

**THERMOMAX | FN**

Advanced Flat Panel Technology



Solar heating is the natural way to reduce your energy bills and your carbon footprint.

**It doesn't have to cost the earth.**



**Kingspan Renewables Limited**

7 Balloo Crescent, Bangor Northern Ireland,  
BT19 7UP, United Kingdom  
**Tel:** +44 (0) 28 9127 0411 **Fax:** +44 (0) 28 9127 0572  
**E-mail:** info@kingspansolar.com  
www.kingspansolar.com

**Kingspan Solar Limited**

Tadman Street, Wakefield, West Yorkshire WF1 5QU  
**Tel:** +44 (0) 1924 376 026 **Fax:** +44 (0) 1924 385 015  
Freephone (GB only) **Tel:** 0845 812 0007 **Fax:** 0845 812 0008  
**E-mail:** sales@kingspansolar.co.uk  
www.kingspansolar.co.uk



**Kingspan SOLAR**

Renew your way of thinking  
with Kingspan Solar

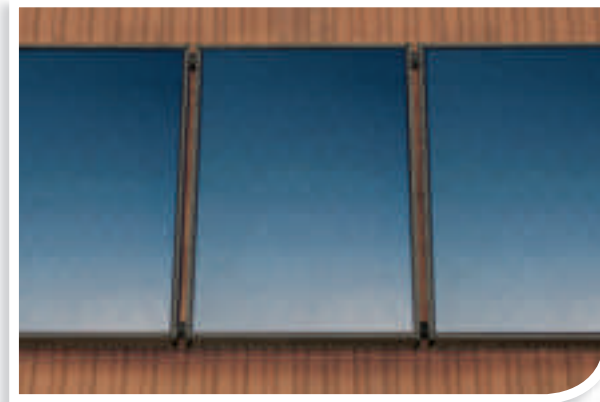
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**Kingspan Group Plc - Global, Sustainable, Building Product Solutions**

Kingspan Group Plc is a building products business focused on establishing leading market positions by providing energy conserving and renewable construction systems with a global reach. Kingspan have manufacturing, distribution and commercial operations throughout Europe, USA, Australia, New Zealand and the Far East.

Together with other Kingspan Group companies, the renewables business has an overall goal to provide solutions towards a zero carbon lifestyle. Kingspan Renewables is committed to providing efficient and cost effective solutions to today's environmental concerns.



**Sustainable Development with Kingspan Solar**

With over 25 years' experience with Solar Thermal technology, Kingspan Renewables Ltd and the Thermomax brand prides itself on leading the way with premium quality products. Thermomax vacuum solar tubes are acknowledged as a world leader in solar thermal collectors, the most efficient method of generating solar hot water in wet, cold and windy weather.

Solar thermal technology is a perfect investment in today's economic and financial climate. Reliance on traditional fossil fuels is no longer a viable option. Limited resources, fluctuating prices along with the impact on today's environment means a shift towards renewable technology is inevitable and key to survival.

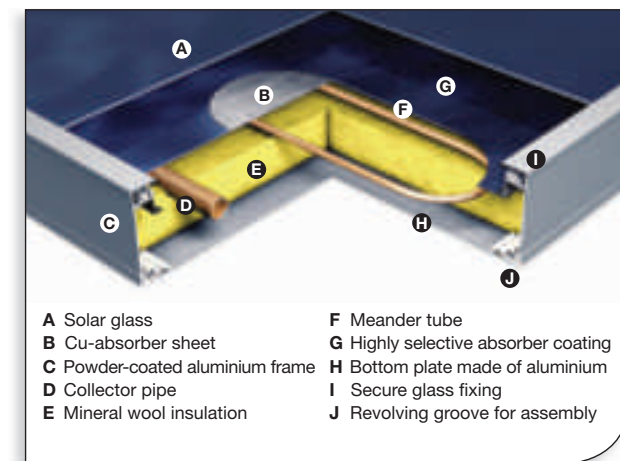
The Kingspan Solar product range from Kingspan Renewables Ltd shows a firm commitment towards ensuring sustainable development.

