



Heat Network Optimisation Part 1

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Improving Standards since 2002



Advances in Heat Network Technology

I was at the UKDEA AGM today, and was asked to give a talk.

Link below is the presentation given - went down rather well.

http://www.heatweb.co.uk/w/images/f/fc/Advances_in_Heat_Network_Technology.pdf

If anyone would like me to come visit and present fu... Show more

Like Comment | 1 1



Phil Jones Richard - absolutely excellent tour de force of many key DH problems we face. All I can say is, I agree! Well done. For my part I will follow up:

- a) I will speak to my friends in the Swedish Embassy to try and get a full translation of DS439
- b) I will make sure the chair of CIBSE Guide B sees this (pipe sizing)
- c) I will work towards an update of CP1 to try and address these issues

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... 3h

Heat networks:
Code of Practice for the UK

Raising standards for heat supply

**Plumbing Engineering Services
Design Guide**



The Institute of Plumbing

CIBSE Design Guide

Heat networks



**WATER TREATMENT
AND CONDITIONING
OF NON-DOMESTIC
SYSTEMS AND HEAT
NETWORKS**

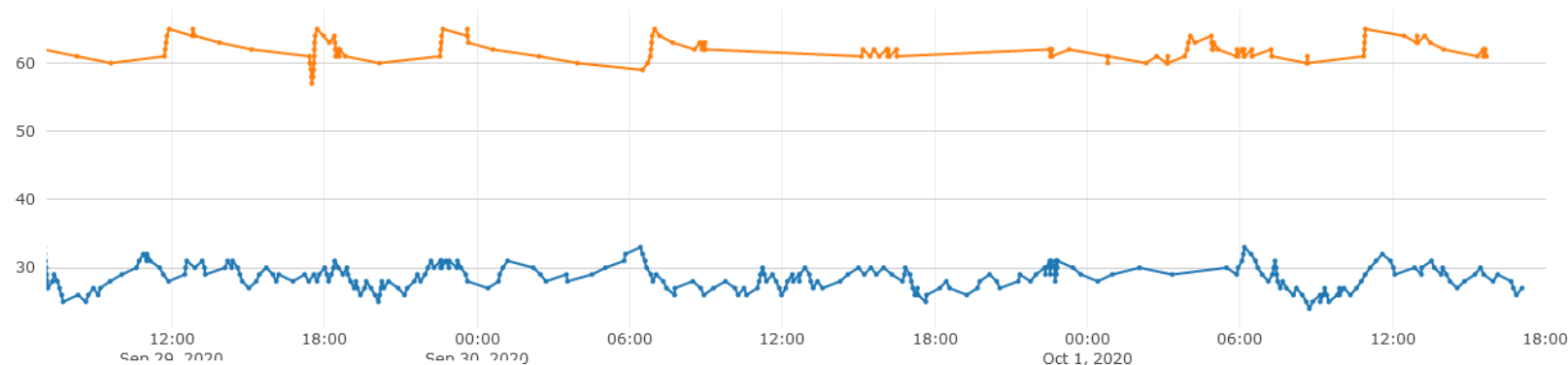
1980	1982	1989	1990	1995	1999	2000	2005	2010	2015	2016	2017
SPARTAN ET50/100 The first primatic module for vented storage systems	HYDRO PACK Framed hot and cold water storage with boiler	HEAT BANKS The first use of plate heat exchangers on domestic thermal storage	HEATBANK® STOWAWAY & PANDORA The first thermal stores free from discharges or annual maintenance	HEATBANK® XCEL The first Multi-Fuel thermal storage system	BOILER MASTER The UK's first Hydraulic Interface Units	HEATWEB The most extensive technical resource to be found online	AMAZON HXIN The first domestic unvented cylinder with plate heat exchanger reheat	THE HIFLOW Modular commercial HIU sets	THE DATA The most efficient twin plate heat interface unit in the world	THE SLIM The smallest electronic heat interface unit in the world	SLIM-EXTRA with NODE-HIU Technology Advanced direct heating HIU with contract-free open source heat network management



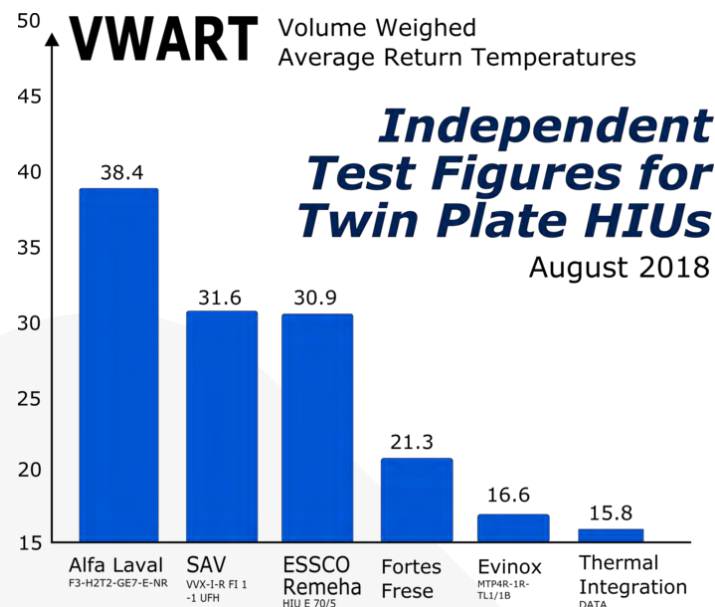
To learn more visit www.heatweb.co.uk
or telephone us on 0845 2411441



The DATA HIU



Thamesway Homes, Harrington Place, 2020



VWART with keep warm inactive *		
Period	VWART (°C)	% Time
No heating	13.9	93%
Heating	39.4	7%
Overall	15.8	

* HIU has ability to deactivate keep warm function

VWART calculation prepared by Freddie Valletta of FairHeat Ltd on 26 July 2017

Heatweb Solutions Ltd.

Technical Support Services for Heat Networks & Commercial Buildings

- Consultancy
- Cloud Services
- 3D Scanning & CAD
- HIU & Substation Design, Commission, & Maintenance
- MVHR Upgrades and Maintenance
- Specification Services
- BMS Strategy & Integration
- HNES & Heat Network Optimisation



The Roles of an Optimisation Engineer

- To improve the reliability of building services.
- To improve energy efficiency and reduce carbon footprints.
- To move networks to fossil-free energy supplies.
- To identify processes that improve outcomes for end-users.
- To disseminate knowledge [processes, guidance & training].
- To reduce the costs & burden of QA processes.



*Archibald 'Harry' Tuttle
Brazil*

Areas of Optimisation

- Metering infrastructure & accuracy
- Central heating systems
- HIUs
- Distribution pipework
- Bypasses
- Substations and intake rooms
- Water quality
- DP sensing and pump control
- Buffer store arrangements
- Boiler loading
- Boiler sequencing
- Setpoints
- Temperature Dilution
- CHP integration
- Air handling units
- Fan-coil units
- MVHR systems
- Heat pump COP
- Cooling systems
- BMS point to point testing
- BMS control strategy
- BMS alarm functions
- Frost functions
- Benchmarking efficiency