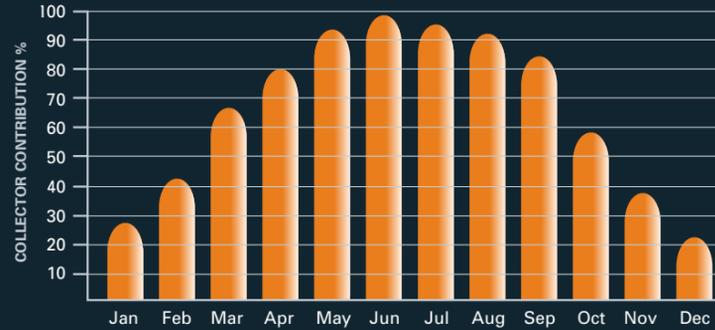




## SAVINGS

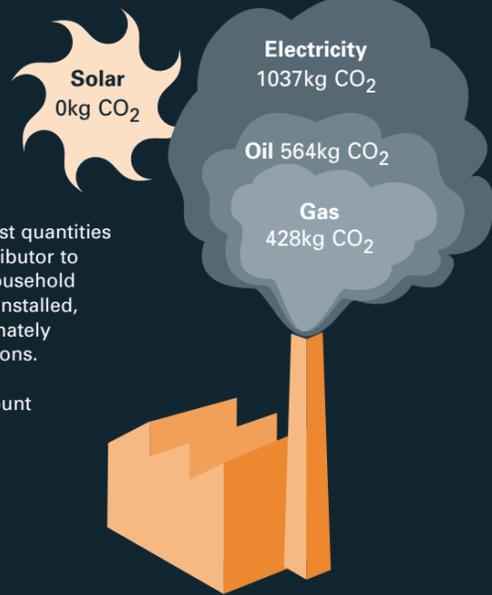
A DF100 solar system is usually sized to provide 60% of a household's annual hot water requirements. The graph below shows the typical annual solar energy contribution for London.



## POSITIVE ENVIRONMENTAL IMPACT

Burning fossil fuels produces vast quantities of carbon dioxide, a major contributor to global warming. The average household with a 3m<sup>2</sup> Thermomax system installed, can expect to generate approximately 2,256 kWh/year with zero emissions.

This diagram illustrates the amount of CO<sub>2</sub> (kg) produced by oil, gas and electricity to generate the equivalent 2,256 kWh.



For further information on industrial or commercial applications, please ask for our reference manual or contact our technical support team at [info@thermomax.com](mailto:info@thermomax.com).

## DF100

DIRECT FLOW SOLAR COLLECTOR

### SPECIFICATIONS

	DF100 – 2m <sup>2</sup>	DF100 – 3m <sup>2</sup>
Number of tubes	20	30
Dimensions (gross) [mm]	1996 x 1418 x 97	1996 x 2127 x 97
Absorber Area [m <sup>2</sup> ]	2.004	3.020
Weight (empty) [kg]	54.8	81.4
Fluid Content [Ltr]	3.8	5.6
Max. Operating Pressure [bar]	8	8
Flow Rate [l/min/tube]	0.10 - 0.25	0.10 - 0.25
Vacuum level [mbar]	10 <sup>-5</sup>	10 <sup>-5</sup>
Glass Specification	Low Iron Solar Glass	Low Iron Solar Glass
Efficiency (Absorber) $\eta_0$	0.830	0.832
$a_1$ [W/m <sup>2</sup> K]	1.53	1.14
$a_2$ [W/m <sup>2</sup> K <sup>2</sup> ]	0.0063	0.0144
Heat Capacity [kJ/m <sup>2</sup> /K]	9.3	9.2
Test/Approval (Solarkeymark)	EN12975-2	EN12975-2

## THERMOMAX

**Thermomax Ltd**  
7 Balloo Crescent  
Bangor Co. Down  
Northern Ireland  
BT19 7UP

T: +44 (0)28 9127 0411  
F: +44 (0)28 9127 0572  
E: [info@thermomax.co.uk](mailto:info@thermomax.co.uk)

THERMOMAX HAS A DISTRIBUTION NETWORK WORLDWIDE.  
TO LOCATE YOUR NEAREST APPROVED DISTRIBUTOR PLEASE VISIT OUR WEBSITE:  
[www.thermomax-group.com](http://www.thermomax-group.com)



# DF100

DIRECT FLOW SOLAR COLLECTOR

© DESIGN BY POSITIVE DESIGN CONSULTANTS



**THERMOMAX**  
PURE POWER. LIQUID SUN.



# THERMOMAX

The revolutionary Thermomax vacuum tube solar collector provides hot water in all seasons

Established over 25 years ago, Thermomax is a world leader in the design and manufacture of solar thermal vacuum tube collectors. The unique design of the collectors uses vacuum technology to ensure the most effective transfer of energy into heat. This means the Thermomax solar collector has extra performance in comparison with a traditional flat plate collector, providing heat not only in warm, sunny days, but also in cold, windy or humid conditions.

