

# Domestic and Commercial

## Hot And Cold Water Storage Solutions



**McDonald**  
Water Storage

# Domestic & Commercial Water Storage Solutions

Established in 1945 and privately owned, McDonald Water Storage is one of the UK's leading manufacturers of hot water cylinders.

Our commitment to providing a quality service is reflected in every aspect of our offering, from the premium grade copper material used to our manufacturing systems and processes.

CONTENTS

|                                  |    |
|----------------------------------|----|
| <b>Introduction</b>              | 3  |
| <b>Vented Range</b>              |    |
| Vented/Twin Cylinders            | 10 |
| Combination Cylinders            | 10 |
| WHEELflow                        | 11 |
| ELSOflow                         | 11 |
| <b>Thermal Stores</b>            |    |
| Benefits of Thermal Stores       | 12 |
| MULTiflow                        | 13 |
| MULTiflow+                       | 13 |
| ECOcube                          | 14 |
| CUBEflow                         | 14 |
| THERMflow                        | 15 |
| CENTRALflow                      | 15 |
| <b>Electric Boiler Solutions</b> |    |
| The Benefits                     | 16 |
| MULTiflow + Flow Boiler          | 16 |
| ELECTRAflow                      | 17 |
| ELECTRAstore                     | 17 |
| <b>Unvented Cylinders</b>        |    |
| What Are Our Differences?        | 18 |
| POWERflow                        | 19 |
| ECOflow                          | 19 |
| STEELflow                        | 20 |
| Pre-Plumbed Options              | 20 |
| <b>Commercial Cylinders</b>      |    |
| Copper Calorifiers (inc. Buffer) | 21 |
| Stainless Steel Calorifiers      | 21 |
| Mild Steel Buffers               | 22 |
| HTM04-01 NHS Specification       | 22 |
| PLATEflow                        | 23 |
| PLATEflow Plus                   | 23 |
| <b>Cold Water Storage</b>        |    |
| One Piece Tanks                  | 24 |
| Two Piece Tanks                  | 25 |
| Sectional Tanks                  | 25 |
| <b>Ancillary Items</b>           |    |
| Back Boilers                     | 26 |
| Low Loss Header                  | 26 |



# McDonald Water Storage built on service, quality and tradition



McDonald Water Storage are one of the UK's leading manufacturers of copper hot water storage solutions, having produced superior quality systems for over 80 years.

Following the war, we developed new products such as pre-fabricated plumbing and vented copper cylinders.

We have developed these skills to provide an extensive range today, of vented cylinders, unvented cylinders and thermal stores, in addition to large commercial calorifiers.

# Continuous improvement for product quality

The commitment to high quality products and manufacturing earned our distinguished reputation.

We place great importance on maintaining this standard with not only continuous investment in the manufacturing equipment and staff training, but also attaining ISO 14001 and ISO 9001 recognition.



# So why is copper our material of choice?

- Maximum flexibility for cylinder and tank manufacture, allowing us to customise the size, shape and connection layout to suit a specific installation requirement, simplifying installation and minimise pipework changes.
- Superior heat conductivity, improving performance of renewable energy inputs, especially air source heat pumps
- Extracts heat very effectively, perfect for use in thermal stores solutions to deliver hot water or heating.
- Anti-microbial properties to reduce bacteria growth, killing 99% of bacteria.

| Material        | Thermal Conductivity <sup>3</sup> |         |
|-----------------|-----------------------------------|---------|
|                 | (Btu/(hr-ft-F))                   | (W/m.K) |
| Copper          | 233                               | 386     |
| Aluminium       | 118                               | 204     |
| Titanium        | 13                                | 232     |
| Stainless Steel | 26                                | 45      |

Table 1: Heat Exchanger Materials & Thermal Conductivity



## But not your only choice!

We are also able to provide stainless steel solutions for domestic use where budget is a factor and commercial solutions where higher pressure up to 10 bar or up to 100,000 litre volume is specified.

Mild steel options are available for water used within heating systems, operating up to a maximum of 6 bar pressure.



# The complete water storage solution provider

Whatever your water storage requirements are, hot or cold ... we will have a solution!

From small-scale domestic installations to large-scale commercial projects, our technical team can help design and specify the perfect system to meet your needs.

Whether you require a standard or bespoke solution, we have the expertise to ensure optimal performance and energy efficiency.

From traditional vented and unvented cylinders to versatile thermal stores, we'll work with you to provide a system to meet your needs.



## Reputation? don't just take our word for it ...



### Excellent service start to finish

Incredibly prompt with replies, provided detailed and up to date information, delivery bang on time !!!



### Hot Water Solution

We are very grateful to David for his exceptional help, patience, and accommodation in completing our project to provide hot water to the sinks in our club toilet block at Cheshire Ghost Riders BMX Club.



