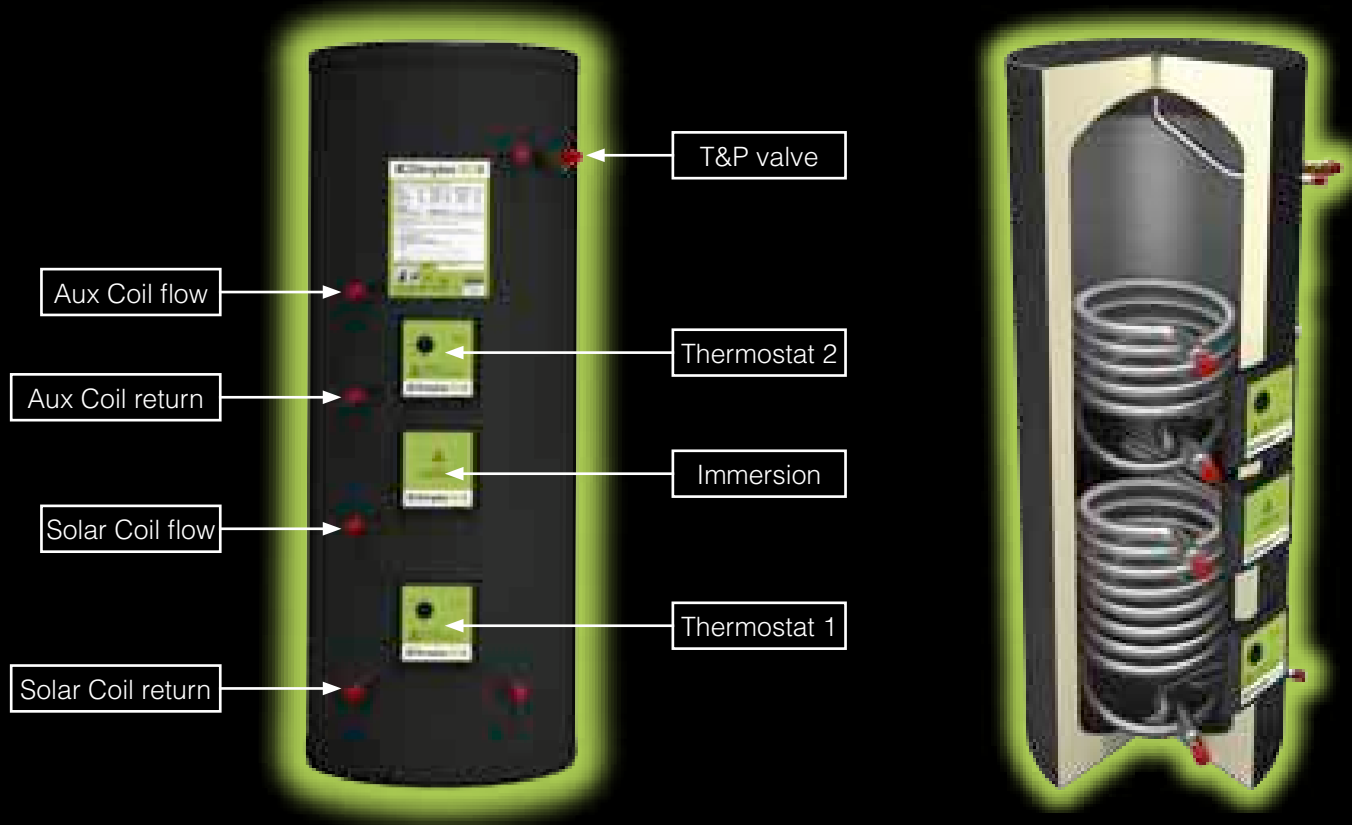
Unvented stainless steel cylinders for solar thermal

Dimplex EC-Eau solar cylinders provide highly efficient hot water storage for a variety of solar thermal applications and are designed specifically to work seamlessly with Dimplex solar thermal systems. Featuring a purpose designed solar coil to maximise heat transfer of the generated solar energy to the stored water, EC-Eau solar cylinders are available in choice of single or dual coil options.



