

RENEWABLE ENERGY HOT WATER CYLINDERS



McDONALD ENGINEERS UK
HOT WATER STORAGE SOLUTIONS

energy efficient hot water cylinders since 1945

RENEWABLE ENERGY HOT WATER CYLINDERS

As well as being one of the UK's leading manufacturers of hot water cylinders since 1945, McDonald Engineers has been at the forefront of developing cylinders designed to harness renewable energy since the early 1970s.

Working initially with solar energy, we have continued to remain one step ahead by anticipating the developments of the energy market and have focused on optimising the heat transfer process for maximum efficiency. We were the first company to launch a dedicated Heat Pump Cylinder and the first to offer a combined Cylinder and Buffer, Tank on Tank unit for heat pump installations.

If you are looking for expert advice on implementing a renewable energy powered hot water system, our highly experienced technical sales team are on hand to talk you through the best solution for your project.

As well as holding an extensive stock of our standard products ready for immediate despatch, our advanced manufacturing process enables us to cope with any order level, from one-off bespoke cylinders to large production runs of custom designed units.

COPPERS CREDENTIALS

Copper's thermal conductivity rating is over 15 times greater than that of stainless steel. Our systems capitalise on this vital property with our high efficiency finned copper coils, to provide the most effective heat transfer process on the market today.

Many heat pump manufacturers are now insisting on the use of copper cylinders with their products, due to the improved performance that copper offers.

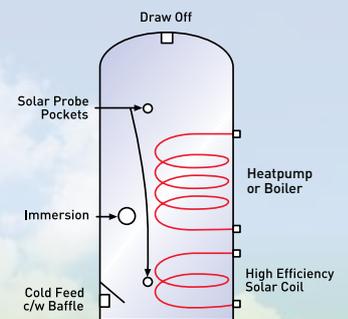
Copper is 100% recyclable and also has unrivalled bacteria killing properties, even at the lower water temperatures often involved in renewable systems, making it the preferred choice of every renewable energy installer.



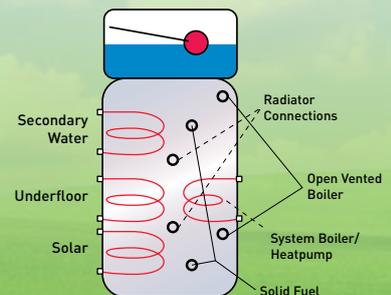
USING DUAL AND MULTIPLE FUEL SOURCES

In some applications multiple technologies are used. We offer a multi-fuel system on a number of our cylinders to draw the energy from every available source, thereby delivering the most cost effective hot water solution.

Thanks to copper's flexibility and unrivalled thermal transfer properties, we can incorporate a number of high efficiency coils into a cylinder. This added to the numerous cylinder options we have, the flexibility of positioning coils and connections, allows us to maximise potential gains.



DUAL COIL in vented and unvented to incorporate solar energy and boiler coil or heatpump coil.



Multiple Fuel System using THERMflow

HELPLINE 01592 611123

UNVENTED POWERflow

The pinnacle of unvented cylinders with fabulous performance and reliability. Built to deliver superior mains pressure simultaneously for showers, sinks and wash hand basins. Now available as ECOflow, the first dedicated heat pump cylinder.



Solar	✓
Air Source } Heatpumps Geothermal }	✓
Biomass	✓
Solid Fuel	X
Wind/Hydro Power	✓

THERMAL STORE THERMflow

One of the most flexible thermal stores on the market today. Providing instant, mains pressure hot water but with a vented store. Perfect for multiple fuel sources including solid fuel. Ideal for Passive & Eco Homes

No annual service required.

Mains pressure with Solid Fuel.



Solar	✓
Air Source } Heatpumps Geothermal }	✓*
Biomass	✓
Solid Fuel	✓
Wind/Hydro Power	✓

* May require immersion top up & extended coil

ELECTRIC WET BOILER ELECTRAflow

A combined electric boiler and storage cylinder, providing a wet central heating solution. This can be combined with a solid fuel boiler and the hot water supplemented with solar. Available in Vented, Unvented and Thermal Store models.



