



# HIGH PERFORMANCE SOLAR THERMAL SOLUTIONS

MARKET LEADING SOLAR THERMAL EVACUATED  
TUBES AND FLAT PLATES



THE  
TRUSTED  
ORIGINAL



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[www.kingspanthermomax.com](http://www.kingspanthermomax.com)



# KINGSPAN THERMOMAX



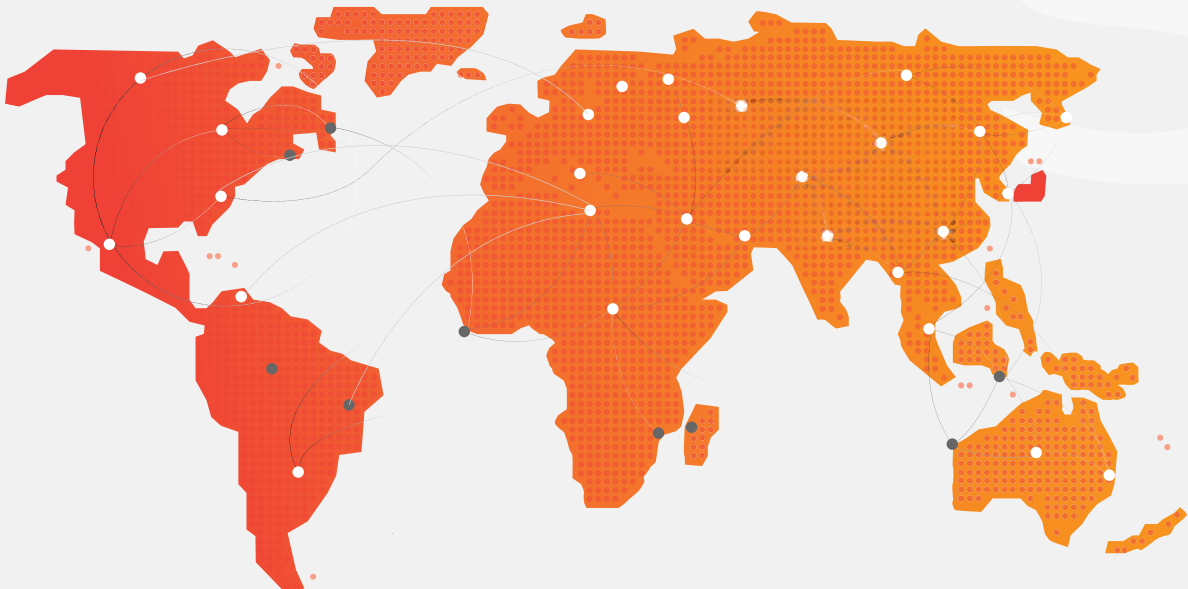
**WORLD  
LEADER**  
in trusted solar  
thermal solutions

Kingspan Thermomax is committed to energy conservation and the development of environmentally-friendly solutions to generate hot water and home heating. We're world leaders in creating efficient and cost-effective solar thermal energy solutions.

Manufactured in Ireland for over 30 years, Kingspan Thermomax collectors are proven global innovations, known worldwide for their reliability and excellent value for money. Our evacuated tubes and flat plate technologies are the best ways to utilise the sun's energy, across commercial, industrial, institutional and residential applications - backed by the experience, expertise and integrity of Kingspan.

#### **Solar Thermal Expertise for Your Home**

Kingspan Thermomax and Varisol evacuated tubes and Flat Plate panels have the potential to become a key part of your home energy management system. They efficiently harness the power of the sun, providing up to 70% of your annual hot water needs, saving you money through lower energy bills, while reducing your carbon footprint and dependence on fossil fuels.



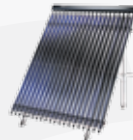
# HARNESS THE POWER OF THE SUN

## WITH OUR KINGSPAN THERMOMAX RANGE

Kingspan Thermomax provides only the most efficient and highest quality solar solutions designed to outperform the competition. We offer the following 3 options:

### THERMOMAX EVACUATED TUBES

Thermomax evacuated tubes are ideal for higher latitude climates, including cold, windy or humid conditions. They are easy to install, highly efficient and can generate up to 70% of your hot water needs.



### VARISOL

The revolutionary design of Varisol offers a modern alternative to rigid manifold systems. They combine flexibility and high performance polymer materials for a low maintenance, easy to install and environmentally-friendly solution.