- Models from 175 to 300 litres
- Optimally sized, high surface area heat exchangers for solar operation
- Mains pressure hot water for fast filling baths and powerful showers
- Immersion for sterilisation and back up heating
- 60mm of CFC-free foam injected insulation for excellent heat retention – minimising heat loss and energy consumption

EC-Eau indirect solar cylinders



DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Solar Coil return (mm)	Solar Coil flow (mm)	Aux coil return (mm)	Aux coil flow (mm)	Immersion (mm)	Thermostat 1 (mm)	Thermostat 2 (mm)	Weight empty (kg)	Weight packaged (kg)
ECSi175ST-580	1280	580	1050	190	525	740	995	580	330	847	37	49
ECSi210ST-580	1505	580	1275	190	525	837	1052	615	330	940	40	53
ECSi250ST-580	1780	580	1550	190	525	905	1120	640	330	1012	47	60
ECSi300ST-580	2080	580	1850	190	525	992	1207	640	330	1095	52	56

All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Auxiliary heated volume (litres)	Dedicated solar volume (litres)	Aux coil size (kW)	Aux coil surface area (m2)	Solar coil size (kW)	Solar coil surface area (m2)	Number of immersions	Aux reheat (mins)	Solar Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECSi175ST-580	175	80 ⁽ⁱ⁾	95 ⁽ⁱⁱ⁾	20 ⁽ⁱ⁾	0.8	23 ⁽ⁱ⁾	1.1	1	12 ⁽ⁱ⁾	23 ⁽ⁱ⁾	1.12
ECSi210ST-580	210	100 ⁽ⁱ⁾	110 ⁽ⁱⁱ⁾	20 ⁽ⁱ⁾	0.8	22 ⁽ⁱ⁾	1.1	1	15 ⁽ⁱ⁾	26 ⁽ⁱ⁾	1.41
ECSi250ST-580	250	140 ⁽ⁱ⁾	110 ⁽ⁱⁱ⁾	17 ⁽ⁱ⁾	0.8	19 ⁽ⁱ⁾	1.1	1	24 ⁽ⁱ⁾	35 ⁽ⁱ⁾	1.51
ECSi300ST-580	300	175 ⁽ⁱ⁾	125 ⁽ⁱⁱ⁾	18 ⁽ⁱ⁾	0.8	20 ⁽ⁱ⁾	1.1	1	31 ⁽ⁱ⁾	42 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

(ii) Determined in accordance with KIWA document for unvented hot water storage cylinders to the requirements of the UK building regulations, Annex D.

EC-Eau direct solar cylinders



DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Solar Coil return (mm)	Solar Coil flow (mm)	Immersion 1 (mm)	Immersion 2 (mm)	Thermostat (mm)	Weight empty (kg)	Weight Packaged (kg)
ECSd175ST-580	1280	580	1050	190	525	630	895	330	34	45
ECSd210ST-580	1505	580	1275	190	525	724	1117	330	38	49
ECSd250ST-580	1780	580	1550	190	525	790	1350	330	44	57
ECSd300ST-580	2080	580	1850	190	525	880	1620	330	50	54

All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Auxiliary heated volume (litres)	Dedicated solar volume (litres)	Solar coil size (kW)	Solar coil surface area (m ²)	Number of immersions	Aux reheat (mins)	Solar reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECSd175ST-580	175	100 ⁽ⁱ⁾	75 ⁽ⁱⁱ⁾	24 ⁽ⁱ⁾	1.1	2	101 ⁽ⁱ⁾	21 ⁽ⁱ⁾	1.12
ECSd210ST-580	210	115 ⁽ⁱ⁾	95 ⁽ⁱⁱ⁾	22 ⁽ⁱ⁾	1.1	2	128 ⁽ⁱ⁾	27 ⁽ⁱ⁾	1.41
ECSd250ST-580	250	151 ⁽ⁱ⁾	100 ⁽ⁱⁱ⁾	22 ⁽ⁱ⁾	1.1	2	166 ⁽ⁱ⁾	33 ⁽ⁱ⁾	1.51
ECSd300ST-580	300	194 ⁽ⁱ⁾	105 ⁽ⁱⁱ⁾	21 ⁽ⁱ⁾	1.1	2	208 ⁽ⁱ⁾	43 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

(ii) Determined in accordance with KIWA document for unvented hot water storage cylinders to the requirements of the UK building regulations, Annex D.

