FairHeat

Low Temperature VWART Calculation for HSF HIU on behalf of Flamco

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

Test carried out by RISE in June 2018, Test Reference 8P04823

Manufacturer: HSF; Model: Meibes A2RXE; Serial number: AI-10920.40OH30; Year of manufacture: 2018

VWART calculation prepared by Freddie Valletta of FairHeat Ltd on 3 August 2018

	VWART (°C)	Volume (m^3)
DHW	15.0	28.62
Keep warm	39.2	58.71
Space heating	34.9	51.95

	VWART with keep warm active	
Period	**VWART (°C)**	**% Time**
No heating	31.3	93%
Heating	34.5	7%
Overall	**31.5**	

	VWART with keep warm inactive *	
Period	**VWART (°C)**	**% Time**
No heating	15.0	93%
Heating	34.1	7%
Overall	**16.4**	

* 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	10142	0.194	14.5	0.002	14.1
Medium	16419	0.321	15.3	0.001	14.6
High	21142	0.413	15.6	0.001	15.3

DHW draw volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
729	71.88	13.932
297	18.09	5.807
444	21.00	8.678

Post DHW draw volumes per annum		
Events	Avg duration (seconds)	Volume (m^3)
10000	30	0.181
660	75	0.012
300	145	0.010

Keep warm test results	
Primary flow (m^3/hr)	Return temp (°C)
0.007	39.2

Keep warm volumes per annum	
Time (hours)	Volume (m^3)
8020	58.711

	Space heating test results		
	Power (W)	Primary flow (m^3/hr)	Return temp (°C)
1 kW	992	0.037	34.9
2 kW	1999	0.072	34.9
4 kW	4145	0.147	34.9

Space heating volumes per annum		
Energy (kWh)	Time (hours)	Volume (m^3)
98	98.84	3.644
787	393.62	28.257
565	136.32	20.053