### FLAT PLATE

Kingspan Flat Plate solar thermal panels are available as 'on-roof' or as 'in-roof' designs. They are a practical, cost-effective way to gather solar energy for water heating and can be easily installed whether you have concrete, slate or clay peg tiles.



## QUALITY

- › We provide higher quality, more efficient, and longer lasting solar solutions designed and manufactured in Europe. Our aim is to ensure the best performance and absolute peace of mind.

## EFFICIENCY

- › Generate up to 70% of your hot water needs, reduce your carbon footprint and lower your annual energy costs with the most efficient and technologically advanced solar solutions available.

## FULL SUPPORT

- › From world-class design consultancy and site assessment to delivery and installation by accredited installers, we offer full support throughout the process. Exceptional customer service is our top priority.



\* selected models only





# FREE ENERGY FOR YOUR HOME OR BUSINESS

GENERATE  
UP TO  
**70%**  
of your hot water needs -  
**FREE**

Our technology is the original and best evacuated tube collector on the market. We pride ourselves on not only our world class product, but on the design, engineering, and technical service we provide our customers.

## HOW SOLAR WORKS



1 The sun generates an abundance of free renewable energy

2 The solar panel harvests this energy and converts it into usable heat

3 This heat is then transferred into your heating system and used to provide water and space heating



**KINGSPAN THERMOMAX**  
THE ULTIMATE IN  
SOLAR THERMAL

# KEY BENEFITS OF KINGSPAN THERMOMAX SOLAR THERMAL SOLUTIONS

Kingspan Thermomax offers the complete solar thermal solution for commercial, industrial, institutional and residential applications. Along with offering superior products that benefit from more than 30 years of experience and expertise, our complete solution provides the following benefits:

## FREE PASSIVE ENERGY

- Free energy for life - reduce dependence on fossil fuels
- Generates up to 70% of your hot water needs - FREE

**70%**  
OF YOUR HOT  
WATER NEEDS

## HIGH STANDARDS

- MCS approved and Solar Keymarked
- UK manufacture & product design
- Independently tested & certified



## PERFORMANCE

- Manufactured and designed for higher latitude climates allowing hot water to be produced even on cold and cloudy days
- Works from dawn until dusk throughout the year



## PEACE OF MIND

- 5-year guarantee on Flat Plate panels and 10 years on evacuated tubes (tube guarantee extended to 20 years and Flat Plate guarantee to 10 years when installed by a Kingspan Accredited Installer)
- Kingspan Accredited Installer Network



## EASE OF INSTALLATION

- Can be linked to traditional UK heating systems
- Easy to retrofit to existing homes
- Pipework, seals and couplings supplied as 'First' and 'Second' Fix Kits to aid installation and reduce on-site time



## SUPPORT

- We offer professional design consultancy of our solar thermal systems to meet your exact specifications as well as installation advice, recommended accredited installers, access to local customer service teams, and full service and maintenance packages.



KM 559829 BS EN 12975  
Thermal solar systems and  
components





# THERMOMAX – THE TRUSTED ORIGINAL SOLAR THERMAL SOLUTION

UP TO  
**30%**  
MORE EFFICIENT  
than flat plate panels

## PROTECTION FROM SYSTEM OVER HEATING



1 The device is open and heat transfer occurs until the condenser reaches its set point temperature

2 Snap disks operate and close the device, stopping heat transfer into condenser

3 Device re-opens as temperature falls below the set point, reactivating heat transfer



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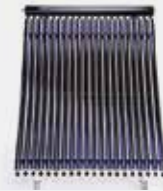
## THERMOMAX EVACUATED TUBES

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Kingspan Thermomax are the original and still the best solar thermal evacuated tube collectors in the world - offering unrivalled transfer of solar energy into usable heat. 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. They far surpass other collectors on the market in terms of efficiency and performance, and provide solar heated water in record time.

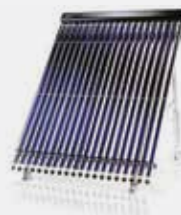
### HP400

The high performance HP400 is easy to install and maintain. The dry connection between manifold and tubes allows for tubes to be easily fitted and replaced without draining the system and the unique temperature limitation device gives added protection. A choice between two temperature limits provides the perfect hot water solution for your home or business.



### DF400

This efficient and effective direct flow collector provides the perfect solution when the ideal installation position or roof orientation is not available. It is a fully pumped wet system offering great installation flexibility and can be fitted horizontally and vertically, on sloping as well as flat roofs and facades.