Solar thermal packages

A range of solar packages to suit a variety of applications and budgets

A solar hot water system is comprised of three key elements, the collector, heat transfer system and hot water storage cylinder. Dimplex solar systems are supplied in versatile packages designed around these three key elements to make specification and purchase easy. With a range of collector types, roof mounting options and cylinder sizes (see previous pages), Dimplex has a solution for every solar water heating requirement from small apartments to large commercial installations.

Roof Kit Packages

- Choice of evacuated tube or flat plate collector kits in a range of sizes to suit most domestic properties
- On roof mounting for plain tile, corrugated tile or slate roofs
- Façade or flat roof mounting kits (depending on collector type)

Hydraulic Packages

Suitable for the majority of domestic applications, including:

- Pump station
- Control unit
- Heat transfer fluid
- Expansion vessel and fixing kit

Accessories

A complete range of accessories available to make installation and maintenance quick and easy including pre-insulated flexible hoses, vent tiles, flow meters and heat transfer fluid testing kits.



EC-Eau heat pump cylinders

Unvented stainless steel cylinders for heat pumps

Dimplex EC-Eau heat pump cylinders are designed to operate seamlessly with heat pumps to provide an efficient and environmentally friendly way of supplying domestic hot water. Employing a large surface area heat exchanger, EC-Eau heat pump cylinders maximise the transfer of heat generated from renewable energy to the stored water, optimising heat pump efficiency and reducing running costs. Suitable for use with a wide range of heat pumps and the perfect partner to Dimplex heat pumps, EC-Eau heat pump cylinders are available in capacities from 125 to 300 litres to serve most domestic hot water demands.



- Models from 125 to 300 litres
- Optimally sized, high surface area heat exchangers for heat pump operation
- Tough, easy to clean outer casing – made from recycled materials
- Immersion for sterilisation and back up heating
- 60mm of CFC-free foam injected insulation for excellent heat retention – minimising heat loss and energy consumption

EC-Eau heat pump cylinders



DIMENSIONS										
Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Secondary return (mm)	Heat Pump return (mm)	Heat Pump flow (mm)	Immersion (mm)	Thermostat (mm)	Weight empty (kg)	Weight packaged (kg)
ECS125HP-580	960	580	730	-	190	710	208	460	30	40
ECS150HP-580	1130	580	900	-	190	845	208	545	35	45
ECS175HP-580	1280	580	1050	-	190	845	208	620	37.5	48
ECS210HP-580	1505	580	1275	967	190	895	208	732	42	53
ECS250HP-580	1780	580	1550	1105	190	895	208	870	47	60
ECS300HP-580	2080	580	1850	1255	190	930	208	1020	53	57

All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE									
Model	Capacity (litres)	Primary hot water capacity (litres)	Heat pump coil heatable volume (litres)	Number of immersions	Expansion vessel (litres)	Heat Pump Coil Size (kW)	Heat Pump Coil Surface area (m²)	Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECS125HP-580	125	97 ⁽ⁱ⁾	116.5	1	12	45 ⁽ⁱ⁾	2.2	7 ⁽ⁱ⁾	0.95
ECS150HP-580	150	120 ⁽ⁱ⁾	141.5	1	12	51 ⁽ⁱ⁾	2.8	7 ⁽ⁱ⁾	1.10
ECS175HP-580	175	142 ⁽ⁱ⁾	173.5	1	19	43.3 ⁽ⁱ⁾	2.8	11 ⁽ⁱ⁾	1.12
ECS210HP-580	210	180 ⁽ⁱ⁾	210	1	19	47 ⁽ⁱ⁾	3.0	12 ⁽ⁱ⁾	1.41
ECS250HP-580	250	238 ⁽ⁱ⁾	250	1	24	47 ⁽ⁱ⁾	3.0	17 ⁽ⁱ⁾	1.51
ECS300HP-580	300	267 ⁽ⁱ⁾	300	1	24	43 ⁽ⁱ⁾	3.2	20 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

EC-Eau heat pump cylinders with buffer



DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Secondary return (mm)	Heat Pump return (mm)	Heat Pump flow (mm)	Buffer return (mm)	Buffer flow (mm)	Buffer immersion (mm)	Immersion (mm)	Thermostat (mm)	Weight empty (kg)	Weight packaged (kg)
ECS125HP75-580	1535	580	730	-	190	710	1098	1308	1123	208	460	44.5	60
ECS150HP75-580	1705	580	900	-	190	845	1268	1478	1293	208	545	49	60
ECS210HP75-580	2080	580	1275	967	190	895	1642	1852	1667	208	732	57	61

