

Dimplex solar

Solar Thermal solutions from the name you can trust



 Dimplex renewables[®]

Introducing Dimplex solar

The low carbon water heating system



The complete solar thermal water heating system from a name you'll recognise.

The Dimplex Solar package is made simple by combining all the components into easy to purchase kits containing all the necessary solar components needed for a standard installation.* Each component has been carefully selected for its quality and suitability to the Irish climate.

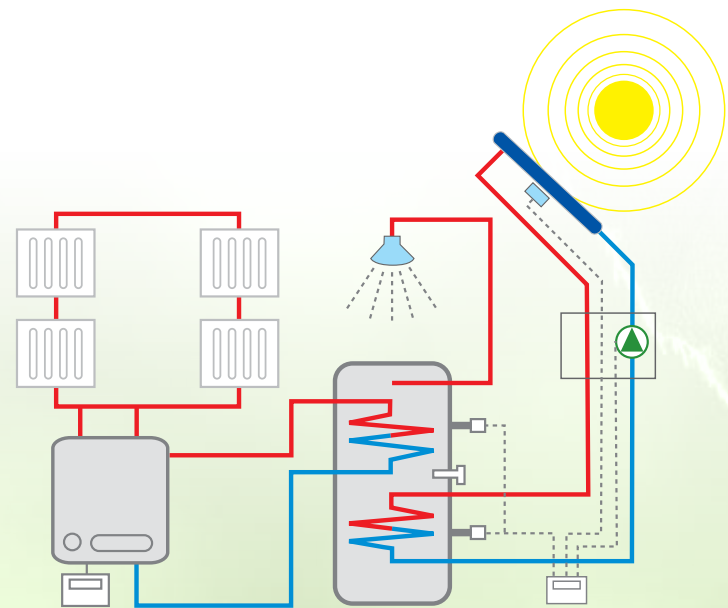
With a range of cylinder sizes suitable for each property and a selection of integrated kits and roof mounting options the Dimplex solution has an answer for every solar water heating requirement.

* By a suitably qualified person.

How Solar works

Solar energy is available in abundance all around us. Every year the sun provides 8000 times more energy than we consume globally ready to use when ever you need it.

Solar water heating systems harness solar radiation to efficiently and effectively heat water stored in a cylinder, ready for use whenever you need it.



One system adaptable for numerous applications

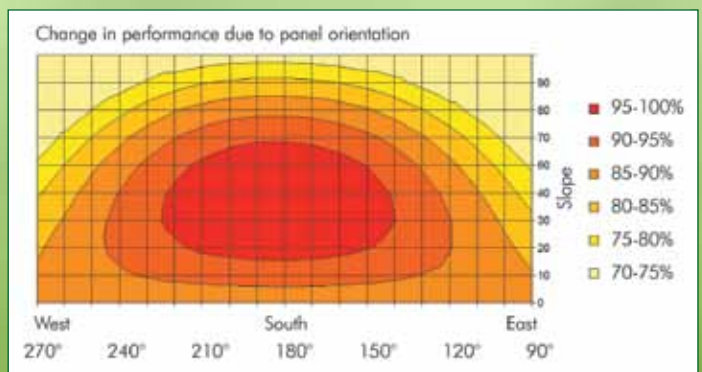
Dimplex Solar Systems are comprised of 3 key elements:

1. Dimplex Solar Collector (flat plate or vacuum tube).
2. Dimplex Hydraulic pack including one or two output controller.
3. Dimplex Solar Water Cylinder.

Each of these elements is highly versatile and enables our systems to be used for any scheme, from a small apartment right up to a substantial commercial installation.

