



**High Temperature VwART Calculation for vTherm Thermostatic**

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

Test carried out by Enertek International for HIGH Temperature BESA Tests

Manufacturer: Vital Energi; Model: vTherm Thermostatic; Serial number: 44100395;

VwART calculation prepared by Ian Williamson of Enertek International on 28 Aug 2019

	VwART(°C)	Volume (m3)
DHW	14	22.6
Standby	40	18.4
Space Heating	40	43.0

VwART with Keep warm active		
Period	VwART(°C)	% Time
No Heating	26	93%
Heating	39	7%
<b>Overall</b>	<b>27</b>	

VwART with Keep warm inactive		
Period	VwART	% Time
No Heating	14	93%
Heating	39	7%
<b>Overall</b>	<b>16</b>	

	DHW Draw test results		Post DHW Draw (60 seconds)	
	Power (W)	Primary flow (l/s)	VwART (°C)	VwART (°C)
Low	11403	0.049	14	14
Medium	18534	0.081	14	14
High	21173	0.092	14	14

Standby test results	
Primary flow (m³/hr)	VwART (°C)
0.002300	40

Space Heating test results		
Power (W)	Primary flow (m³/hr)	VwART (°C)
1kWp	1296	0.010
2kWp	2141	0.017
4kWp	4079	0.032
		40

DHW Draw Volumes pa		
kWh pa	Hours	Volume pa (m³)
729	63.93	11.20
297	16.02	4.60
444	20.97	6.90

Standby Volumes pa	
Hours	Volume pa (m³)
8,033	18.40

Space Heating Volumes pa		
kWh pa	Hours	Volume pa (m³)
98	91.00	3.20
787	392.00	23.70
565	143.00	16.40

Post DHW Draw Volumes pa		
Events pa	Average duration (secs)	Volume pa (m³)
10000	30	-
660	75	-
300	145	-