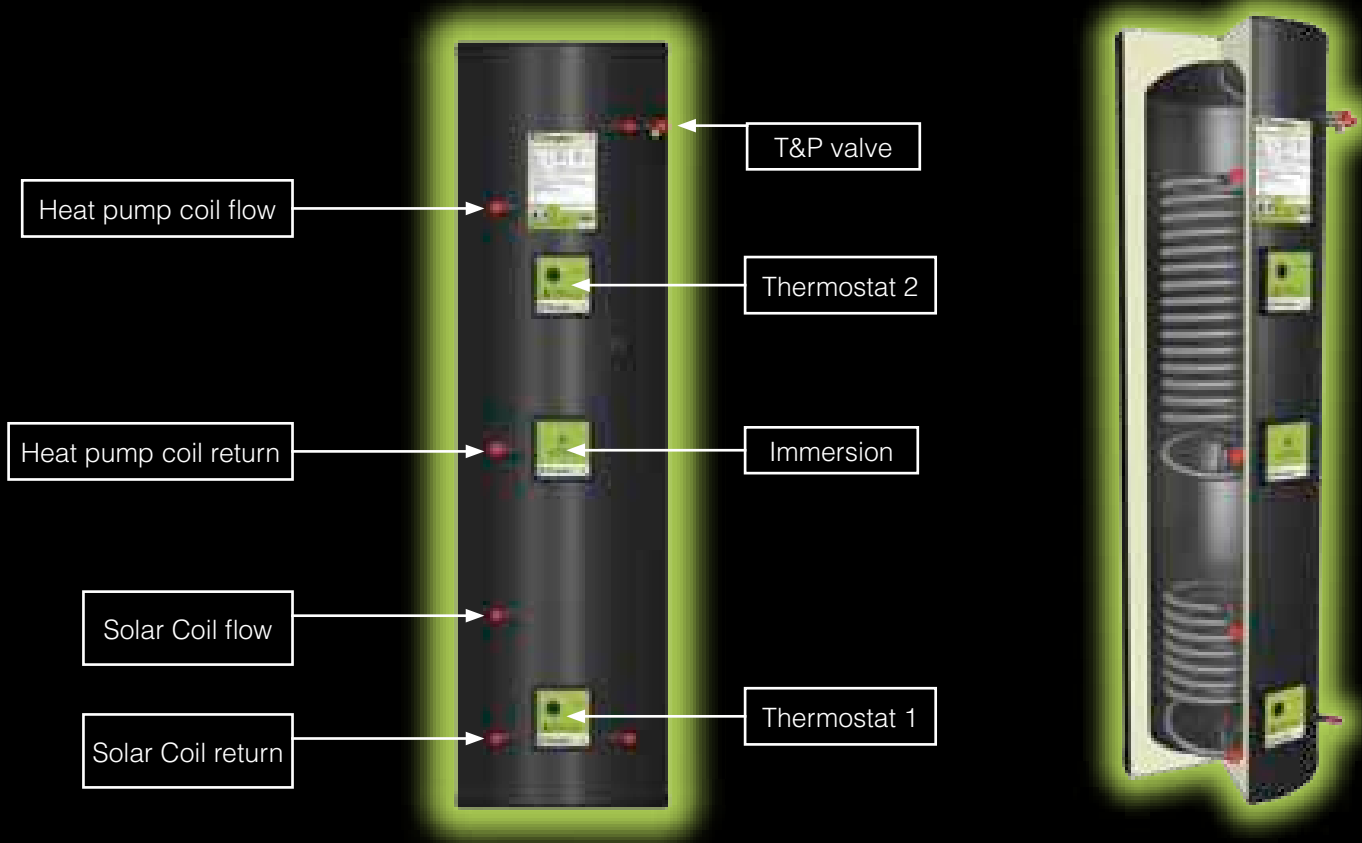
All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Primary hot water capacity (litres)	Heat pump coil heatable volume (litres)	Buffer capacity (litres)	Number of immersions	Expansion vessel (litres)	Heat pump coil size (kW)	Heat Pump Coil Surface area (m²)	Reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECS125HP75-580	125	97 ⁽ⁱ⁾	116.5	72	2	12	45 ⁽ⁱ⁾	2.2	7 ⁽ⁱ⁾	0.95
ECS150HP75-580	150	120 ⁽ⁱ⁾	141.5	72	2	12	51 ⁽ⁱ⁾	2.8	7 ⁽ⁱ⁾	1.10
ECS210HP75-580	210	180 ⁽ⁱ⁾	210	72	2	19	47 ⁽ⁱ⁾	3.0	12 ⁽ⁱ⁾	1.41

