

SPECFLUE

Xcel HEATBANK[®] Thermal Store

The solution to multi-fuel heating

Renewable Energy Solutions

Description of Standard Options

01

Size and Capacity

The Xcel HEATBANK® thermal store comes in a number of standard sizes. All are manufactured from Duplex stainless steel, and come complete with finished outer casing and injected CFC free polyurethane insulation.

| | |
|-------------|-----------------------|
| 165 litres: | Ø535mm x 1200mm Cased |
| 220 litres: | Ø535mm x 1500mm Cased |
| 247 litres: | Ø535mm x 1800mm Cased |
| 300 litres: | Ø560mm x 1800mm Cased |
| 390 litres: | Ø660mm x 1600mm Cased |
| 500 litres: | Ø660mm x 1835mm Cased |

Special sizes and casing finishes on request.

03

24 Hour Electronic Hard Water Protection

Protects the water system and plate heat exchanger from limescale even when there is no water flow. The Hydropath HS38A model is used as standard, and is factory fitted and wired.

Note: This option is in addition to the Domestic Hot Water option.

04

Secondary Return Pump

On installations where a hot water loop is used to prevent dead-legs in supplies to taps, the option of a factory fitted secondary return pump is offered. This includes a bronze pump, non-return valve and pipe thermostat for control of the pump. A Wilo Star Z15 pump is used as standard with other models available on request.

Note: This option is in addition to the Domestic Hot Water option.

05

Direct Open Vented Boiler Assembly (up to 35kW)

Upgrade available for boilers over 35kW

When connecting a boiler to the Xcel HEATBANK® thermal store, the standard option is to use the GX direct connection method. This uses a return mixer assembly to control the return temperature to the boiler and ensure efficient condensing recovery from the top down.

The top of the store is always heated first, at full boiler output, providing hot water within minutes from a cold start. It also allows the user to decide how much of the store should be heated by the boiler (and hence how much of the store is left for alternative heat sources).

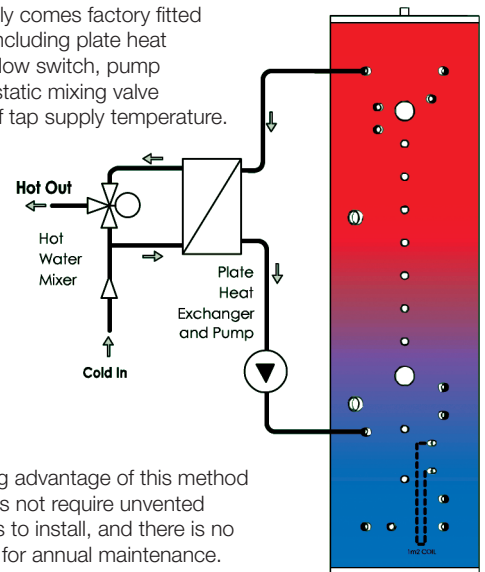
Option includes fitted return mixing valve and cylinder thermostat for boiler control. Also used with pumped solid fuel appliances using separate overheat protection as required.

02

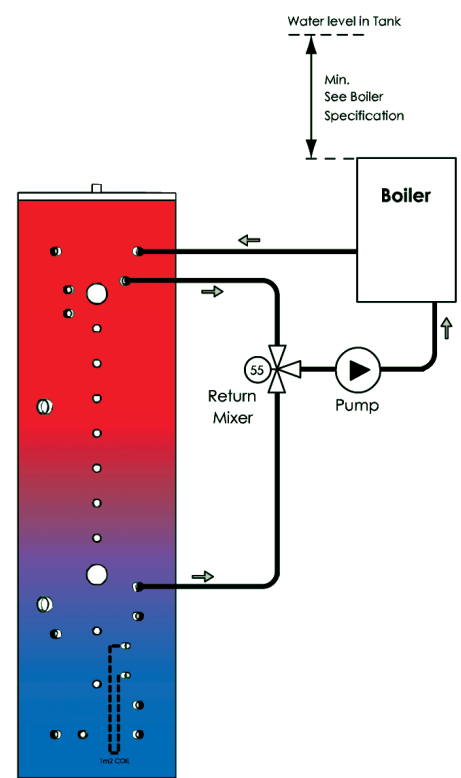
Domestic Hot Water

The basic concept behind all of our HEATBANK® thermal store systems is the use of a plate exchanger to generate mains pressure hot water. This method of generating hot water allows the store to remain unpressurised and open vented, while providing 9 bar hot water at up to 45 litres per minute.