Panel Orientation

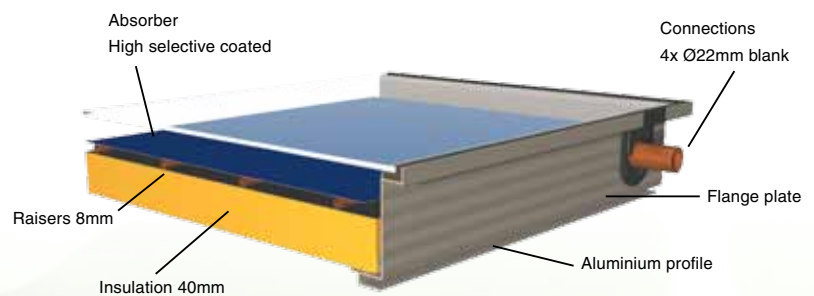
The orientation of the collector is important to ensure as much sun light as possible is captured. The optimum positioning for Dimplex solar thermal collector panels is on a south facing roof at a slope of 35° from horizontal. Solar Thermal collectors are highly versatile and can successfully be orientated either east of west facing and only lose 20% of the maximum captured power.



Dimplex Solar Flat Plate Solutions

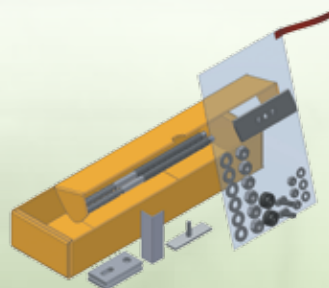
Dimplex Advantage

- 10 Year Warranty on panel.
- Optional Panel Sizes: 2.02m² or 2.5m².
- Lightweight design.
- Fully integrated and on roof options available.
- High efficiency panel performance.
- Robust 22 mm compression fittings.
- Rapid installation with only 6 main parts and unique Click System.
- Ideal for both domestic and commercial applications.
- Up to six collectors can be combined easily into a single collector field.
- Large area gives high kWh outputs for maximum benefit in DEAP and SAP.



Roof -Mounting Options

- Bolt system suitable for both slate and tile roofs.
- Integrated slate and tile solutions available.
- Unique Click System allows for a rapid install.
- Minimum viable roof pitch 20 degrees.

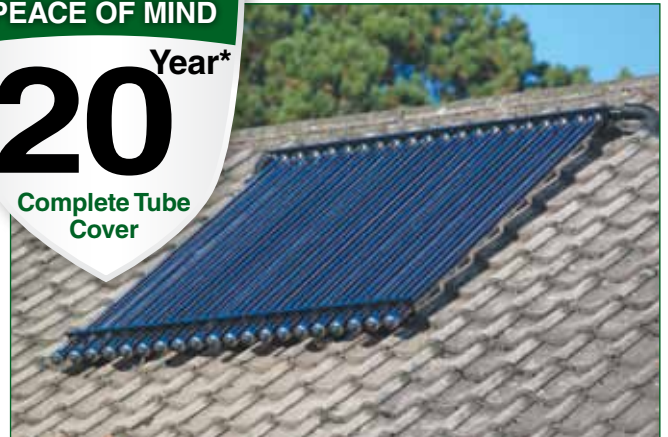


| Technical Data | SOLC250 | SOLC202 |
|------------------------------|-------------------------------------------|-------------------------------------------|
| Gross area m ² | 2.51 | 2.02 |
| Aperture area m ² | 2.404 | 1.907 |
| L x W x H mm | 2150 X 1170 X 83 | 1730 X 1170 X 83 |
| Weight empty kg | 39.3 | 32.6 |
| Absorber capacity L | 1.7 | 1.5 |
| Frame | Alluminium | Alluminium |
| Absorber | Laser welded selective coating | Laser welded selective coating |
| Absorbtion % | 95 | 95 |
| Manifold tubes mm | 22 | 22 |
| Riser tubes mm | 8 | 8 |
| Connections | Blank 22mm compression | Blank 22mm compression |
| Glass | 3.2 tempered solar float 90% transmission | 3.2 tempered solar float 90% transmission |
| Insulation | 40mm high performance | 40mm high performance |
| Max Stagnation temperature | 181 degrees | 184 degrees |
| Recommended fluid | Polypropylene | Polypropylene |
| Max operating pressure bar | 10 | 10 |
| μ0 | 0.785 | 0.799 |
| a1 | 3.594 | 4.174 |
| a2 | 0.014 | 0.009 |

Dimplex Solar Vacuum Tubes

⌘ Dimplex Advantage

- 20 Year Warranty on tubes.
- Direct-Flow and Heat-Pipe options available.
- Collector sizes available in both Direct Flow and Heat Pipe options: 20 Tube System at 2.03m² or 30 Tube System at 3.05m²
- High efficiency class-leading vacuum tubes.
- Rapid installation with no rails and only 4 mounting bolts required.
- Multiple Manifolds can be plugged together with no gaps for larger capacity installations.
- Ideal for domestic and commercial applications.
- Large area gives high kWh outputs for maximum benefit in DEAP and SAP.