(i) Determined in accordance with EN12897-2006.

EC-Eau Solar Heat Pump Cylinder



DIMENSIONS

Model	Height (mm)	Diameter (mm)	T&P Valve (mm)	Solar coil return (mm)	Solar coil flow (mm)	Heat pump coil return (mm)	Heat pump coil flow (mm)	Immersion (mm)	Thermostat 1 (mm)	Thermostat 2 (mm)	Weight empty (kg)	Weight packaged (kg)
ECS300HPST-580	2080	580	1850	190	480	865	1673	975	245	1420	58	62

All measurements are taken from the bottom of the cylinder to the centreline on the component.

PERFORMANCE

Model	Capacity (litres)	Dedicated solar volume (litres)	Heat pump coil heatable volume (litres)	Solar coil size (kW)	Solar coil surface area (m ²)	Heat pump coil size (kW)	Heat pump coil surface area (m ²)	Number of immersions	Primary reheat (mins)	Aux reheat (mins)	Heat loss in 24 hrs (kW/24hr)
ECS300HPST-580	300	141 ⁽ⁱ⁾	300	19 ⁽ⁱ⁾	1.1	49 ⁽ⁱ⁾	2.8	1	38 ⁽ⁱ⁾	10 ⁽ⁱ⁾	1.96

(i) Determined in accordance with EN12897-2006.

Data

Usages of hot water

• Handwashing	1 to 2.5 litres per person (40°C)
• Kitchen sink	3 to 8 litres per meal (60°C)
• Cleaning	10 litres per day (60°C)
• Bath	60 litres per bath (60°C)
• Hairdressing	10 litres per shampoo (60°C)
• Dishwasher	2 litres per cycle (40°C)
• Washing machine	20 litres per cycle (60°C)
• Showers	13 litres per person (60°C) per 5 minutes

Useful formulae

Time and Loading Calculations (Excluding Heat Losses)

Time in minutes to heat water	=	$\frac{\text{Litres} \times \text{Temp Rise } ^\circ\text{C}}{\text{kW loading} \times 14.3}$
	=	$\frac{\text{Gallons} \times \text{Temp Rise } ^\circ\text{F}}{\text{kW loading} \times 5.7}$
kW loading required to heat water	=	$\frac{\text{Litres} \times \text{Temp Rise } ^\circ\text{C}}{\text{Time in minutes} \times 14.3}$
	=	$\frac{\text{Gallons} \times \text{Temp Rise } ^\circ\text{F}}{\text{Time in minutes} \times 5.7}$

Mean Temperature of Mixed Water

Mean Temp	=	$\frac{(\text{Litres Hot} \times \text{Temp Hot}) + (\text{Litres Cold} \times \text{Temp Cold})}{\text{Total (Hot + Cold) Litres}}$
	=	$\frac{(\text{Galls Hot} \times \text{Temp Hot}) + (\text{Galls Cold} \times \text{Temp Cold})}{\text{Total (Hot + Cold) Gallons}}$

Capacity of Tank or Cylinder

Litres	=	$\frac{\text{Dia}^2 \times \text{Height (dimensions in cm)}}{1273}$
Gallons	=	$\frac{\text{Dia}^2 \times \text{Height (dimensions in cm)}}{353}$
Litres	=	$\frac{\text{Length} \times \text{Breadth} \times \text{Height (dimensions in cm)}}{1000}$
Gallons	=	$\frac{\text{Length} \times \text{Breadth} \times \text{Height (dimensions in cm)}}{277}$

Temperature Conversion

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9 \quad ^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$$

Physical constants

Length:	1m = 3.28ft	
	1ft = 30.5cm	
Volume:	1gal = 4.54lits	1lit = 0.22gals
	= 277 cu ins	= 1000cc
	= 10lbs	= 1kg
		1000lits = 1m ³
Weight:	1lb = 0.45kg	
	1kg = 2.21lbs	
Volume:	1bar = 14.5psi = 100kN/m ²	
	1ft head of water = 0.434psi	
	1m head of water = 9.8kN/m ²	

1 kilo calorie (kC) is the heat required to raise 1kg of water through 1°C = 4187 Joules = 3.97 Btu.