Solar energy is clean, free and safe. It produces no carbon emissions, one of the major contributors to Global warming. Building on the world-wide success of Thermomax solar vacuum tubes, the Thermomax FN 2m<sup>2</sup> flat panel high performance solar collectors are the newest addition to the Kingspan Solar range. Designed specifically for Northern European climates, they are ideal for both commercial and domestic use. Taking into account social and economic demands, the Thermomax FN provides the perfect environmentally-friendly solution to your hot water demands.

**Thermomax FN - Highly Efficient Solar Technology**

The new collector housing contains a laser-welded copper absorber with 4 connectors. With an optimised aperture area, the Thermomax FN offers high efficiency and elegant design, as well as simple and flexible installation. Innovative ventilation and drainage design allows the collector to dry out very quickly so it is not adversely affected by wet conditions. Condensation on the glass pane is almost completely eliminated.

The rigorous prevention of thermal bridges allows the highest output levels. The secure glass mount, featuring two separate sealing levels made of UV-resistant material, guarantee ultimate product reliability and durability. The frame is manufactured from a single piece of weather resistant aluminium, with a scratch-proof powder coating and available in anthracite.



Thermomax FN series collectors are produced solely from environmentally friendly and recyclable materials.

**Easy Installation**

Thermomax FN allows for simple and easy installation. High-quality, impact resistant and weather-proof plastic corner caps are designed and fitted to provide impact protection to the frame and to reduce the risk of injury during installation. Detailed installation manuals are also available in Spanish and French.

**In-roof Installation**

An in-roof flashing kit is being developed.



**On-roof Installation**

Rafter anchors and rails hold the collector absolutely securely on the roof skin and mounting is extremely simple. If the pitch of the roof is unfavourable, the on-roof system can be elevated using additional components.

**Freestanding / Flat Roof Installation**

Freestanding system with a variable tilt angle of between 45° and 60°. Tilt angles of between 20° and 45° are also possible using additional components.

**Quality Performance**

- Designed specifically for Northern European climates
- Provides heat even in wet and cooler conditions
- 5 year functionality and weathering resistance warranty
- 10 year warranty with certified installation
- Undergone stringent thermal shock and tensile tests to guarantee highest quality
- Tested to ISO 12975 for performance and durability
- Solar Keymark approved

For full information on our award-winning Thermomax solar vacuum tubes, please visit [www.kingspansolar.com](http://www.kingspansolar.com)

**Thermomax FN 2.0**

Dimensions	
Aperture Area	1.969m <sup>2</sup>
Absorber Area	2.0075m <sup>2</sup>
Overall Dimensions	1870 x 1150 x 95mm
Fluid Volume	1.70 Ltr
Inlet and Outlet Dimensions	22mm compression or ø22mm plug-system with double-O-ring
Weight (Empty)	35kg
Mounting / Connection	
Recommended Inclination	20-90°
Hydraulic Connection	Parallel connection with collectors side-by-side
Operating Data	
Efficiency	Based on aperture
eta 0	0.775
k1	3.73 W/m <sup>2</sup> K
k2	0.0152 W/m <sup>2</sup> K <sup>2</sup>
Quality Test Report	
Flow Rate	
Rated	120 Ltr / h
Minimum	50 Ltr / h
Maximum	120 Ltr / h per collector, per field up to 700 Ltr / h
Maximum Operating Pressure	10 Bar
Stagnation Temperature	217°C
Heat Transfer Fluid Water/Glycol	Antifreeze mix based on propylene-glycol
Materials	
Collector Case	Aluminium frame, powder coated
Insulation	50mm mineral wool
Absorber	Cu-sheet and Cu-tubes, laser welded
Coating	Highly selective on copper
Absorbance	95%
Emissivity	5%
Absorber Type	Absorber with 1 serpentine ø9mm and 2 manifolds ø22mm
Mounting Frame and Clips	Stainless steel, aluminium
Glass	Low iron, structured, solar safety glass (ESG) - Transm. 0.915
Impact Resistance of Covering	EN12975-2. passed optional impact resistance tests
Durability	
Permissible Wind and Snow Load	3 kN/m <sup>2</sup> suction, 5 kN/m <sup>2</sup> pressure
Warranty	5 year functionality and weathering resistance warranty 10 year warranty with certified installation
Quality Certification	Solar Keymark