

Appendix 3

Low temperature VWART calculation with keep warm function active.

Low temperature VWART Calculation for Warmafloor Ltd with keep warm active

Test carried out by RISE on March to May 2019

Manufacturer: Warmafloor Ltd; Model: Calefa V; Serial number: 1129; Year of manufacture: 2019

VWART calculation prepared by Henrik Persson of RISE on 18 June 2019

	VWART	Volume
DHW	14,6	29,52
Standby	40,5	96,32
Space Heating	34,9	52,66

Period	VWART	% Time
No Heating	34,4	93%
Heating	34,9	7%
Overall	34	

	DHW Draw test results			Post DHW Draw (60 seconds)	
	Power (W)	Primary flow (m3/hr)	Return Temp(°C)	Primary flow (m3/hr)	Avg Return Temp(°C)
Low	9406	0,184	14,5	0,007	13,3
Medium	15270	0,300	14,6	0,005	13,9
High	20054	0,393	15,0	0,006	14,6

DHW Draw Volumes per annum		
kWh	Hours	Volume pa (m3)
729	77,50	14,261
297	19,45	5,835
444	22,14	8,701

Post DHW Draw Volumes per annum		
Events	Average duration (secs)	Volume pa (m3)
10000	30	0,583
660	75	0,069
300	145	0,073

Standby	Standby test results	
	Primary flow (m3/hr)	Return Temp(°C)
	0,012	40,5

Standby Volumes pa	
Hours	Volume pa (m3)
8 027	96,32

	Space Heating test results		
	Power (W)	Primary flow (m3/hr)	Return Temp(°C)
1kWp	1078	0,040	35,0
2kWp	2055	0,075	34,9
4kWp	4035	0,145	35,0

Space Heating Volumes pa		
kWh pa	Hours	Volume pa (m3)
98	90,91	3,636
787	382,97	28,723
565	140,02	20,304