The assembly comes factory fitted and wired, including plate heat exchanger, flow switch, pump and thermostatic mixing valve for control of tap supply temperature.



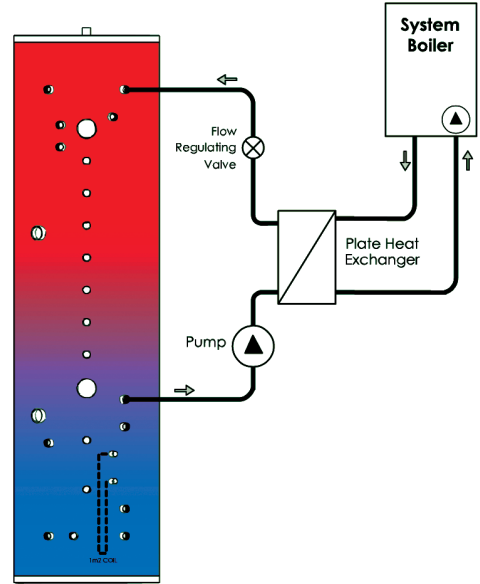
The other big advantage of this method is that it does not require unvented qualifications to install, and there is no requirement for annual maintenance.



06 Indirect Sealed Boiler Assembly (up to 28kW)

For the indirect connection of pressurised boiler systems via a plate heat exchanger recovery system. Provides higher heat transfer rates than a coil, and top-down recovery.

Option includes factory fitted plate heat exchanger, pump, regulating valve, and a single fitted cylinder thermostat for boiler control.



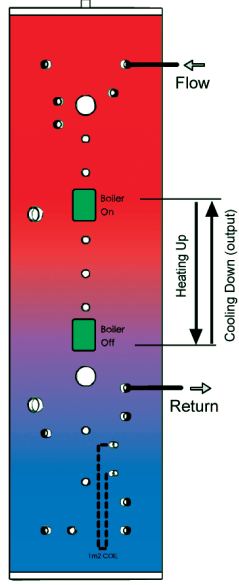
07 Additional Thermostat & Relay for Buffered Boiler Operation

Where a boiler is used to heat up the Xcel HEATBANK® thermal store, the standard options provide for one cylinder thermostat. As a further option the Xcel HEATBANK® thermal store can be fitted with two cylinder thermostats that are connected together using a relay to provide a buffering function.

The top thermostat is used to turn on the boiler, with the bottom thermostat providing the off signal. This prevents boiler cycling by effectively holding off the boiler until a set volume requires heating. The boiler will then fire in one longer continuous burn until this section of the store has been recovered. As stored water is used up for heating or hot water the boiler remains off until again there is sufficient volume to be reheated.

The option includes factory fitted thermostats as well as the wiring for the relay.

Note: This option is generally in addition to the Direct or Indirect Boiler Assemblies.



08 Additional Thermostat for Boiler Economy Mode

Where a boiler is used to heat up the Xcel HEATBANK® thermal store from the top downwards, this option provides for an Economy Mode, where only the very top section of the Xcel HEATBANK® thermal store is reheated. This is useful for ensuring hot water for sinks and single showers, while leaving the majority of the store for alternative heat sources. Thermostat and wiring included.

Note: This option is generally in addition to the Direct or Indirect Boiler Assemblies.

09 Additional Thermostat for Overheat Function

To provide a basic form of overheat protection an additional thermostat can be fitted for the activation of central heating to remove excess heat from the Xcel HEATBANK® thermal store. This is always recommended when using a wood burner.

