High Temperature VWART Calculation for Heat products Ltd. HIU

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

Test carried out by BSRIA Ltd. in March 2019, Test Reference 61539/1

Manufacturer: Heat Product Ltd.; Model: Compact VX1-1; Serial number: 1901271; Year of manufacture: 2019

VWART calculation prepared by Colin Judd of BSRIA Ltd on 29 March 2019

	VWART (°C)	Volume (m^3)
DHW	19	24.73
Keep warm	49	62.25
Space heating	42	45.00

	VWART with keep warm active	
Period	VWART (°C)	% Time
No heating	40	93%
Heating	42	7%
Overall	40	

	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	11718	0.196	18.3	0.000	0.00
Medium	19008	0.319	18.5	0.000	0.00
High	24453	0.415	19.1	0.000	0.00

DHW draw volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
729	62.21	12.219
297	15.63	4.984
444	18.16	7.529

Post DHW draw volumes per annum		
Events	Avg duration (seconds)	Volume (m^3)
10000	30	0.000
660	75	0.000
300	145	0.000

Keep warm test results	
Primary flow (m^3/hr)	Return temp (°C)
0.0078	48.9

Keep warm volumes per annum	
Time (hours)	Volume (m^3)
8022	62.252

	Space heating test results		
	Power (W)	Primary flow (m^3/hr)	Return temp (°C)
1 kW	1012	0.029	39.7
2 kW	1938	0.062	42.3
4 kW	4046	0.123	41.4

Space heating volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
98	96.79	2.791
787	406.04	25.005
565	139.64	17.208