



Low Temperature VWART Calculation for Herz Valves UK Ltd. HIU

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

Test carried out by BSRIA in January/February 2019, Test Reference 100154/1

Manufacturer: Herz Valves UK Ltd.; Model: Guildford Indirect HIU; Serial number: 1-4022-14-180301-01; Year of manufacture: 2018

VWART calculation prepared by Colin Judd of BSRIA Ltd on 08 March 2019

	VWART (°C)	Volume (M ³)
DHW	16.4	29.34
Keep Warm	49.4	101.01
Space Heating	34.9	51.71

VWART with keep warm active		
Period	VWART (°C)	% Time
No Heating	42.0	93%
Heating	35.9	7%
Overall	42	

VWART with keep warm inactive *		
Period	VWART (°C)	% Time
No heating	16.4	93%
Heating	34.1	7%
Overall	18	

* 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 (VWART) (°C)	Primary Flow (m ³ /hr)	Return Temp (VWART) (°C)
Low	10273	0.209	17.0	0.000	0.00
Medium	15482	0.292	14.7	0.000	0.00
High	21248	0.426	16.7	0.000	0.00

DHW draw volumes per annum		
Energy (kWh)	Time (Hours)	Volume (m ³)
729	70.96	14.826
297	19.18	5.605
444	20.90	8.905

Post DHW draw volumes per annum	
Events	Avg duration (Seconds)
10000	30
660	70
300	145

Keep warm test results	
Primary Flow (m ³ /hr)	Return Temp (VWART) (°C)
0.0126	49.4

Keep Warm volumes per annum	
Time (Hours)	Volume (m ³)
8023	101.010

	Space Heating Test Results		
	Power (W)	Primary Flow (m ³ /hr)	Return Temp (VWART) (°C)
1kW	972	0.036	34.6
2kW	2042	0.073	34.8
4kW	4042	0.144	35.0

Space Heating volumes per annum		
Energy (kWh)	Time (Hours)	Volume (m ³)
98	100.79	3.628
787	385.49	27.986
565	139.79	20.094

or annum
Volume (m ³)
0.000
0.000
0.000