Solar	✓
Air Source } Heatpumps Geothermal }	✓
Biomass	✓
Solid Fuel	V*
Wind/Hydro Power	✓

* Vented Only

RECTANGULAR COPPER TANKS CUBEflow

The CUBEflow range of copper hot water tanks are available as either a traditional Combination tank, providing gravity hot water, or as a Thermal Store unit, delivering mains pressure hot water.

The CUBEflow's flexible design, means savings of up to 27% in space required for the same capacity, compared to an equivalent cylinder.

Wide range of options available.



Solar	✓
Air Source } Heatpumps Geothermal }	✓
Biomass	✓
Solid Fuel	✓
Wind/Hydro Power	✓

COMMERCIAL CALORIFIERS/BUFFER VESSELS

For large scale projects, which require very large capacities. Our full range of Calorifiers and Buffer Vessels are suitable for commercial, large domestic, biomass and marine applications. They are available to suit multiple fuel systems



Solar	✓
Air Source } Heatpumps Geothermal }	✓
Biomass	✓
Solid Fuel	V*
Wind/Hydro Power	✓

* Vented Only

STAINLESS STEEL UNVENTED STEELflow

STEELflow is manufactured from premium grade duplex stainless steel, to our uncompromising efficiency and quality standards. STEELflow offers a range of high performance Indirect, Direct and Solar cylinders for those on a budget.



Solar	✓
Air Source } Heatpumps Geothermal }	✓*
Biomass	✓
Solid Fuel	X
Wind/Hydro Power	✓

* Heat Pump Coil Required

FUEL SOURCES EXPLAINED

SOLAR POWER - harnessing the sun's energy using solar thermal panels, can provide up to 70% of your annual hot water requirements. Solar PV can be linked to low rated immersion heaters in cylinders.

AIR SOURCE HEAT PUMPS - utilise the outside air as their energy source and can extract heating energy from temperatures as low as -25°C.

GROUND SOURCE (OR GEOTHERMAL) HEAT PUMPS - extract heat from the earth or water all year round, via heat collectors buried beneath the surface.

BIOMASS/SOLID FUEL - Heat produced from stoves, ovens and boilers burning wood, solid fuel and biomass products, can be used to provide heating and hot water.

WIND & HYDRO POWER - The use of small domestic wind turbines or small hydroelectricity systems from running water such as rivers, can produce electricity to power lights or heat your water.

QUICK REFERENCE

Looking to find out which products can be used with which source energy? Check out our ready reckoner.

	Solar, Thermal & PV	Air Source } Heat pumps Geothermal }	Biomass	Solid Fuel	Wind & Hydro Power
POWER <i>flow</i>	✓	✓	✓	✗	✓
THERM <i>flow</i>	✓	✓	✓	✓	✓
ELECTRA <i>flow</i>	✓	✓	✓	V*	✓
TIME <i>saver</i>	✓	✓	✓	✓	✓
CUBE <i>flow</i>	✓	✓	✓	✓	✓
Calorifiers	✓	✓	✓	V*	✓
STEEL <i>flow</i>	✓	✓	✓	✗	✓

* Vented Only

CUSTOM DESIGNED CYLINDERS FOR CONTRACTS AND ONE-OFF PROJECTS

Although we carry an extensive range of standard products, a large part of our operation is manufacturing custom designed cylinders, to facilitate large contracts or for one off projects.

- Custom cylinders for large production contracts
- One-off cylinders
- Any height
- Wide range of diameters
- Up to 100mm Lagging - improving SAP ratings
- Additional connections to allow multiple fuels or underfloor heating
- Pre-plumbed features such as pumps, zone valves, solar differential controllers
- Special positioning of connections, to make the installation quicker, easier and cheaper

Whatever your requirements, our team are on hand to ensure you get the cylinder exactly the way you need it, using the fuel source you desire.

PLEASE CALL US TO DISCUSS YOUR BEST OPTIONS ON 01592 611123 OR EMAIL SALES@MCDONALD-ENGINEERS.COM

Pre-Plumbed Cylinder & Buffer Tank on Tank

Contact us for details



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