Roof -Mounting Options

- 4-bolt system suitable for both slate and tile roofs.
- Integrated slots on the manifold mean no rails required.
- Lightweight manifold and footer can be installed by a single person.



Collector engineered and manufactured in Germany.

Low liquid volume
hence faster energy conversion

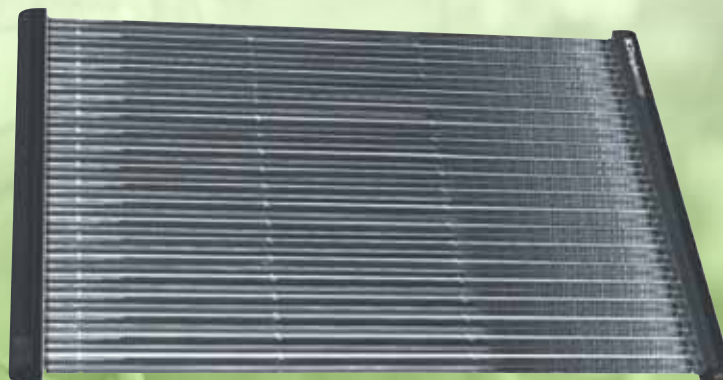
Direct Flow / Heat Pipe vacuum tube systems.

Insulation materials
in header ensure minimum heat loss.

Solar heat processing
Also suitable for high temperature ranges.

Mounting rails
Included in the collector, hence a self-supporting construction.

Tube spacing
is consistent, even when installing multiple collectors in succession.



Easy Access
to the header via click system.

Easy mounting kit system
with step-by-step instructions makes installation easy for one or two people.

Rotating vacuum tubes
Vacuum tubes are individually angled toward the sun. The variable mounting capabilities of the collectors requires no extra cost for roof mounting.

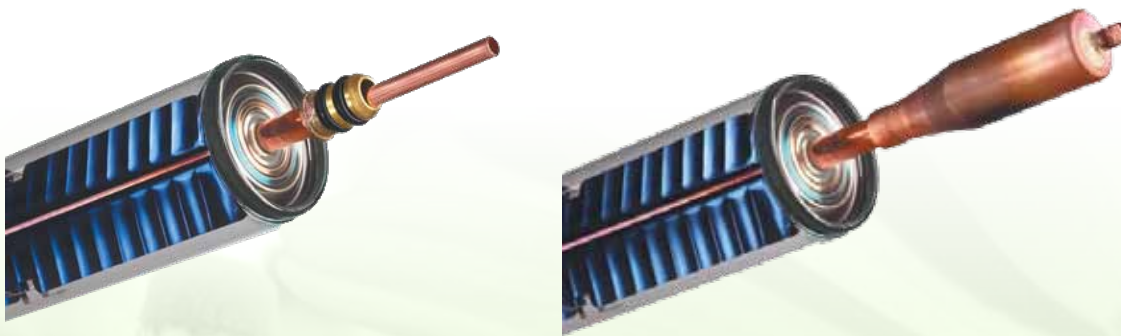
Plug-in tube connection
Vacuum tubes are easily interchangeable.

*Terms & Conditions Apply.

Direct Flow & Heat Pipe Vacuum Tubes

Key Features of Dimplex Vacuum Tubes

- **Vacuum technology**
provides highly efficient heat insulation with a vacuum of 10^{-6} .
- **Nano coating**
increases the transmission (up to 96%) and prevents weathering of the glass surface.
- **Highly resistant to hail**
because of special glass properties and thickness.
- **Absorber**
is connected to heat-carrier tube with ultrasonic welding.
- **Patented glass-to-metal connection**
protects the vacuum over the long term.



