



Low Temperature VWART Calculation for Evinox HIU

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

Test carried out by RISE in August 2017, Test Reference 7P03172

Manufacturer: Evinox Energy Ltd.; Model: MTP4R-1R-TL1/1B; Serial number: MTPE1B1317A11; Year of manufacture: 2017

VWART calculation prepared by Freddie Valletta of FairHeat Ltd on 6 September 2017

	VWART (°C)	Volume (m ³)
DHW	15.1	29.46
Keep warm	45.1	63.66
Space heating	35.7	53.81

VWART with keep warm active		
Period	VWART (°C)	% Time
No heating	35.6	93%
Heating	35.7	7%
Overall	35.6	

VWART with keep warm inactive *		
Period	VWART (°C)	% Time
No heating	15.1	93%
Heating	34.8	7%
Overall	16.6	

* HIU has ability to deactivate keep warm function

	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	9378	0.164	13.6	0.019	13.3
Medium	16156	0.304	15.5	0.041	16.2
High	22138	0.429	17.2	0.028	17.7

DHW draw volumes per annum		
Energy (kWh)	Time (hours)	Volume (m ³)
729	77.73	12.783
297	18.38	5.585
444	20.06	8.606

Post DHW draw volumes per annum		
Events	Avg duration (seconds)	Volume (m ³)
10000	30	1.580
660	75	0.563
300	145	0.338

Keep warm test results	
Primary flow (m ³ /hr)	Return temp (°C)
0.008	45.1

Keep warm volumes per annum	
Time (hours)	Volume (m ³)
7990	63.660

	Space heating test results		
	Power (W)	Primary flow (m ³ /hr)	Return temp (°C)
1 kW	974	0.038	35.2
2 kW	1924	0.071	35.4
4 kW	3907	0.145	36.1

Space heating volumes per annum		
Energy (kWh)	Time (hours)	Volume (m ³)
98	100.67	3.840
787	409.02	29.072
565	144.62	20.900