

JOULE SOLUTIONS SOLAR PANEL SYSTEM COMPLIANCE DOCUMENT

System Type	Tubes
System Manufacturer	Joule
System Model	Acapella
System Size	60

Total Building Area	270.00 m ²	
Number of Standard Occupants	7.71 people	
Aperture Area of Solar Collector	5.58 m ²	
Zero-Loss Collector Efficiency η_{l0}	0.73	From EN12975 or Table H1
Collector Heat Loss Coefficient a_1	1.53	From EN12975 or Table H1
Collector Performance Ratio a_1/η_{l0}	2.10	Calculated
Orientation of Collector	South	
Tilt of Collector	30°	
Annual Solar Radiation per m ²	1074.00 kWh/m ²	from table H2
Overshading Factor	1.00	from table H3
Solar Energy Available	4374.83 kWh/annum	
Solar to load Ratio	0.79	
Utilisation Factor	0.72	
Collector Performance Factor	0.81	
Dedicated Solar Storage Volume	350.00 Litres	
If Combined Cylinder, Total Volume of Cylinder	500.00 Litres	
Effective Solar Volume V_{eff}	395.00	
Daily Hot Water Demand V_d	260.05 Litres	from Table 1
Volume Ratio V_{eff}/V_d	1.52	
Solar Storage Volume Factor $f(V_{eff}/V_d)$	1.08	
Solar DHW Input Q_s	2756.50 kWh/annum	
Required System Output	2700.00 kWh/annum	

While Joule try and insure the accuracy of this calculation Joule do no take responsibility its accuracy. This calculation should be used for approximation purposes only. A detailed calculation should be sought from your BER assessor, architect or engineer