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## BENEFITS

- › Designed specifically for higher latitude climates.
- › Supplies up to 70% of your annual hot water needs.
- › Up to 30% more effective than flat plate collectors.
- › The unique 'plug and play' design makes installation quick and easy.
- › A superior vacuum is maintained over a longer period of time.
- › 5-year standard guarantee.
- › 20-year guarantee when fitted by a Kingspan Accredited Installer.
- › Works from dawn until dusk and throughout the year.
- › Average 25-year lifespan
- › MCS Approved and SolarKeymark certified





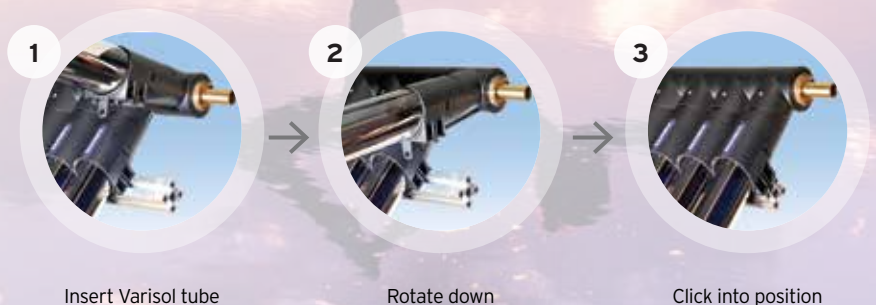
# VARISOL, THE WORLD'S ONLY REVOLUTIONARY DESIGN FOR TOTAL FLEXIBILITY

## PRECISION SIZING

Choose the exact number  
of tubes that you need



## QUICK & EASY INSTALLATION



1 Insert Varisol tube

2 Rotate down

3 Click into position





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## VARISOL MODULAR COLLECTOR

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Our Varisol evacuated tubes are the first collectors in the world with no manifold. This revolutionary new design offers a modern and flexible alternative to the rigid manifold system, providing total flexibility in installation. Individual tubes can be simply 'clicked' together to create solar collectors of varying sizes, making it possible to install where roof area is limited, such as between windows or skylights.

### VARISOL HP

Our Varisol HP combines the world-leading technology of Thermomax heat pipe tubes with a unique modular design, offering a high performance collector with a low cost of ownership. Dry connection allows for the tubes to be fitted or replaced without draining down the system, while the unique temperature safety device ensures system protection. A choice between two temperature limits provides the perfect hot water solution for your home or business.



### VARISOL DF

The Varisol DF combines high performance Thermomax direct flow technology with the benefits of a modular system. It is a fully pumped wet system that offers even greater flexibility in installation as the tubes can be fitted horizontally and vertically, on sloping as well as flat roofs and facades.



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## FEATURES

- › Total flexibility in system installation and design
- › Collector size from 1-150 tubes
- › Precision sizing - 100% accurate
- › High performance polymer material
- › Manifold component and tube pre-assembled
- › Expandable - the system can grow with your needs
- › 20-year guarantee when fitted by a Kingspan Accredited Installer
- › 5-year guarantee against hail damage
- › MCS Approved & SolarKeymark certified



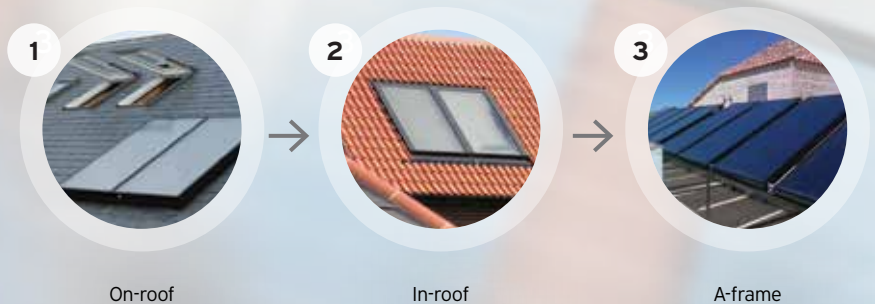


# DURABLE & COST-EFFECTIVE

AESTHETICALLY PLEASING  
INSTALLATION  
low visual impact



## FLEXIBLE INSTALLATION OPTIONS





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THE ULTIMATE IN  
SOLAR THERMAL

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## FLAT PLATE

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Kingspan Thermomax flat plate panels are a superior flat plate solar thermal solution that offers an aesthetically pleasing sleek and subtle design, durability and flexible installation with both 'in-roof', 'on-roof' and A-frame options.