1 British Thermal Unit (Btu) is the heat required to raise 1lb of water through 1°F = 17.6 watt mins = 0.252kC.

1kW Hour = 3412 Btu = B60kC.

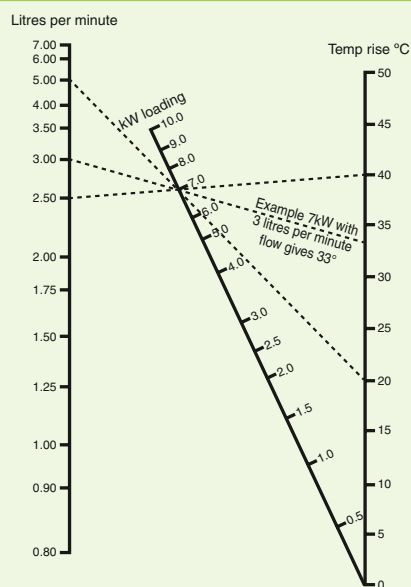
1 Joule = 1 watt second (Ws).

Instantaneous performance calculations

Temp rise °C	$\frac{\text{kW loading} \times 14.3}{\text{Litres per minute flow}}$
Litres per minute flow	$\frac{\text{kW loading} \times 14.3}{\text{Temp Rise } ^\circ\text{C}}$
Temp rise °F	$\frac{\text{kW loading} \times 5.7}{\text{Gallons per minute flow}}$
Gallons per minute flow	$\frac{\text{kW loading} \times 5.7}{\text{Temp Rise } ^\circ\text{F}}$

Instantaneous heaters

(Flow-Load and Temperature Rise Chart)



RECOVERY CHART (Approximate time in minutes to heat water)

Gallons heated through 100°F

Loading Kilowatts		1	1.5	2	3	5	12	15	20	30	40	50	60	80	100	125
	0.75	24	40	50	75	120	265	-	-	-	-	Time in minutes				
	1.0	18	27	40	55	90	215	265	-	-	-					
	1.5	12	18	24	40	60	145	180	235	355	-					
	2.0	9	14	18	27	45	110	135	180	265	355					
	3.0	6	9	12	18	30	75	90	120	180	235	295	355	470	590	735
	4.0	5	7	9	14	22	55	70	90	135	180	220	265	355	440	555
	6.0	3	5	6	9	15	40	45	60	90	120	150	180	235	295	370
	8.0	3	4	5	7	11	27	35	45	70	90	110	135	180	220	280
	9.0	2	3	4	6	10	24	30	40	60	80	100	120	160	200	245
	12.0	2	3	3	5	8	18	22	30	45	60	75	90	120	150	185
	15.0	2	2	3	4	6	15	18	24	40	50	60	75	95	120	150
	18.0	1	2	2	3	5	12	15	20	30	40	50	60	80	100	125
	24.0	1	2	2	3	4	9	11	15	22	30	40	45	60	75	95
	36.0	1	1	1	2	3	6	8	10	15	20	25	30	40	50	65

Litres heated through 50°C

Loading Kilowatts		5	7	10	15	30	60	80	100	150	200	250	300	400	600	800	1000
	1.0	18	25	35	55	105	210	280	-	-	-	-	Time in minutes				
	2.0	9	13	18	27	55	105	140	175	265	-	-					
	3.0	6	9	12	18	35	70	95	120	175	235	295					
	4.0	5	7	9	14	27	55	70	90	135	175	220	265	-	-	-	-
	6.0	3	5	6	9	18	35	50	60	90	120	150	175	235	350	470	585
	8.0	3	4	5	7	14	27	35	45	70	90	110	135	185	265	350	440
	9.0	2	3	4	6	12	24	35	40	60	80	100	120	160	235	315	390
	12.0	2	2	3	5	9	18	24	30	45	60	75	90	120	175	235	295
	15.0	2	2	3	4	7	14	19	24	35	50	60	70	95	140	190	235
	18.0	1	2	2	3	6	12	16	20	30	40	50	60	80	120	160	195
	24.0	1	1	2	3	5	9	12	15	22	30	40	45	60	90	120	150
	36.0	1	1	1	2	3	6	8	10	15	20	25	30	40	60	80	100