10 Additional Fitted Sensor Pockets

Any spare bosses on the Xcel HEATBANK® thermal store can be factory fitted with spare sensor pockets for use with site fitted thermostats or sensors. 6mm x 100mm pockets are used as standard with alternatives on request.

11

Standard Pump Assembly

11A Boiler, 11B Heating, 11C Underfloor Heating

For boiler circuits and central heating circuits there is usually a requirement for a fitted circulating pump. The standard pump assembly option can be applied to all circuits fed to and from the store, and includes a Wilo 6m head pump, pump valves, fitting and wiring.

12

High Flow Pump Assembly

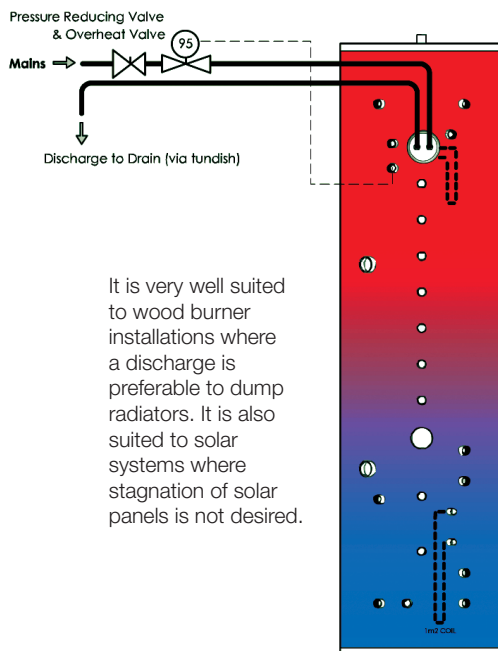
12A Boiler, 12B Heating, 12C Underfloor Heating

For boiler circuits and central heating circuits that require a pump larger than a standard circulation pump, this option includes a pump capable of delivering up to 100 litres per minute at peak flow, and a peak pressure of 6.8m head. Pump valves, fitting and wiring also included.

13

Power-Free Overheat Protection via Discharge

This option provides overheat protection of over 12kW, which does not rely on pumps or electricity, using a retro-fit coil. When the stored water reaches 95°C a factory fitted valve opens to allow cold mains water to run through the coil, providing a cooling effect, then off to drain. A pressure reducing valve is fitted for regulation.



It is very well suited to wood burner installations where a discharge is preferable to dump radiators. It is also suited to solar systems where stagnation of solar panels is not desired.

14

Indirect Sealed Central Heating Assembly (up to 28kW)

For pressurised central heating circuits this option uses a plate heat exchanger to transfer heat from stored water into the heating circuit. Identical to Option 6, except the pump is reversed, pumping down, and no fitted cylinder thermostat.

15

Underfloor Heating Temperature Control Valve - 28mm

To control the temperature of water fed to a central heating circuit, this option provides a fitted 28mm Thermostatic Mixing Valve (Reliance Water Controls), 20°C to 65°C range.