### First class service

Wonderful pleasant, competent staff, very quick responses, professional design work, great/ perfect product for the job, compassionate in an emergency order, good delivery service.

I couldn't be more pleased or impressed in this world where nothing seems to work right.

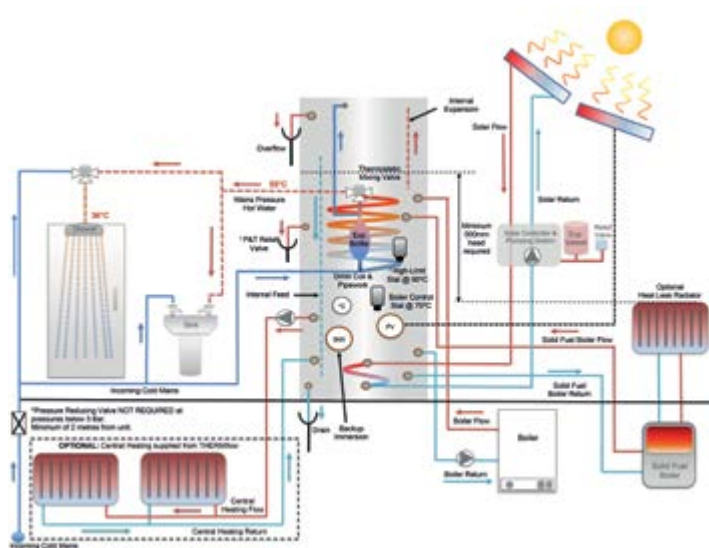


### Brilliant Service

Brilliant Service, Excellent Product, Easy to Install. The custom designed cylinder are very helpful for awkward jobs

[Check us out - click here](#)

# Why are hot water cylinders essential to reduce our carbon and running costs?



As UK homes increasingly adopt renewable energy sources and multi-outlet demand rises, hot water cylinders offer the solution for efficient and reliable hot water supply.

Their versatility can maximise the input from a single heat source such as electric, or multiple heat sources to deliver both heating and hot water.

A hot water cylinder is essential where a property is looking to reduce their energy costs and transition their home to lower carbon emissions.

The cylinder of water can be used to provide hot water or store energy in the form of heat.

The ability to heat the store when the cost is at its lowest, whether it is solar PV, heat pump or time of use electric tariffs, is only provided by the cylinder, specifically designed to work with that heat source.



# MCS umbrella scheme with free heat pump training

To keep up with the evolving market, it's crucial for installers to master heat pump installations. That's why we're excited to highlight our services, designed to save time and ensure that the heat pump installations are as seamless as possible!

Providing access to an MCS Umbrella Scheme enables the installers customers to benefit from an MCS accredited heat pump installation, whilst removing all the hassle of the company completing the associated paperwork themselves.



The course is held in our dedicated training centre at our head office in Glenrothes, Fife. It is specifically designed for plumbers and heating installers looking to enter the rapidly growing heat pump market.

The courses provide hands-on experience of heat pump products, where you will gain:

- In-depth heat pump knowledge
- Hands-on experience from industry experts
- Access to our MCS Umbrella Scheme
- Become an Assured Installer

## Don't wait, register today ...

For details on the training and MCS Umbrella Scheme, or to register your interest in one of our courses, either scan the QR code or click here.



# Your selection guide to understand what works where?

The table below provides a quick look up guide as to which product range meets your hot water cylinder requirements.

Our technical team are able to provide further advice and confirmation on your selection if required.