Designed especially for higher latitude climates, the panels provide a cost-effective solution for both commercial and domestic applications and deliver excellent levels of efficiency and performance all year round.

They are robust and hard-wearing, and deliver many years of trouble-free operation in all weather conditions. A range of fixing brackets allows for the panels to be installed on all types of roof tiles including concrete, slate and clay peg.



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## FEATURES

- › High efficiency performance
- › Available in 3 sizes
- › Robust and hard-wearing
- › Ease of installation with appropriate package solutions - 'in-roof' / 'on-roof' / A-frame
- › Weatherproof seal
- › Aesthetically pleasing installation image (comparable to a roof light or velux window)
- › Drainback compatible
- › Highly insulated to reduce heat loss
- › Lightweight - easy to handle on site
- › 95% absorption
- › MCS Approved & SolarKeymark certified
- › 5-year guarantee (extended to 10 years when fitted by Kingspan Accredited Installer)





# SPECIFICATIONS

## EVACUATED TUBES

	DF400 20 tube panel	DF400 30 tube panel	HP400/450 20 tube panel	HP400/450 30 tube panel
<b>DIMENSIONS</b>				
Aperture Area	2.157m <sup>2</sup>	3.23m <sup>2</sup>	2.13m <sup>2</sup>	3.20m <sup>2</sup>
Overall Dimensions in mm (length x width x depth)	1954 x 1416 x 93	1954 x 2125 x 93	1952 x 1418 x 93	1952 x 2127 x 93
Fluid Volume (In Manifold)	4.1 Ltr	5.6 Ltr	1.1 Ltr	1.7 Ltr
Inlet and Outlet Dimensions	22mm	22mm	22mm	22mm
Weight (Empty)	53kg	78.4kg	52kg	71kg
<b>MOUNTING</b>				
Recommended Inclination	0-90°	0-90°	20-75°	20-75°
<b>OPERATING DATA</b>				
Efficiency	Based on Aperture	Based on Aperture	Based on Aperture	Based on Aperture
eta 0 - Zero loss collector efficiency (no)	0.768	0.768	0.75	0.75
k1 - Heat loss coefficient (a1)	1.36 W/m <sup>2</sup> K	1.36 W/m <sup>2</sup> K	1.18 W/m <sup>2</sup> K	1.18 W/m <sup>2</sup> K
k2 - Heat loss coefficient (a2)	0.0053 W/m <sup>2</sup> K <sup>2</sup>	0.0053 W/m <sup>2</sup> K <sup>2</sup>	0.0095 W/m <sup>2</sup> K <sup>2</sup>	0.0095 W/m <sup>2</sup> K <sup>2</sup>
Rated Flow Rate (Ltr /h)	120	180	120	180
Min./Max. Flow Rate (Ltr /h)	80/210	120/300	80/210	120/300
Max. Operating Pressure	8 Bar	8 Bar	10 Bar	10 Bar
Temp. Limitation	N/A	N/A	90°C / 135°C	90°C / 135°C
Absorbance	95%	95%	95%	95%
Emissivity	5%	5%	5%	5%
Stagnation Temperature	313°C	313°C	168°C	168°C
Vacuum	<10 <sup>-6</sup> mbar	<10 <sup>-6</sup> mbar	<10 <sup>-6</sup> mbar	<10 <sup>-6</sup> mbar
<b>QUALITY CERTIFICATION</b>				
Solar Keymark	011-7S1946R	011-7S1946R	011-7S1793R	011-7S1793R



## VARISOL

	Varisol DF	Varisol HP90	Varisol HP135
<b>DIMENSIONS</b>			
Dimensions (Each Tube) in mm	1950x70.9x70.9	1965x70.9x70.9	1965x70.9x70.9
Weight (Each Tube)	2.2kg	2.13kg	2.13kg
Volume (Each Tube)	0.19 litres	0.05 litres	0.05 litres
Pipe Connections	22mm compression	22mm compression	22mm compression
<b>MOUNTING</b>			
Recommended Inclination	0-90°	20 - 70°	20 - 70°
<b>OPERATING DATA</b>			
Efficiency	Based on Aperture	Based on Aperture	Based on Aperture
eta 0 - Zero loss collector efficiency (no)	0.775	0.76	0.78
k1 - Heat loss coefficient (a1)	1.061 W/m <sup>2</sup> K	1.621 W/m <sup>2</sup> K	2.112 W/m <sup>2</sup> K
k2 - Heat loss coefficient (a2)	0.023 W/m <sup>2</sup> K <sup>2</sup>	0.008 W/m <sup>2</sup> K <sup>2</sup>	0.006 W/m <sup>2</sup> K <sup>2</sup>
Max Operating Pressure	6 bar	6 bar	6 bar
Temp. Limitation	N/A	90°C	135°C
<b>QUALITY CERTIFICATION</b>			
Solar Keymark	011-7S1238R	011-7S1936R	011-7S1935R