16

Immersion Heater - 3kW to 9kW

16A 3kW, 16B 6kW, 16C 9kW

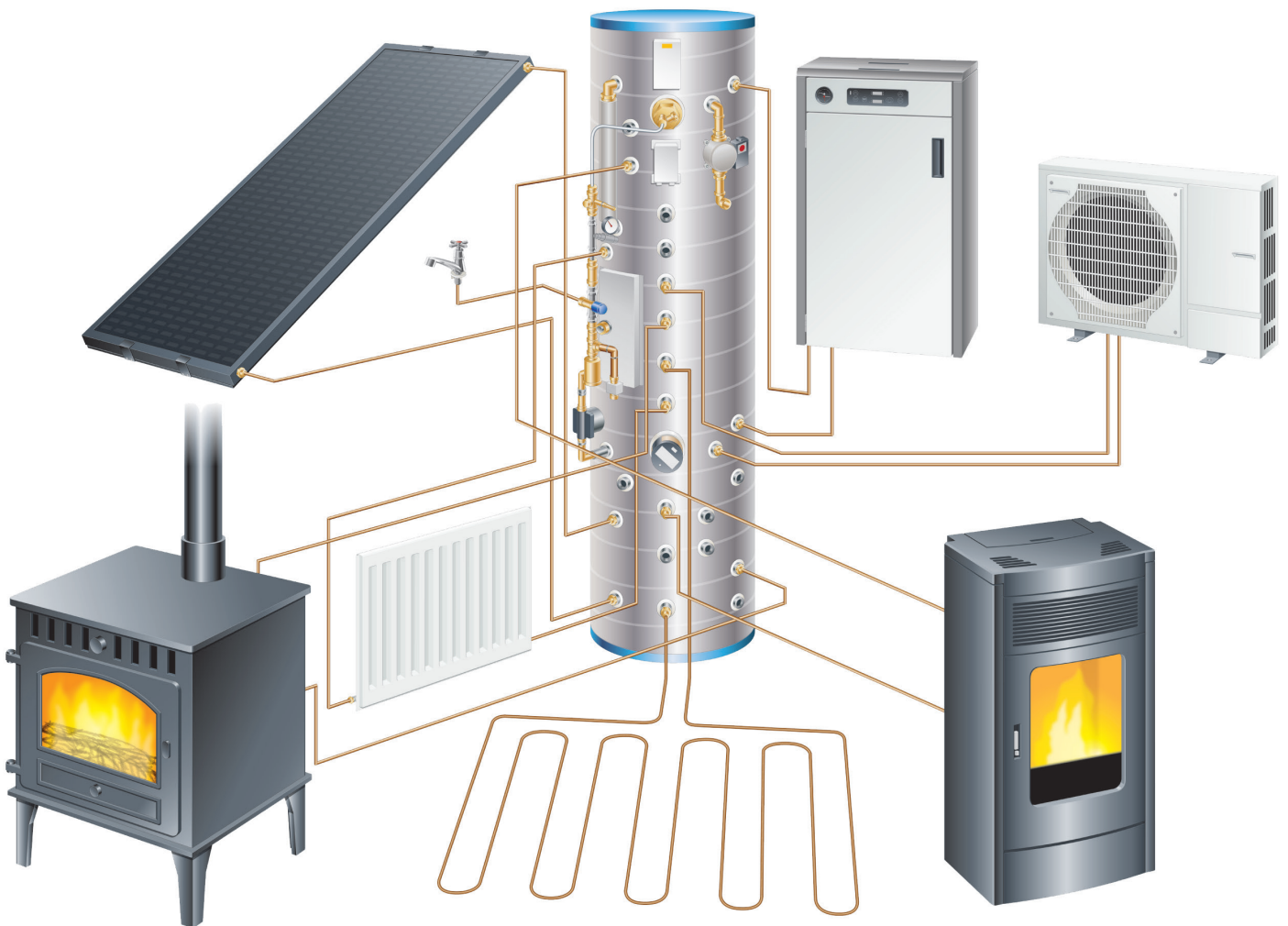
To provide electrically heated hot water, this option includes a fitted 3kW Immersion Heater, complete with control and overheat thermostats, 20°C to 83°C setting range. 6kW and 9kW options require separate overheat protection.

Suitable for simultaneous connection to:

- **Wood Burners**
- **Pellet Stoves and Biomass Boilers**
- **Gas and Oil Boilers**
- **Solar Thermal Panels**
- **Heat Pumps**
- **Vented and Sealed Heating Systems including Radiators and Underfloor Heating, as well as High Performance Showers and Multiple Bathrooms**

Very high quality Stainless Steel Laser Welded Construction

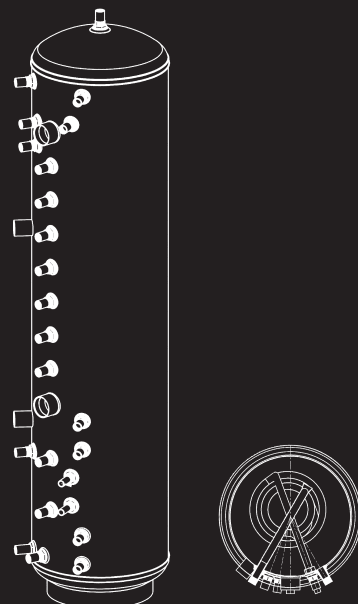
Performance guaranteed: 25 year guarantee