|                         | Hot Water Only | Heating And Hot Water | Mains Electric | Solar PV | Smart Electric Tariff Compatible | Gas, Electric, Oil Boiler or Central Plant | Solar Thermal | Heat Pump | Solid Fuel | Apartment / Small Property | House / Larger Property | Standard Models Only | Standard and Bespoke Models |
|-------------------------|----------------|-----------------------|----------------|----------|----------------------------------|--------------------------------------------|---------------|-----------|------------|----------------------------|-------------------------|----------------------|-----------------------------|
| Vented/Twin Cylinders   | ✓              | —                     | ✓              | —        | —                                | ✓                                          | ✓             | ✓         | ✓          | ✓                          | ✓                       | —                    | ✓                           |
| Combination Cylinders   | ✓              | —                     | ✓              | —        | —                                | ✓                                          | ✓             | ✓         | ✓          | ✓                          | ✓                       | —                    | ✓                           |
| WHEELiflow              | ✓              | —                     | ✓              | —        | —                                | —                                          | —             | —         | —          | ✓                          | —                       | ✓                    | —                           |
| ELSOflow                | ✓              | —                     | ✓              | —        | —                                | ✓                                          | —             | —         | —          | ✓                          | —                       | —                    | ✓                           |
| MULTIflow               | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | —             | —         | —          | ✓                          | —                       | ✓                    | —                           |
| MULTIflow+              | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | —             | —         | —          | ✓                          | ✓                       | —                    | ✓                           |
| ECOcube                 | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | —             | ✓         | —          | ✓                          | —                       | —                    | ✓                           |
| CUBEflow                | ✓              | ✓                     | ✓              | ✓        | —                                | ✓                                          | ✓             | —         | ✓          | ✓                          | ✓                       | —                    | ✓                           |
| THERMflow               | ✓              | ✓                     | ✓              | ✓        | —                                | ✓                                          | ✓             | —         | ✓          | ✓                          | ✓                       | —                    | ✓                           |
| CENTRALflow             | ✓              | ✓                     | —              | —        | —                                | ✓                                          | —             | —         | —          | ✓                          | —                       | —                    | ✓                           |
| MULTIflow + Flow Boiler | —              | ✓                     | ✓              | —        | —                                | —                                          | —             | —         | —          | ✓                          | ✓                       | ✓                    | —                           |
| ELECTRAflow             | —              | ✓                     | ✓              | —        | —                                | —                                          | —             | —         | —          | ✓                          | —                       | —                    | ✓                           |
| ELECTRAstore            | —              | ✓                     | ✓              | ✓        | ✓                                | —                                          | —             | —         | —          | ✓                          | ✓                       | —                    | ✓                           |
| POWERflow               | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | ✓             | —         | —          | ✓                          | ✓                       | —                    | ✓                           |
| ECOflow                 | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | ✓             | ✓         | —          | ✓                          | ✓                       | —                    | ✓                           |
| STEELflow               | ✓              | —                     | ✓              | ✓        | —                                | ✓                                          | ✓             | ✓         | —          | ✓                          | ✓                       | ✓                    | —                           |

# Commercial sizing how our team can help

When it comes to sizing a commercial cylinder, there are many factors that have to be taken into account, including the type of application, flow rates, energy input, number of outlets ... just to highlight a few!

Our team at the head office have extensive years of experience in assisting specification teams to provide the perfect solution, whether it is manufactured from copper, mild steel or stainless steel.



### Sizing a Commercial Hot Water Tank

1. Choose Installation Type:

Installation Type:

2. Enter Appliance Quantities:

Private Hand Basin:  Public Hand Basin:

Full Demand: 0 Litres/hr Full Demand: 0 Litres/hr

Shower:  Full Demand: 0 Litres/hr

Wash Sink:  Full Demand: 0 Litres/hr

Kitchen Sink:  Full Demand: 0 Litres/hr

Laboratory Sink:  Full Demand: 0 Litres/hr

#### Considering a Semi-Instantaneous Calorifier?

If you are looking to reduce your storage volume whilst still utilising a boiler checkout our Plateflow option.

**PLATEFLOW**

Based on the calculation on the left:

**Storage Calorifier Recommendation: 0 Litres/hr**

Select kW rating from drop down menu. This subtracts the hourly output of PHE from total requirement of hot water

Select kW:

**Storage Vessel Volume in Litres: 0 Litres**

[Visit Plateflow](#)

We have extended our assistance with commercial cylinder sizing with our exclusive online sizing tool.

This will enable you to size the cylinder based on the application, whether it is a hotel, hospital, sports centre but also specify the types and number of outlets. The calculation then provides you a guide based on BS853 and the hourly water requirements.

In addition, it will also provide you the option to see how a PLATEflow unit could reduce your storage requirement.

Click here to use the online tool today.



## VENTED

The vented range is manufactured to BS1566 standards, meaning when it comes to a straight replacement, the tapping positions are the same as the original cylinder, reducing installation time.

Where space is at a premium, in addition to our twin cylinder configuration we can also bespoke manufacture your vented solution, with diameters starting from as little as 280mm.

We have a complete range of standard vented cylinders, both direct and indirect, held in stock with immediate availability.

- British Kitemark Standard
- Standard models available from stock
- Grade 1, 2 and 3 copper variants
- Shell diameter from as little as 280mm



## VENTED

Combination cylinders are widely used in apartment applications where there is no loft space for the cold feed tank, so it is incorporated on top of the vented cylinder.

The combination cylinder range is manufactured to BS3198 standards, meaning when it comes to a straight replacement, the tapping positions are the same as the original cylinder, reducing installation time.

We have a wide range of direct and indirect models held in stock with immediate availability.

- British Kitemark Standard
- 65 – 210 Litre models held in stock
- Split-Header versions available
- Direct, Indirect & Renewable options



[Click here](#) for full details on the Vented Cylinder range



## WHEELIFLOW

The WHEELiflow is a 50 litre electrically heated hot water store, providing emergency hot water for a property either during planned maintenance work or where the original hot water source has failed, perfect for property management companies.

This copper lined offering has unique microbial properties for prevention against legionella.