| Technical Date | SOLCDF32/22 | SOLCHP32/22 |
|-------------------------------|---------------------------------------|---------------------------------------|
| Gross area m ² | 4.87 / 3.25 | 4.96 / 3.24 |
| Apperture area m ² | 3.05 / 2.03 | 3.05 / 2.03 |
| L x W x H mm | 2164 X 2250 X 120 / 2164 x 1500 x 120 | 2210 X 2250 X 115 / 2210 x 1500 x 115 |
| Weight empty kg | 67.5 / 45 | 72 / 48 |
| Absorber capacity L | 3.96 / 2.64 | 1.41 / 0.94 |
| Manifold | Powder Coated Alluminium | Powder Coated Alluminium |
| Manifold / tube connection | Double O Ring with full tube rotation | Dry socket with full tube rotation |
| Absorbtion % | 96 | 96 |
| Absorber | Tinox selective coating | Tinox selective coating |
| Tube Steel | Patented Glass to metal seal | Patented Glass to metal seal |
| Connections | Double O Ring with 15 mm blank | Double O Ring with 15 mm blank |
| Glass | 1.8mm Hail resistant Soda Lime Glass | 1.8mm Hail resistant Soda Lime Glass |
| Vacuum Insulation | 10^{-6} | 10^{-6} |
| Max Stagnation temperature | 192 degrees | 160 degrees |
| Recommended fluid | Polypropylene | Polypropylene |
| Max opperating pressure bar | 10 | 10 |
| $\mu 0$ | 0.776 | 0.703 |
| a1 | 1.936 | 2.224 |
| a2 | 0.0064 | 0.005 |

Dimplex EC-Eau Indirect Solar Cylinders

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. Key features and advantages of Dimplex EC-Eau cylinders include:

- Purpose-designed solar coil to maximise heat transfer of generated solar energy to the stored water.
- Available in choice of single or dual coil options.
- Optimally sized, high surface area heat exchangers for solar operation.
- Mains pressure hot water for fast filling baths and powerful shower.
- Immersion for sterilisation and back up heating.
- 60mm of CFC-free foam injected insulation to minimise heat loss and energy consumption.



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) |
|---------------|-------------|---------------|----------------|------------------------|----------------------|----------------------|--------------------|----------------|-------------------|-------------------|
| ECSi175ST-580 | 1280 | 580 | 1050 | 190 | 525 | 740 | 995 | 580 | 330 | 847 |
| ECSi210ST-580 | 1505 | 580 | 1275 | 190 | 525 | 837 | 1052 | 615 | 330 | 940 |
| ECSi250ST-580 | 1780 | 580 | 1550 | 190 | 525 | 905 | 1120 | 640 | 330 | 1012 |
| ECSi300ST-580 | 2080 | 580 | 1850 | 190 | 525 | 992 | 1207 | 640 | 330 | 1095 |

PERFORMANCE

| Model | Capacity (litres) | Auxiliary heated volume (litres) | Dedicated solar volume (litres) | Weight empty (kg) | Weight full (kg) | Aux coil size (kW) | Aux coil surface area (m ²) | Solar coil size (kW) | Solar coil surface area (m ²) | Number of immersions | Aux Re-heat (mins) | Solar Reheat (mins) | Heat loss in 24 hrs (kW/24hr) |
|---------------|-------------------|----------------------------------|---------------------------------|-------------------|--------------------|--------------------|-----------------------------------------|----------------------|-------------------------------------------|----------------------|--------------------|---------------------|-------------------------------|
| ECSi175ST-580 | 175 | 80 ^(*) | 95 ^(*) | 37 | 210 ⁽⁺⁾ | 20 ^(*) | 0.8 | 23 ^(*) | 1.1 | 1 | 12 ^(*) | 23 ^(*) | 1.3 ^(y) |
| ECSi210ST-580 | 210 | 110 ^(*) | 100 ^(*) | 42 ⁽⁺⁾ | 252 ⁽⁺⁾ | 19 ^(*) | 0.8 | 22 ^(*) | 1.1 | 1 | 17 ^(*) | 23 ^(*) | 1.5 ^(y) |
| ECSi250ST-580 | 250 | 150 ^(*) | 100 ^(*) | 46 ⁽⁺⁾ | 300 ⁽⁺⁾ | 19 ^(*) | 0.8 | 21 ^(*) | 1.1 | 1 | 27 ^(*) | 34 ^(*) | 1.7 ^(y) |
| ECSi300ST-580 | 300 | 175 ^(*) | 125 ^(*) | 52 | 360 ⁽⁺⁾ | 18 ^(*) | 0.8 | 20 ^(*) | 1.1 | 1 | 31 ^(*) | 42 ^(*) | 1.9 ^(y) |

(*) Measured in accordance with EN12897-2006 at 80°C flow temperature and 0.25 l/s flow rate or operation of immersion heater.

