

Technical Specifications



AES Supremacy Collector Models 1.5AR, 1.9AR & 2.5AR



EFFICIENT

A high efficiency collector with anti-reflective technology boasting a 95.5% solar transmission level.

DURABLE

Tested to international engineering standard EN ISO 9806 for durability and performance.

ATTRACTIVE

Only 70mm thick! Roof integrated options for tile and slate, seamless colour.

VERSATILE

Portrait or landscape, range of sizes and fixing for almost any roof type, can be ground or wall mounted with a ballast option for flat roofs.

The AES Supremacy flat plate solar thermal collector combines over 3 decades of solar design and manufacturing experience with state of the art technology and a modern, professional approach to technical and visual design. Optimising energy yield and consideration of aesthetics are equally important to many home owners and specifiers and the AES Supremacy satisfies both impeccably. Both new and proven mounting solutions mean installation is quick and easy for the installer and causes minimal disruption to the home owner. The AES Supremacy is Solar Keymark certified and tested to the ISO EN 9806 global standard for solar thermal collectors, meaning you can be assured it satisfies the highest standards of construction quality – backed up by a 10 year warranty. Solar Keymark certification also means that the collector qualifies for Government incentives including the UK domestic and non-domestic RHI schemes.

EASY TO INSTALL

The AES sliding nut fixing method allows easy adjustment and fitting on roof. The roof integration system fits together like a jigsaw, hardly any measuring required! The Supremacy is one of lightest glass covered flat plate collectors per m² available.



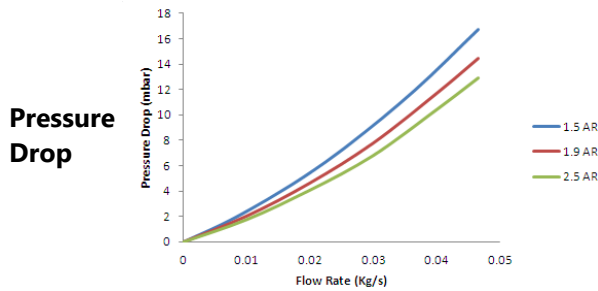
Design | Manufacture | Install | Commission | Service

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AES is a Limited Company registered in Scotland under SC084742. Our VAT registration number is 135595787.



	1.5 AR	1.9 AR	2.5 AR
Gross Area	1.5m ²	1.9m ²	2.5m ²
Height	1300mm	1650mm	2150mm
Width	1150mm	1150mm	1150mm
Thickness	70mm		
Aperture Area	1.38m ²	1.76m ²	2.31m ²
Weight	23Kg	28Kg	35Kg
Absorber	Aluminium Fins metallurgically bonded to rhombic copper waterways providing large water to wall contact for maximum heat transfer. Sputter coated selective surface: solar absorption = 96%±2, thermal emission = 7%±2.		
Glazing	Low iron solar glass. 3.2mm thick. Double sided anti reflective surface. Matt/matt textured surface. Tempered according to EN 12150. Solar transmission 95.5% ⁺² _{-1.5}		
Frame	Custom designed aluminium extrusion with all round fixing channels and sliding nuts for easy fitting. Coloured RAL 7012 dark grey.		
Insulation	Rigid PIR foam, manufactured with zero ODP. Class O fire rating. Thermal conductivity 0.021W/mK		
Flow & Return Connections	Flow = 15mm copper pipe. Return = AES connection kit including external sensor pocket required – connection is to 15mm copper compression fitting.		
Fluid Content	0.86L	1.03L*	1.29L
Recommended Flow Rate	0.25 – 1 L/min/m ²		
Transfer Fluid	Premixed solar antifreeze with inhibitors. (100% Tyfocor antifreeze mixture recommended)		
Max. Working Pressure	10 bar (tested to 15 bar)		
Zero loss Efficiency, η	0.788	0.785*	0.781
Heat loss coefficient	$a_1= 5.028, a_2=0.009$	$a_1= 4.621^*, a_2= 0.014^*$	$a_1= 4.021, a_2= 0.022$
Peak Power Output (at irradiance of 1000W/m²)	1.082kW	1.372kW*	1.808kW
Tilt angle range	20° - 90°		
Stagnation Temperature	170.1°C		
Maximum snow loading	≤2.4kN/m ²		
Maximum wind loading	≤1.2kN/m ²		
Testing	ISO EN 9806 by CENER, Spain. Solar Keymark certification by DIN CERTO, Germany.		
Certification	Solar Keymark - registration number: 011-7S2383 F		
Life expectancy	In excess of 25 years		
Warranty	10 Years		
Applications	Small to large domestic hot water systems, industrial process and swimming pool heating.		

*Interpolated from test data for 1.5 AR and 2.5 AR models

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