The store of water has 50mm insulation and is heated via a 3kW immersion heater, which is prefitted with 3 metres of cable and a plug. The immersion can heat the water to 60°C within 60 minutes.

- Portable temporary hot water supply
- Boiler breakdown solution
- 50 Litres of hot water in 60 minutes
- Easy installation



## ELSOFLOW

Our ELSOflow range was launched in 2011 to provide direct replacements for the discontinued Elson copper rectangular water heater range.

The ELSOflow hot water tank range can be heated electrically, or indirectly by a gas or oil boiler, multifuel stove or log burner, solar thermal or a combination of these sources.

The ELSOflow range provide gravity hot water, with Coral E and Coral Si providing mains pressure hot water (see the CUBEflow range).

- Exact Replacement for Elson Products
- Space-saving alternative to a Combination Cylinder
- Electric models available from stock



[Click here](#) for full details on the ELSOflow range

# Discover the benefits of a Thermal Store hot water storage solution

## Homeowner / Resident

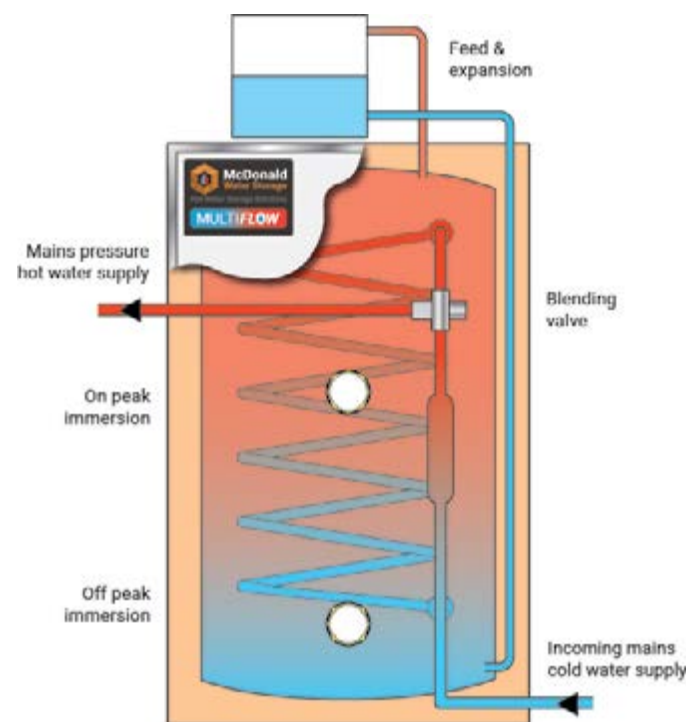
- Delivers mains pressure hot water, a major benefit over existing vented and combination cylinders
- Anti-scald protection with the hot water automatically blended to 55 degrees at the unit
- No risk of legionella as the domestic hot water is mains cold water instantaneously heated
- Inherent safety of a vented hot water system

## Installer / Landlord

- No annual safety check or maintenance as required by unvented cylinders, saving ongoing operational costs
- No G3 qualification for installation as the thermal store is open vented
- No discharge pipework requirement, making the siting of the thermal store more flexible and reduce installation costs

## Mains pressure hot water from an open vented cylinder, how?

- The store itself is open vented and acts as a battery, storing energy in the way of water.
- The water held in the store is heated by immersion or indirectly via an internal coil.
- When the hot tap is turned on, it is mains pressure cold water that is instantly heated when passing through the internal coil.
- The hot water is then blended with cold water to a maximum of 55 degrees before being delivered to the hot water outlets.



[Click here](#) for full details on the Thermal Store range



## MULTIFLOW

The MULTIflow is a direct thermal store, with the additional flexibility to incorporate either an open vented boiler or sealed/central plant boiler, to provide mains pressure hot water.

This low cost thermal store can be used with a boiler and/or off-peak electricity to aggregate the supply to heat the store, and provide domestic hot water when it is required.

With the store itself being open vented, it is inherently safe, and therefore does not require any discharge pipework associated with unvented cylinders, which can prove problematic in apartment installations.

- Replacement for Gledhill Pulsacoil
- No annual safety check
- Low-cost mains pressure hot water
- Models available from stock



## MULTIFLOW+

The MULTIflow+ is a direct thermal store, with the additional flexibility to incorporate either an open vented boiler or sealed/central plant boiler, to provide mains pressure hot water.

This multi-application thermal store, with integrated F&E tank, can be used with a boiler and/or off-peak electricity to aggregate the supply to heat the store.

With the store itself being open vented, it is inherently safe, and therefore does not require any discharge pipework associated with unvented cylinders, which can prove problematic in apartment installations.