Xcel HEATBANK® Thermal Store

Technical specification:

| | | | |
|--------------------|---|--------------------------------------|--|
| Capacity: | 210, 250, 300, 350, 475 litres | Boss Span: | 70° |
| Material: | Duplex Stainless Steel | Insulation: | 40mm CFC Free Foam |
| Bosses: | 20 x ¾" Female 2 x ¾" Diffuser Tubes 2 x 2¼" Female 2 x 1½" Female | Casing: | Coated Steel |
| Solar Coil: | 1m² Finned Stainless Steel | Test Pressure: | 9 Bar |
| | | Domestic Hot Water (via PHE): | 150kW Peak (45 lpm) 9 bar pressure. Drinkable |



The key to the Xcel HEATBANK® is its versatility

For twenty years we have been manufacturing both standard and bespoke hot water systems, combining just about every type of heat source there is available to drive central heating and hot water for domestic properties. The Xcel HEATBANK® thermal store standardises the whole approach, providing design features that allow any possible combination to be made using a standardised product.

In its most basic form the store can act as a buffer system, used purely for central heating. Large 1½" bosses allow the largest of domestic wood burners to be comfortably connected using gravity circulation, with numerous other bosses for pumped circuits. Even larger 2¼" bosses provide for immersion heaters as well as retro-fit coils (mainly used for overheat protection). A large 1m² coil is provided as standard for connection of solar panels (or any other pressurised heat source).

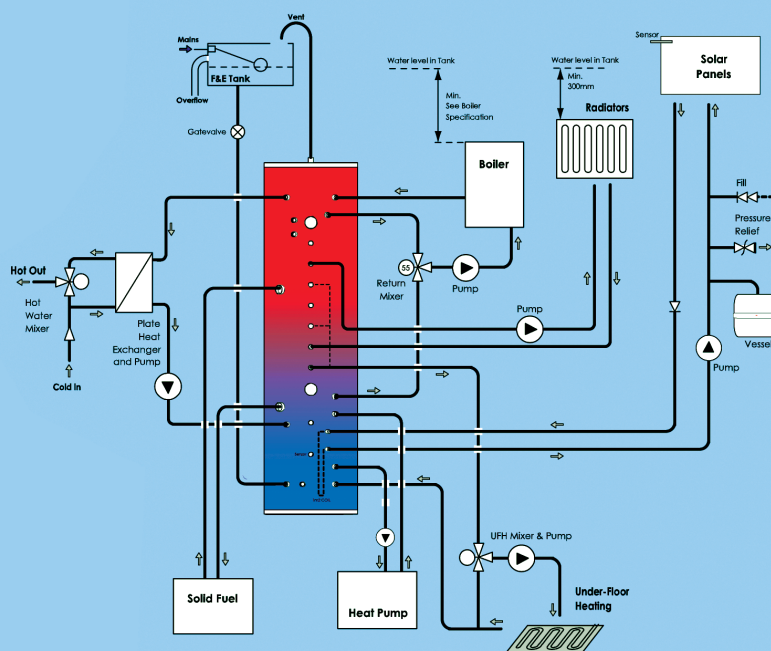
One can then add the PHE (plate heat exchanger) option

to generate mains pressure hot water to run multiple bathrooms using high pressure mains water, without the need for unvented certification or annual maintenance.

Further options provide fitted controls for the use of boilers of all types (sealed and vented) as well as heat pumps. Control options include pump assemblies, thermostats, programmers and timers, and control valves.

Both radiators and underfloor heating can be run simultaneously, and the store is configured in such a way that low temperature loads (e.g. underfloor heating) can run off low temperature heat sources (e.g. heat pump) while high temperature loads (e.g. radiators) run using higher temperature heat sources (e.g. wood burners or boilers).

Everything working in perfect harmony.



SPECFLUE

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For a free online design and quotation please visit:

www.systemdesigner.co.uk

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Recommended by most well known wood burner manufacturers

