

JOULE SOLUTIONS SOLAR PANEL SYSTEM COMPLIANCE DOCUMENT

System Type	On-Roof Panel
System Manufacturer	Joule
System Model	Navitas
System Size	5

Total Building Area	360.00 m ²	
Number of Standard Occupants	10.29 people	
Aperture Area of Solar Collector	10.05 m ²	
Zero-Loss Collector Efficiency η_{l0}	0.78	From EN12975 or Table H1
Collector Heat Loss Coefficient a_1	3.98	From EN12975 or Table H1
Collector Performance Ratio a_1/η_{l0}	5.10	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	8419.09 kWh/annum	
Solar to load Ratio	1.14	
Utilisation Factor	0.58	
Collector Performance Factor	0.73	
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	346.73 Litres	from Table 1
Volume Ratio V_{eff}/V_d	1.14	
Solar Storage Volume Factor $f(V_{eff}/V_d)$	1.03	
Solar DHW Input Q_s	3696.32 kWh/annum	
Required System Output	3600.00 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