- Replacement for Mainsflow & Flowmax
- No annual safety check
- Low-cost mains pressure hot water
- 6 capacities in standard or slimline



[Click here](#) for full details on the Thermal Store range



## ECOCUBE

The ECOcube is specifically designed for smaller properties with a low hot water requirement (such as low occupancy or bedsit properties) with restricted spaces.

This market leading 'A' rated thermal store utilises a unique combination of insulation techniques to minimise the heat loss, improving efficiencies and reducing running costs.

Whilst the ECOcube has primarily been designed for use with electric immersions, we have also future proofed the range to accommodate additional primary heat sources such as boilers and heat pumps.

- Perfect for 1-2 bed apartments
- High output, small footprint.
- A rated for maximum energy savings
- Installed anywhere within the property



## THERMFLOW

Our THERMflow thermal store works at the heart of your heating and hot water system to supply the central heating system in addition to mains pressure hot water.

THERMflow offers the perfect solution, with the ability to utilise all available energy sources to provide both heating and hot water for the home.

With a wide range of models up to 400 litres, to incorporate heat sources such as solid fuel, solar thermal or low carbon generated electricity, or bespoke design your cylinder to suit your installation requirements.

- The most customisable thermal store
- Perfect solution for multi-fuel installation
- Ideal for off-grid properties
- Hot water on demand



## CUBEFLOW

Our CUBEflow rectangular thermal store provides the ultimate space saving hot water solution whilst allowing for bespoke design for installation requirements.

The rectangular design of the store takes up to 27% less space than an equivalent volume cylinder, freeing up space, essential within apartment applications.

We can bespoke design the CUBEflow to fit into the tightest spaces, whether it is underneath a sink unit or on a specifically designed frame to provide space below, delivering mains pressure hot water.

- Direct replacement for Elson Coral range
- Ultimate space-saving thermal store
- Available in any width, depth or height
- Multi-fuel options available



## CENTRALFLOW

The CENTRALflow system provides a unique and energy efficient heating and stored hot water solution for apartment blocks or properties where the heat comes from a centralised source such as a biomass or CHP Plant.

CENTRALflow delivers mains pressure hot water through a thermal store linked to a Heat Interface Unit (HIU) which can also offer a Heat Metering facility.

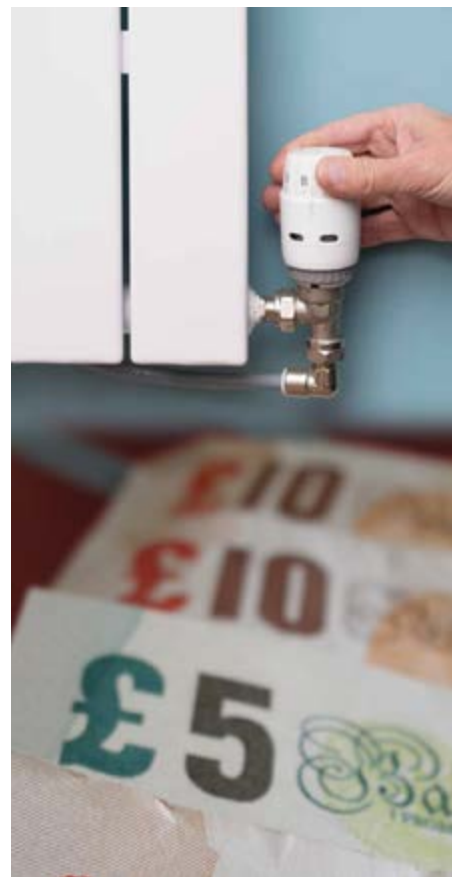
The solution also enables other forms of renewable energy, such as solar thermal technology to be included to reduce the carbon footprint and minimise operating costs.

- Direct replacement for Elson Amerpak
- Add diversity to central plant systems
- Hot water backup during boiler shutdowns
- Manufactured for space available



[Click here](#) for full details on the Thermal Store range

[Click here](#) for full details on the Thermal Store range



## What makes our electric boiler solutions different to a standard electric boiler?

Ultimately it is a cost saving solution where the property requires both heating and hot water from an electric only product.

With an electric combination boiler or instantaneous heater, the unit utilises on peak daytime, expensive electricity to meet the properties heating and hot water requirement.

Our electric boiler solutions incorporate hot water storage, allows for energy storage that can be charged using low cost off-peak electricity periods such as economy 7 and economy 10 or smart time of use tariffs, in addition to renewable technologies such as solar PV or wind generated electricity.

- Maximise low cost electric tariffs
- Reduced running costs
- Increased energy storage
- Bespoke designed to suit the property



## ELECTRAFLOW

Our ELECTRAflow is an electric boiler incorporating thermal storage, providing instantaneous heating and hot water.

It is the most customisable wet central heating and hot water solution for apartment applications, with bespoke design flexibility to meet the installation requirements.

