HEATWEB



CASE STUDY · HEAT NETWORKS & COMMERCIAL

Thermal storage: 30 years at the bleeding edge

The HEATBANK thermal stores

AT A GLANCE

PRODUCTS
HEATBANK Xcel multi-fuel, PANDORA, electric and district versions

YEARS
Late 1980s to 2023

SUPPLIED
Over 10,000, many thousands custom built

HEAT SOURCES
Wood, biomass, solar, gas, oil, heat pumps, electric, district heat

SUPPLY
Prefabricated: our design, manufacture, installer training and lifetime warranty

SOLD THROUGH
Local authorities, housebuilders and over 30 renewable and biomass outlets

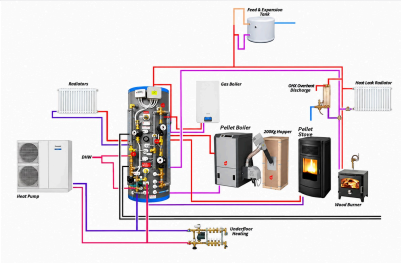
For more than 30 years we designed and built the HEATBANK thermal stores: over 10,000 supplied, many thousands custom built for a particular mix of heat sources. We no longer make them, but we design thermal storage at any scale for heat networks and multi-source systems.

The challenge

Multi-fuel systems, wood burners above all, are easy to get wrong and can be dangerous. Customers wanted several heat sources, often adding more later, and installers needed a system that would work first time.

What we did

- The Xcel: up to 28 connections, patented top-down reheating and overheat protection that works in a power cut.
- Temperatures matched to loads: heat pumps feed underfloor heating, wood burners and boilers feed radiators and hot water.
- Every system designed by us, prefabricated and supplied ready to connect.



One Xcel combining a heat pump, gas boiler, pellet boiler, pellet stove and wood burner.

What we found

- At its peak the Xcel sold through over 30 renewable and biomass outlets, most with a working HEATBANK on display beside the stoves it connected to.
- The PANDORA gave mains pressure hot water with no discharge pipe; 354 customised units serve one district heated development in Highbury.
- Storage near the point of demand lets a heat network be sized for the average load, rest between peaks and take heat sources at any point.



Part of the HEATBANK range, each store prefabricated with its controls.

10,000+
HEATBANK thermal stores supplied

30+
renewable and biomass outlets at the peak

28
connections on the multi-fuel Xcel

The outcome

- Approved by fourteen wood burner manufacturers, chosen for Channel 4's Escape to the Chateau, and sold through stove shops across the UK.
- Authors of the plate heat exchange and thermal storage sections of the Institute of Plumbing's design guide, with patents in thermal storage.
- Today we design thermal storage for heat networks: sizing, stratification, integrating heat sources, controls and reviews of existing plant.

About Heatweb. Heatweb Solutions is a UK provider of engineering support for heat networks and commercial HVAC: monitoring, fault diagnostics, technical compliance, optimisation, commissioning and maintenance.

Talk to an engineer

The full case study: www.heatweb.co.uk/blog/case-study/thermal-storage-30-years/

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