

Assumption Change Control Sheet

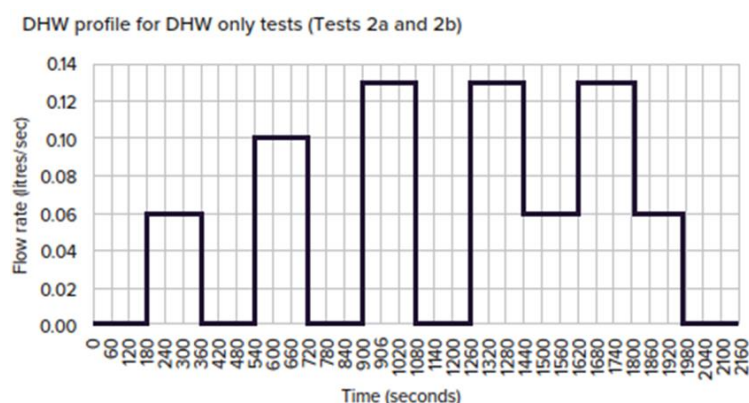
Test	2a, 2b. DHW dynamic test
Assumption	20. DHW dynamic draw off duration and duration of pauses

Change Originator	Martin Crane
Change Request No.	038
Date of Request	20/08/2020
Proposed Change to Assumption?	N

Proposed Approach

Retain DHW dynamic test pattern:

For the DHW outputs used in the Test, each flow (0.06 l/s (10kW), 0.01 l/s (17kW) and 0.13 l/s (22kW)) is for 180 seconds with a 180 second pause in between. The pattern of flows is shown below.



The return temperature during these 180 second periods are used in the VWARD calculation

Rationale (underlying basis for assumption)

See Technical Note 015.

Summary of considerations:

- 180 seconds between DHW draw off is long enough for the HIU to stabilise after the DHW demand, giving time for the DH flow rate to drop to zero.
- Data from recent tests show that the DH return temperatures stabilises quickly after the change in DHW flow rate, so increasing or reducing the length of DHW draw off would have little impact on the average return temperatures – which are the inputs to the VWARD calculation.

Current Test methodology provides what seems to be representative data for the VWART calculation and the graphed results show the effectiveness of the HIU control. The Test methodology provides a check that the HIU does not generate high DHW temperature spikes.

Impact of Change (e.g. implications for test rig)

N/A

CHANGE EVALUATION

Date Evaluated	22/09/2020
Additional Information Required?	N
Modification to Proposed Approach?	N
Details	
Signed-off	Y