Thermomax has two hi-tech manufacturing plants in the UK - the headquarters in Bangor, Northern Ireland and a second manufacturing plant in Blackwood, South Wales.



Skilled staff combined with an ongoing research and development programme allows for consistently innovative products

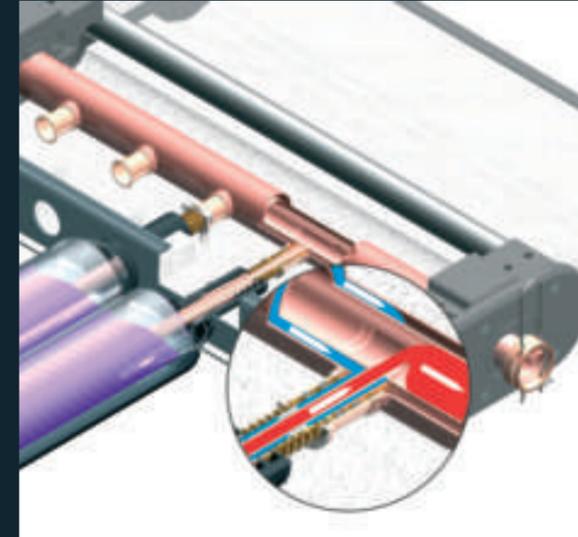
Thermomax products are reliable and durable. The Company is certified to ISO9000-2000 standard and all products have Solar Keymark approval (European Solar Industry Quality Certification).

Focus and investment in Research and Development means that Thermomax is consistently innovative. This is complemented by a highly skilled and efficient workforce, ensuring a perfect product in performance, quality and service.

## High Performance Solar Collectors

### DF100 TECHNOLOGY

Solar thermal technology transforms direct and diffuse solar radiation into useful heat using a solar collector



## DF100

### DIRECT FLOW SOLAR COLLECTOR

A DF100 is a direct flow solar collector, which consists of a row of solar tubes and a highly insulated manifold. Heat transfer fluid is circulated in a coaxial manner through the manifold and tubes.

The vacuum inside each tube provides perfect insulation and therefore protects the system from outside influences such as cold and windy weather or high humidity.

This vacuum insulation also ensures that the energy collected from the sun is very efficiently and effectively transferred into usable heat as there is minimal heat loss.



THERMOMAX  
SOLAR CONTROL

A Thermomax control kit ensures that the hot water generated by the system is transferred to the water storage tank.

Efficient and flexible system control  
Internet enabled access for control and monitoring  
Automated data logging, fault analysis and alarm



Thermomax offers universal fitting for pitched or flat surfaces

### INSTALLATION

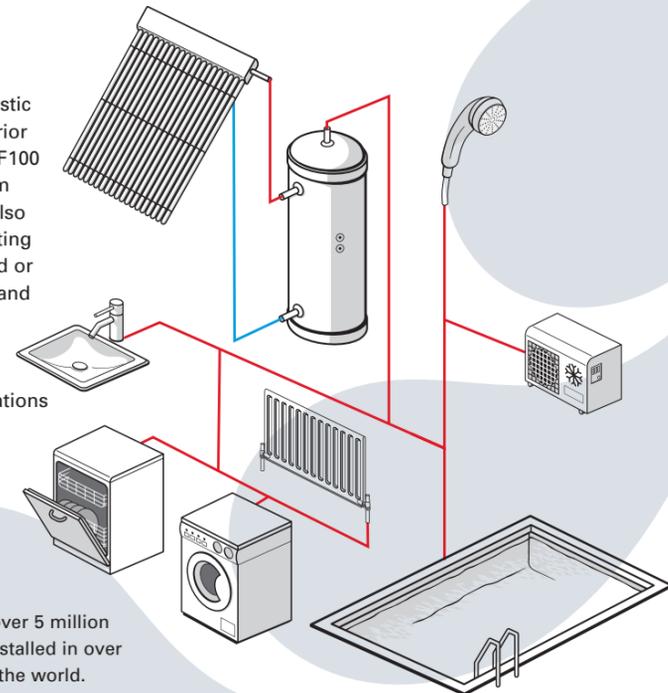
The unique plug and play design of the DF100 Thermomax solar system makes installation quick and easy. There is no need for heavy lifting equipment as tubes can be carried onto the roof individually. Usually installed facing south, the collector is fixed to the roof by easy-fit roof brackets, which are simply attached to the rafter.



The Thermomax DF100 system has been designed for flexible building integration. The system can be installed on a sloping roof, vertically/facade or horizontally to suit any architectural requirements or building constraints. A wide range of accessory kits is available to suit all installation needs, as well as kits to provide added protection against wind or snow loads.

### APPLICATIONS

In addition to domestic hot water, the superior performance of a DF100 Thermomax vacuum tube collector can also provide central heating support for standard or underfloor heating and more specialised industrial hot water heating for high temperature applications and solar cooling.



There are currently over 5 million Thermomax tubes installed in over 40 countries around the world.

The superior performance of the DF100 can also provide specialised industrial heating and cooling applications