## FLAT PLATE

	FPW18 Flat Plate	FPW21 Flat Plate	FPW25 Flat Plate
<b>DIMENSIONS</b>			
Gross Area	1.80m <sup>2</sup>	2.07m <sup>2</sup>	2.43m <sup>2</sup>
Aperture Area	1.62m <sup>2</sup>	1.92m <sup>2</sup>	2.23m <sup>2</sup>
Overall Dimensions	1929 x 933 x 91	1988 x 1041 x 91	1990 x 1222 x 91
Panel volume of liquid	1.00 litre	1.1 litres	1.3 litres
Panel weight	34 kg	37.2 kg	44 kg
<b>MOUNTING</b>			
Type of Mounting	'In-roof', 'On-roof' and A-frame		
<b>OPERATING DATA</b>			
eta 0 - Zero loss collector efficiency (no)	0.785	0.785	0.785
k1 - Heat loss coefficient (a1)	3.722 W/m <sup>2</sup> K	3.722 W/m <sup>2</sup> K	3.722 W/m <sup>2</sup> K
k2 - Heat loss coefficient (a2)	0.012 W/m <sup>2</sup> K <sup>2</sup>	0.012 W/m <sup>2</sup> K <sup>2</sup>	0.012 W/m <sup>2</sup> K <sup>2</sup>
Max. Operating Pressure	10 bar	10 bar	10 bar
Absorbance	95%	95%	95%
Emissivity	4%	4%	4%
<b>QUALITY CERTIFICATION</b>			
Solar Keymark	011-7S2039F	011-7S2039F	011-7S2039F



**UP TO  
20 YEAR**  
**EXTENDED GUARANTEE**  
when installed by a Kingspan  
Accredited Installer

# CUSTOMER SUPPORT

We stand by the quality and performance of Kingspan Thermomax products and our support doesn't stop once your system is installed. We're on standby 24/7 with guidance on servicing and maintenance - our trained professional support team is only a phone call away.

## PEACE OF MIND THROUGH TECHNICAL AND ENGINEERING SUPPORT

Our professional engineers design solar thermal systems to your exact specifications and objectives through our world-class design consultancy, engineering expertise and comprehensive advice. From initial site assessment to installation, Kingspan is with you every step of the way.

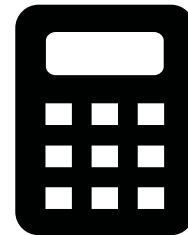
## CUSTOMER SUPPORT WHEN YOU NEED IT

Our friendly local customer service team are on hand with professional advice. We operate a dedicated helpline on +44 (0) 28 3836 4520 and a support email address on [solar@kingspan.com](mailto:solar@kingspan.com)

## SAVINGS CALCULATOR

Our online calculator will provide you with the best thermal solution to suit your needs. By answering a few simple questions, you will instantly see how much you could save with a Kingspan Thermomax solar thermal installation in your home.

Alternatively, you can visit your local merchant or phone us on **+44 (0) 28 3836 4520** and speak to our friendly customer service team.



## SERVICE AND MAINTENANCE

Regular maintenance is recommended to ensure optimal performance of any system. In the unlikely event your system needs servicing, our specially trained engineers are on hand to help.

For more information on our Solar servicing & maintenance call **+44 (0) 28 3836 4600** or email [helpingyou@kingspan.com](mailto:helpingyou@kingspan.com)



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# UK Manufacture - International Standards

Kingspan Thermomax is without doubt the most technologically advanced and efficient solar thermal system available in the world.

We are the pioneers in solar thermal solutions and our standards are unparalleled.

kingspan



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We take every care to ensure that the information in this document is accurate at the point of publishing but with continuous product development, details are subject to alteration without notice.

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