(**) Calculated – based on measurements made in accordance with EN12897 at 80°C flow temperature and 0.25 l/s flow rate or operation of immersion heater.

(+) Calculated value.

(y) Heat loss figure calculated based on measured surface temperatures. Indicative only.

All measurements are from the bottom of the cylinder to the centre of the component.

System Sizing Guide

How many collectors do I need?

The Dimplex package has been grouped into easy to select kits. Simply, follow the 3 easy steps below, ticking one box at each stage.

Step 1 – Select the cylinder

Based on the number of people living in the property and their water consumption at 45°C (normal temperature for sanitary hot water) in 24 hours, select the size of the domestic hot water cylinder.

Choose a cylinder size from the Indirect range (one solar coil and one coil for connection to a secondary heating source and one immersion heater).

Step 2 – Select the on roof kit

Based on the amount of hot water required select the number of solar panels. Once this is decided, choose the method of roof fixing.

Step 3 – Select the hydraulic kit

The hydraulic kit also contains everything that is required inside the property, apart from the interconnecting pipes.

Also, available are accessories to help speed up installation such as the flush and fill station, corrugated stainless steel hose and others.

Total water usage in 24 hrs (litres)

155 170

185 200

215 230 245

260 275 290 305 320

335 350 365

INDIRECT

ECSL210ST 580

ECSL250ST 580

ECSL300ST 580

2 x 2m² collectors and roof mounting kits
2 x 2.5m² collectors and roof mounting kits
20 tube collectors and roof mounting kits

Flat Plate 4m²

Tile in roof SOL404IT
 Slate in roof SOL404IS
 Tile/Slate on roof SOL404ST

Flat Plate 5m²

Tile in roof SOL500IT
 Slate in roof SOL500IS
 Tile / Slate on roof SOL500ST

Direct Flow Tubes 2m²

Tile/Slate on roof SOLCDF22

Heat Pipe Tubes 2m²

Tile Slate on roof SOLCHP22

Hydraulic Kit

Duel Stream 2 Out Puts SOLHK3
 Duel Stream 1 Out Put SOLHK2

3 x 2m² collector and roof mounting kits
2 x 2.50m² collectors
30 tube collectors

Flat Plate 6m²

Tile in roof SOL606IT
 Slate in roof SOL606IS
 Tile/Slate on roof SOL606ST

Flat Plate 7.5m²

Tile in roof SOL750IT
 Slate in roof SOL750IS
 Tile / Slate on roof SOL750ST

Direct Flow Tubes 3m²

Tile/Slate on roof SOLCDF22

Heat Pipe Tubes 3m²

Tile Slate on roof SOLCHP32

Hydraulic Kit

Duel Stream 2 Out Puts SOLHK3
 Duel Stream 1 Out Put SOLHK2

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Specifications

Dimplex policy is one of continuous improvement; the Company therefore reserves the right to alter specifications without notice. The information contained in this brochure is correct at the time of printing. You are advised to consult your Dealer before purchasing.

Installation Guidance

This brochure is designed to assist you with your choice of Dimplex products and it is not intended as an installation guide. For safety, products should only be installed by a competent person, in accordance with current regulations and the manufacturer's instructions.

The Dimplex Range

Dimplex offers the widest range of electric space and water heating products in the world – over 400 – to meet almost any heating need. In addition to this publication, we have a wide range of brochures for both domestic and commercial applications.

Please visit our website www.dimplex.co.uk for more information.

For more information on our
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With thanks to the following customer: Randwick Village Hall and Playing Fields Committee

 **Dimplex**renewables®

A world of expertise

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