

RENEWABLE ENERGY SOLUTIONS  
KINGSPAN SOLAR DATA SHEET

THERMOMAX HP400  
NEW SLIMLINE DESIGN

HEAT PIPE VACUUM TUBE  
SOLAR COLLECTOR



# THERMOMAX HP400

A dry heat pipe collector for ease of installation and maintenance. The dry connection between manifold and tube means tubes can be easily fitted and replaced. A unique temperature limitation device gives added system protection. A choice between two temperature limits provides the perfect hot water solution for your home or business.

HP400 COLLECTORS ARE AVAILABLE IN 2 DIFFERENT SIZES  
- both with the option of the 2 different temperature limits.

	HP400 / HP450	
<b>NUMBER OF TUBES</b>	20	30
<b>DIMENSIONS</b>		
Absorber Area (m <sup>2</sup> )	2.01	3.021
Overall Dimensions (mm)	1952 x 1418 x 93	1952 x 2127 x 93
Width of Manifold (mm)	1418	2127
Length (tube and manifold) (mm)	1952	1952
Depth (mm)	93	93
Aperture Area (m <sup>2</sup> )	2.16	3.23
Fluid Volume (ltr)	1.2	1.7
Inlet and Outlet Dimensions (mm)	22	22
Weight (empty) (kg)	48	71
<b>MOUNTING</b>		
Recommended Inclination (°)	20-70	20-70
<b>PERFORMANCE DATA</b>		
Efficiency	Based on Aperture	Based on Aperture
Eta 0	0.75	0.75
a1 (W/m <sup>2</sup> K)	1.18	1.18
a2 (W/m <sup>2</sup> K <sup>2</sup> )	0.0095	0.0095
<b>OPERATING DATA - FLOW RATE (ltr/h)</b>		
Rated	160	240
Minimum	120	180
Maximum	300	480
Maximum Operating Pressure	10 Bar	10 Bar
Stagnation Temperature (°C)	166	166
Heat Transfer Fluid	Water / Glycol	Water / Glycol
<b>MATERIALS</b>		
Absorber	Copper	Copper
Coating	Selective Coating	Selective Coating
Absorbance (%)	95	95
Emissivity (%)	5	5
Mounting Frame and Clips	Stainless Steel, Aluminium, EPDM	Stainless Steel, Aluminium, EPDM
Glass	Low Iron - Transm. 0.92	Low Iron - Transm. 0.92
Vacuum	<10 <sup>-6</sup> mbar	<10 <sup>-6</sup> mbar
Temperature Limitation (°C)	90 / 135	90 / 135
MCS Certificate Number	KM 559829	KM 559829
Solar Keymark Licence Numbers	011-7S1793	011-7S1793

## PERFORMANCE AND SAVINGS

Designed specifically for higher latitude climates, Thermomax products provide heat even in cold, windy or humid conditions.

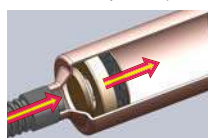
The unique 'plug and play' design of Thermomax solar collectors makes installation quick and easy. There is no need for heavy lifting equipment as tubes can be carried onto the roof individually. The collector is fixed to the roof by easy-fit brackets, which are simply fixed to the rafter.

- An improved hinge means the lid is never separated from the manifold and a tube retaining lip is incorporated into the lid.
- A shorter neck on the tubes reduces movement, retaining their flexibility but making them easier to insert.
- A superior vacuum is maintained over a longer period of time through.
- The dry fit of heat pipe tubes allows easy maintenance as tubes can be removed without draining the system.
- 30% more effective than flat plate collectors.
- Supplies up to 70% of your annual hot water needs.
- 20 year warranty when fitted by a Kingspan Accredited Installer.

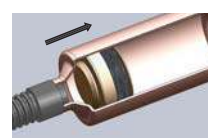
## UNIQUE FEATURE

### Temperature Limitation Device

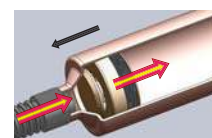
HP400 collectors contain a unique temperature limitation device for system protection.



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



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



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

## INSTALLATION OPTIONS

### Collector Positions

1. Ideal slope 40°
2. Roof kit angled 40°
3. Elevated 20°



Call us today for pricing and sales information.

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