The ELECTRAflow provides many benefits, especially when compared to an electric instantaneous heater or electric combination boiler, as it is designed to utilise the off-peak electricity tariffs, a major benefit in Standard Assessment Procedure (SAP) calculations

- Maximise savings on Economy 7 or 10
- Provides heating and hot water
- Space-saving models available
- Purpose-built controller included



## MULTIFLOW

Incorporating Flow Boiler

Our MULTIflow thermal store range is specifically designed to provide a high performance, mains pressure hot water solution with enormous benefits. The compact design of the Electric Flow Boiler makes it the ideal partner to provide the heating requirements.

Combining the MULTIflow with the flow boiler provides an ideal heating and hot water solution for electric only properties.

Whilst electric combination boilers are suitable for electric only properties, they are unable to provide the benefits of off-peak electric tariffs such as economy 7.

- Up to 210 litres of hot water
- Up to 14.4kW for heating circuit
- Available from stock
- Alternative to an electric combi boiler



## ELECTRASTORE

The ELECTRAstore is an electric boiler incorporating thermal storage, providing instantaneous heating and hot water. Our smart technology maximises the benefit of "time of use tariffs", via our IOT control system, providing the ability to store energy when it is available, at its lowest price!

The store provides many benefits, including the ability to detect low rate tariff periods using our innovative IOT control system.

The smart control device provides the ability to monitor, regulate and manage the amount of energy delivered into the store, dependant on the homeowners usage.

- Maximise Time of Use Tariffs
- Works with Octopus
- Space-saving models available
- Web-based control system



# What makes our Unvented Range stand out from the crowd?



The bespoke design flexibility of the copper unvented range overcomes the restrictions of standard alternatives, making it the perfect solution where 'off the shelf' products do not suit.

Whether it is something smaller in height or slimmer in width, with a wide range of diameters available, the possibilities are extensive.

With high efficiency copper coils, including finned integron variants for renewable inputs, and adding the ability to adjust the tapping positions to suit the installation, the copper unvented provides the perfect choice for installers.



The STEELflow unvented cylinder is engineered for exceptional performance and durability. Manufactured from premium grade Duplex stainless steel, these products are built to the highest specifications to deliver reliable and efficient heat transfer solutions.

The STEELflow range includes all necessary fittings and components, including compression fittings as standard, for a seamless installation process.

Automated welding procedures, combined with post-weld pickling and passivating treatment, guarantee the strength and integrity of the welds.

[Click here](#) for full details on the Unvented Cylinder range



## POWERFLOW

The POWERflow copper unvented hot water cylinders are the most customisable range on the market.

The versatility of this unvented range allows the cylinder to be bespoke designed for your application, whether it is a narrower diameter, additional connections, horizontal models or larger coils for faster reheat, POWERflow can be tailored to meet your requirements.

The heat transfer is maximised by utilising the high efficiency copper coil for boiler inputs, and integron coils for solar input, providing a fast reheat of the cylinder to reduce running costs.

- Most customisable unvented cylinder
- Market leader since 1992
- High-efficiency copper coils
- As slim as 400mm including insulation



## ECO FLOW

The ECOflow copper unvented hot water cylinders are the most customisable heat pump range on the market.

The bespoke design flexibility of the ECOflow range overcomes the restrictions of stainless steel alternatives, making it the perfect solution where 'standard' products do not suit. Whether it is something smaller in height, slimmer in width or even horizontal, the possibilities are extensive.

Our Tank on Tank models provides both hot water and buffer benefits from one unit, rather than requiring two, the ideal space saving solution.

- Most efficient heat pump cylinder in UK
- Fully customisable; slimline, horizontal, bespoke connections
- Finned copper coils for greater COP



[Click here](#) for full details on the Unvented Cylinder range



## STEELFLOW

Manufactured from premium grade duplex stainless steel ensuring superior corrosion resistance, STEELflow provides uncompromising efficiency and high quality standards, with a range of high performance cylinders for those on a budget.

Supplied with a manufacturers guarantee and fully tested, the automated welding procedures with post weld pickling and passivating treatment guarantees the strength of the welds.

The STEELflow is supplied with all the necessary components required, including compression fittings to provide a quicker installation process and reduce additional cost on installation.

- Available from stock.
- High grade duplex stainless steel
- External expansion models only
- 60-500 litre models available



## CALORIFIERS

Manufactured From Copper

We specialise in manufacturing copper commercial water heaters with the superior quality calorifiers range, all meeting BS583 specification.

This copper range can be manufactured to any dimension up to 3000 litre capacity, and designed to suit vented and unvented installations and incorporate renewable energy technology.

Our expert commercial water heater specialists can advise on the optimum design whilst our advanced manufacturing approach can ensure even the most complex calorifier is supplied in just 2 weeks.

