



Low Temperature VVART Calculation for Heat Product Ltd. HIU

Primary flow temperature = 60°C, DHW set point = 50°C, Space heating temperatures = 45°C/35°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

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

	VVART (°C)	Volume (m ³)
DHW	20	31.53
Keep warm	46	83.18
Space heating	35	51.04

VVART with keep warm active		
Period	VVART (°C)	% Time
No heating	39	93%
Heating	36	7%
Overall	39	

	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	10537	0.227	19.5	0.000	0.00
Medium	17119	0.366	19.6	0.000	0.00
High	21541	0.461	19.9	0.000	0.00

DHW draw volumes per annum		
Energy (kWh)	Time (hours)	Volume (m ³)
729	69.18	15.689
297	17.35	6.343
444	20.61	9.495

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)
0.0104	46.2

Keep warm volumes per annum	
Time (hours)	Volume (m ³)
8009	83.183

	Space heating test results		
	Power (W)	Primary flow (m ³ /hr)	Return temp (°C)
1 kW	977	0.036	34.8
2 kW	1960	0.068	35.2
4 kW	3975	0.140	35.2

Space heating volumes per annum		
Energy (kWh)	Time (hours)	Volume (m ³)
98	100.27	3.610
787	401.48	27.475
565	142.14	19.956