High Temperature VWART Calculation for Switch2 Energy Ltd. HIU

Primary flow temperature = 70°C, DHW set point = 55°C, Space heating temperatures = 40°C/60°C

Test carried out by BSRIA Ltd. in September 2019, Test Reference 61535/1

Manufacturer: Switch2 Energy Ltd.; Model: T3 ECO PLUS; Serial number: S2HIU19001065; Year of manufacture: 2019

VWART calculation prepared by Colin Judd of BSRIA Ltd. on 19 September 2019

	VWART (°C)	Volume (m^3)
DHW	18	24.5
Keep warm	42	31.5
Space heating	41	43.4

	VWART with keep warm active	
Period	VWART (°C)	% Time
No heating	31	93%
Heating	40	7%
Overall	32	

	DHW draw test results			Post DHW draw (60 seconds)	
	Power (W)	Primary flow (m^3/hr)	Return temp (°C)	Primary flow (m^3/hr)	Return temp (°C)
Low	10937	0.175	16.6	0.002	16.83
Medium	18541	0.317	18.9	0.003	19.02
High	23941	0.404	18.9	0.002	18.71

DHW draw volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
729	66.66	11.681
297	16.02	5.077
444	18.55	7.499

Post DHW draw volumes per annum		
Events	Avg duration (seconds)	Volume (m^3)
10000	30	0.150
660	75	0.045
300	145	0.021

Keep warm test results	
Primary flow (m^3/hr)	Return temp (°C)
0.0039	41.9

Keep warm volumes per annum	
Time (hours)	Volume (m^3)
8036	31.517

	Space heating test results		
	Power (W)	Primary flow (m^3/hr)	Return temp (°C)
1 kW	1020	0.032	40.5
2 kW	2036	0.061	40.8
4 kW	4024	0.119	40.9

Space heating volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
98	96.09	3.041
787	386.63	23.634
565	140.40	16.748