- Manufactured in 2 working weeks
- Meet requirements up to 3,000 litres
- Manufactured to BS853 and HTM04 spec.
- 80mm thick insulation as standard



## STEELFLOW

The STEELflow heat pump range is also available in a pre-plumbed configurations to provide the installer with a 'plug and play' solution, not only speeding up the installation process onsite, but also standardising the plumbing configuration between properties on the same developments.

The heat pump tank on tank range incorporates a 50 litre buffer store provides extra volume for the heating system.

This allows the heat pump to work longer but less often, reducing cycling and increasing the efficiency.

- Perfect third party cylinder for heat pump installations
- Held in stock for immediate despatch
- 8m working head pumps included



## CALORIFIERS

Manufactured From Stainless Steel

In addition to our copper range, we also offer stainless steel alternatives to accommodate for the higher volume or higher pressure applications.

This range can be manufactured to any dimension up to 100,000 litre capacity, and designed to suit vented and unvented installations and incorporate renewable energy technology.

Our expert commercial team can advise on the optimum design of the cylinder.

- Made to meet customer requirements
- Fully pickled and passivated
- Manufactured to required standards.
- Up to 100,000 litre tanks available



[Click here](#) for full details on the Unvented Cylinder range

[Click here](#) for full details on the Commercial Cylinder range

## BUFFERVESSEL



The hot water buffer vessel, manufactured from either mild steel or stainless steel, is designed for the storage of primary water produced from continuous and intermittent heat sources.

The hot water contained in the cylinder is only designed to be circulated in a closed heating circuit in order to avoid corrosion.

The cylinders are available from 500 litres to 100,000 litres, with the option to incorporate a backup immersion heater. With models either standard configurations or bespoke specification to suit individual installation requirements.

- Up to 100,000 litre tanks available
- Baffles, sparge and diffuser pipes options
- Compliant with Pressure Equipment and Energy Related Products Directives



## NHS



When cylinders are specified for NHS installations, the Health Technical Memorandum 04-01, a Department of Health document outlines the requirements for Safe Water within Healthcare Premises.

Part of this document outlines the specification of all hot water storage vessels used on NHS premises, stipulating specific requirements for NHS applications.

Our expert commercial water heater specialists can advise on the HTM04-01 requirements, in addition to the optimum design for the installation.

- Full HTM04 Compliance
- Bespoke designed to suit installation
- 2 week delivery on most projects
- Approved supplied for the NHS



[Click here](#) for full details on the Commercial Cylinder range

## PLATEFLOW



The PLATEflow is part of our commercial cylinder range, designed to supply hot water in situations where demand varies over the day, e.g. hotels, hospitals, factories etc.

The system comprises a brazed plate heat exchanger, prepiped and mounted on a buffer vessel. This design effectively decreases the amount of stored hot water required, while still delivering peak flow rates as demanded.

Supplied pre-assembled to your own specification onto either a copper or stainless steel cylinder, the PLATEflow can significantly reduce installation and commissioning time.

- Rapid hot water generation with smaller storage requirements
- PHE and buffer sized for each project
- Copper and Stainless Steel



## PLATEFLOW Plus



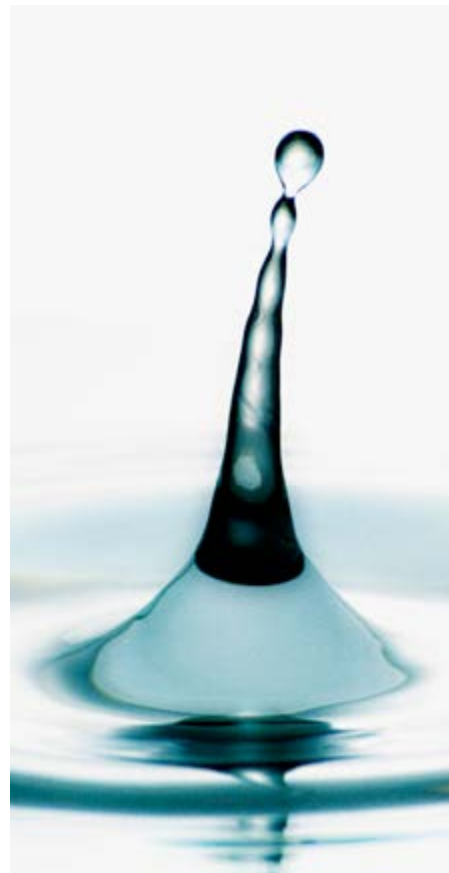
Our PLATEflow Plus provides a new level of control and ease of installation to our PLATEflow Plate Heat Exchanger. This configuration allows the user to fully control both the Primary and Secondary flows to meet the varying hot water demands by including a packaged plate heat exchanger.

