

RENEWABLE ENERGY SOLUTIONS  
KINGSPAN SOLAR DATA SHEET

THERMOMAX DF100

# DIRECT FLOW VACUUM TUBE SOLAR COLLECTOR



**Kingspan Solar**

Harnessing the sun  
to work for you



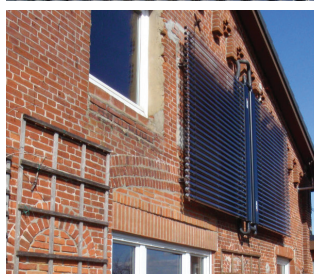
## THERMOMAX DF100

DF100 is a direct flow solar collector, which consists of a row of solar tubes and a highly insulated manifold. The heat medium to be heated is passed down through the collector tube within a coaxial heat exchanger.

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.

DF100 collectors are available in 3 different sizes

	DF100		
	1m <sup>2</sup>	2m <sup>2</sup>	3m <sup>2</sup>
<b>NUMBER OF TUBES</b>	10	20	30
<b>DIMENSIONS</b>			
Absorber Area (m <sup>2</sup> )	1.002	2.004	3.020
Overall Dimensions (mm)	1996 x 709 x 97	1996 x 1418 x 97	1996 x 2127 x 97
Width of Manifold (mm)	709	1418	2127
Length (tube and manifold) (mm)	1996	1996	1996
Depth (mm)	97	97	97
Aperture Area (m <sup>2</sup> )	1.07	2.15	3.23
Fluid Volume (ltr)	1.8	3.6	5.6
Inlet and Outlet Dimensions (mm)	22	22	22
Weight (empty) (kg)	25	54.8	81.4
<b>MOUNTING</b>			
Recommended Inclination (°)	0-90	0-90	0-90
<b>PERFORMANCE DATA</b>			
Efficiency	Based on Aperture	Based on Aperture	Based on Aperture
Eta 0	0.781	0.773	0.779
a1 (W/m <sup>2</sup> K)	1.44	1.43	1.07
a2 (W/m <sup>2</sup> K <sup>2</sup> )	0.0062	0.0059	0.0135
Solar Keymark Licence Numbers	011-7S060R	011-7S060R	011-7S060R
<b>OPERATING DATA</b>			
Flow Rate (ltr/h)			
Rated	80	160	240
Minimum	60	120	180
Maximum	150	300	480
Maximum Operating Pressure	8 Bar	8 Bar	8 Bar
Stagnation Temperature (°C)	286	286	286
Heat Transfer Fluid	Water / Glycol	Water / Glycol	Water / Glycol
<b>MATERIALS</b>			
Absorber	Copper	Copper	Copper
Coating	Selective Coating	Selective Coating	Selective Coating
Absorbance (%)	95	95	95
Emissivity (%)	5	5	5
Mounting Frame and Clips	Stainless Steel, Aluminium, EPDM	Stainless Steel, Aluminium, EPDM	Stainless Steel, Aluminium, EPDM
Glass	Low Iron - Transm. 0.92	Low Iron - Transm. 0.92	Low Iron - Transm. 0.92
Vacuum	<10 <sup>-4</sup> mbar	<10 <sup>-4</sup> mbar	<10 <sup>-4</sup> mbar
Quality Certification/ Solar Keymark	Yes	Yes	Yes

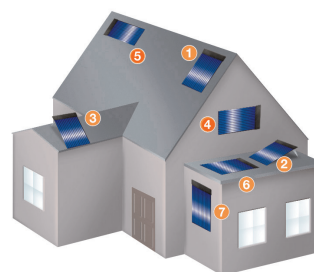


### FEATURES

- 30% more effective than flat plate collectors.
- Supplies up to 70% of your annual water needs.
- Designed specifically for Northern European climates.
- Provides heat even in cold, windy or humid conditions.
- Fully pumped system - can be installed horizontally and vertically; on flat roofs and facades.
- Reduces dependence on increasingly expensive fossil fuels.
- 5-year standard warranty.
- 20-year warranty with a Kingspan Solar Accredited Installer.
- Works from dawn until dusk and throughout the year.
- Average 25-year lifespan.

### INSTALLATION OPTIONS

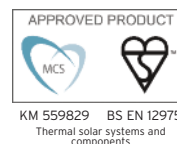
The unique 'plug and play' design of Thermomax solar collectors makes installation quick and easy. There is no need for heavy lifting equipment as tubes can be carried onto the roof individually. The collector is fixed to the roof by easy-fit brackets, which are simply fixed to the rafter.



### INSTALLATION OPTIONS

#### Collector Positions

- 1 Ideal slope 40°
- 2 Roof kit angled 40°
- 3 Elevated 20°
- 4 Horizontal ideal slope
- 5 Horizontal façade
- 6 Flat
- 7 Vertical façade



Call us today for pricing and sales information.

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