Pressure in pounds per square inch for different heads of water

Head feet	Pressure lb/in ²	Head feet	Pressure lb/in ²	Head feet	Pressure lb/in ²	Head feet	Pressure lb/in ²
1	0.4	26	11.3	51	22.1	76	32.9
2	0.9	27	11.7	52	22.5	77	33.4
3	1.3	28	12.1	53	23.0	78	33.8
4	1.7	29	12.6	54	23.4	79	34.2
5	2.2	30	13.0	55	23.8	80	34.7
6	2.6	31	13.4	56	24.3	81	35.1
7	3.0	32	13.9	57	24.7	82	35.5
8	3.5	33	14.3	58	25.1	83	36.0
9	3.9	34	14.7	59	25.6	84	36.4
10	4.3	35	15.2	60	26.0	85	36.8
11	4.8	36	15.6	61	26.4	86	37.3
12	5.2	37	16.0	62	26.9	87	37.7
13	5.6	38	16.5	63	27.3	88	38.1
14	6.1	39	16.9	64	27.7	89	38.6
15	6.5	40	17.3	65	28.2	90	39.0
16	6.9	41	17.8	66	28.6	91	39.4
17	7.4	42	18.2	67	29.0	92	39.9
18	7.8	43	18.6	68	29.5	93	40.3
19	8.2	44	19.1	69	29.9	94	40.7
20	8.7	45	19.5	70	30.3	95	41.2
21	9.1	46	19.9	71	30.8	96	41.6
22	9.5	47	20.4	72	31.2	97	42.0
23	10.0	48	20.8	73	31.6	98	42.5
24	10.4	49	21.2	74	32.1	99	42.9
25	10.8	50	21.7	75	32.5	100	43.4

Pressure in Kilonewtons per square metre for different heads of water

Head metres	Pressure kN/m ²	Head metres	Pressure kN/m ²
0.5	5	11	108
1.0	10	12	118
1.5	15	13	127
2.0	20	14	137
2.5	25	15	147
3.0	29	16	157
3.5	34	17	167
4.0	39	18	177
4.5	44	19	186
5.0	49	20	196
5.5	54	21	206
6.0	59	22	216
6.5	64	23	226
7.0	69	24	235
7.5	74	25	245
8.0	76	26	255
8.5	83	27	265
9.0	88	28	275
9.5	93	29	284
10.0	98	30	294



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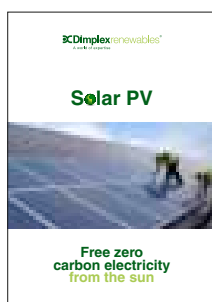
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The Dimplex Range

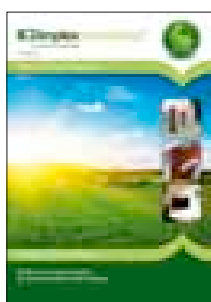
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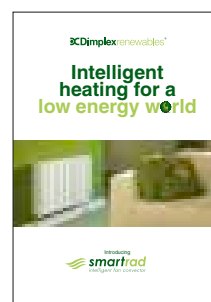
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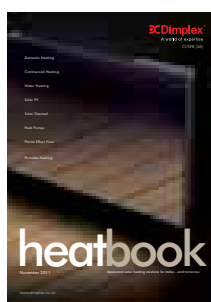
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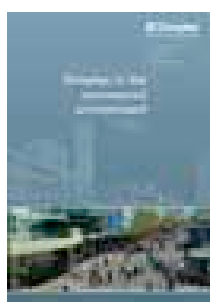
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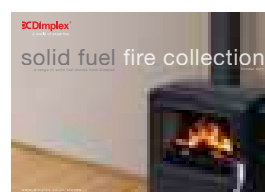
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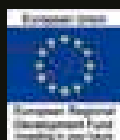


Solid fuel brochure

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