Our standard set up incorporates a primary circulating shunt pump, a 4-port control valve, temperature controller with LCD digital display, and a gasket heat exchanger, which can have more plates added/removed to suit the boiler load. The system also offers the possibility of connecting to a local building management system.

- Improved system controls
- Reduces installation time on-site
- Commissioning services available
- Customisable to meet requirements



[Click here](#) for full details on the Commercial Cylinder range



## What choose McDonald Water Storage for your cold water solution?

Our extended our range of cold water storage tanks are manufactured from state-of-the-art GRP materials. Low maintenance, long-lasting and highly cost-effective, these tanks are a perfect option for a wide range of cold water storage applications.

These potable water tanks are available in one piece, two piece and sectional formats. Simply provide us with the available space dimensions and we can advise on the best option available.

Our cold water storage tanks are available to purchase with the additional components required for installation, providing a single point of purchase.

Suitable for all cold water applications including:

- Potable & Non Potable water storage
- Process water applications -15° to +30°C



## One Piece Tanks

A comprehensive range of one piece cold water storage tanks in AG/AF and AB airgap configurations. Fully encapsulated insulation to sides and lid. Close fitting and sealed lid which is removable for maintenance.

Tanks storing over 1000 litres nominal have an access man-way with removable lid providing a 520 x 520mm opening, allowing access for maintenance and inspection.

The outer surface of the tank is coated with polyester gel coat to ensure tank suitability for external positioning in most extremes of weather as standard.

- Full WRAS approval
- Manufactured to BS EN 13280:2001
- Quality System manufactured in accordance with ISO 9001: 2000



**Click here** for full details on the Cold Water Storage Solutions

## Two Piece Tanks

A Comprehensive range of two piece cold water storage tanks AG/AF and AB airgap configurations.

Comprising an upper and lower section of equal height, incorporating an external horizontal joint flange allowing the sections to be bolted together on site. All sealant and fixings for the joint flange are supplied with the tank.

The two piece units are particularly suitable for sites with access restrictions, allowing a large tank to be carried through a doorway or similar restriction, then assembled once in position.

- Full WRAS approval
- Manufactured to BS EN 13280:2001
- Quality System manufactured in accordance with ISO 9001: 2000



## Sectional Tanks

Our range of sectional cold water storage tanks are designed in a modular format, which allows a comprehensive range of tank sizes and configurations. They comprise of individual bolt-up panels which are assembled on site.

Pre-insulated including insulated base option, providing a U value of 0.8w/m°C, ensuring maximum dimensional stability.

In order to calculate the nominal capacity of the tank, simply multiply the length x width x height. There can be multiple configurations of our tanks, for example a 2 x 2 x 1m tank is not the same as a 2 x 1 x 2m tank.

- From 125 up to 2,000,000 litres
- Flexibility of on-site assembly
- Industry's largest sized man-way access
- Hot press moulded GRP panels



**Click here** for full details on the Cold Water Storage Solutions



## Back Boilers

Copper back boilers are predominantly required in the replacement market and will come in a variety of shapes and sizes; from large complex designs, to simple rectangular boxes.

Carrying a number of standard sizes in stock allows our copper back boilers to be despatched same day, ensuring you are back up and running as fast as possible. However, bespoke manufactured units are available for an exact replacement.

Manufactured from a minimum of 3mm thick copper and fully factory tested prior to despatch, all our back boilers are designed and built to last.

- Manufactured in 4mm thick copper
- Available from stock
- Can be manufactured to order
- Available as block or arch-flue



## Low Loss Header

A low loss header provides hydraulic separation between the boiler circuit and the heating circuit, regulating the flow rate and pressure, improving efficiency and performance.

It is particularly important in the case of modern boiler systems, which specify the optimum parameters to ensure the boiler operates at peak efficiency.

Should the velocity exceed or be lower than those specified by the boiler, performance can be compromised, resulting in irregular flow rates and water temperature, putting unnecessary strain on the system.

- Bespoke manufactured to meet project requirements
- Domestic and commercial options
- 10 - 1,000kW system outputs



# Discover Our Complete Range Of Water Storage Solutions

Open Vented and Combination Cylinders

Elson Replacement Solutions

Thermal Stores

Electric Boiler Solutions

Unvented Cylinders

Commercial Cylinders

Cold Water Storage



For full details on a product range click on the category above or go to [mcdonaldwaterstorage.com](http://mcdonaldwaterstorage.com)

**Click here** for full details on the Ancillary Products



**McDonald**  
**Water Storage**

Pride in our  
service, quality  
and tradition



QUEENSWAY INDUSTRIAL ESTATE | GLENROTHES | FIFE | KY7 5QF

T: 01592 611123 | E: [sales@mcdonaldwaterstorage.com](mailto:sales@mcdonaldwaterstorage.com)

[www.mcdonaldwaterstorage.com](http://www.mcdonaldwaterstorage.com)

