DISCOVER COPPER’S NATURAL SUPERPOWERS

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Copper’s Natural Super Powers Make it The Perfect Solution

The hot water cylinder is a key feature in determining the energy efficiency of a building and it is vital that you consider the importance of your material choice and the impact it has on the solution’s lifetime costs. We believe Copper’s natural super powers make it the right choice for your project.

- **Copper’s superior heat transfer properties means it takes less time to heat water.**
  - Copper’s thermal conductivity is almost 30 times greater than that of other materials
  - As Copper is a flexible material, you can squeeze more Copper coil into a cylinder, further improving heat recovery times
  - Copper coils can also be supplied with a finned profile to enhance heat recovery times

- **Copper cylinders are more efficient and cost less to run.**
  - A leading heat pump manufacturer stated a Copper cylinder could save over £100 per year on running costs when used with heat pumps
  - A leading manufacturer of solar thermal panels estimated that a system incorporating a Copper cylinder is 17% more efficient than with other cylinders

- **Copper cylinders may significantly reduce the threat of bacteria growth, such as E.coli and Legionella, in your water system.**
  - In tests, the level of E. coli was 100 times lower on Copper than stainless steel
  - It took 34 days for E. coli to die on stainless steel and just 4 hours on Copper

- **Copper is 100% recyclable which means you are using the most environmentally friendly material possible for your hot water cylinder.**

- **The flexible nature of Copper, means your cylinder can be manufactured in a wide range of heights, diameters and connection positions to suit your installation.**

- **Copper has an extremely long lifespan. Last year we received one of our cylinders back from 1947. It had been taken out, not because it was leaking, but they wanted to replace it with one of our thermal stores.**

And when it comes to a Copper hot water cylinder from McDonald Engineers, we provide our clients with even more benefits including:

- Our technical sales team ensure you get the optimum hot water cylinder for your project
- We use thicker Copper in many of our products, than most other cylinder manufacturers, for extra strength and durability
- Our flexible manufacturing process means we can customise the positioning of your connections to reduce the installation time and costs
Even More Reasons Why You Should Choose Copper for Your Hot Water Cylinders

And if that wasn’t enough to convince you, here is some additional information regarding Copper’s incredible super powers.

**Hospitals** - Copper and Copper alloys such as brass, are now being used in hospitals for handles and push plates to stop germs from spreading. In fact data from clinical trials have shown that installing key touch surfaces manufactured from Copper can reduce a patient’s risk of catching an infection whilst in hospital by 58%.

**Construction** - Copper flashings and Copper wire are regularly used on roofs to prevent moss and algae from growing. It works because the oxidization process provides a thin layer of Copper salt to the roof which kills the algae.

**Currency** - One of the main reasons Copper is used to manufacture coins is so that germs are killed and not passed on through daily transactions of currency.

**Health** - Japanese soldiers avoided dysentery by having a Copper ball in their water bottles which kept their water fit for drinking.

**Health** - Early American pioneers are said to have put Copper coins in large wooden water casks to provide them with safe drinking water on their long voyage as they moved west across the continent.

**Tourism** - The world famous statue of liberty is made from Copper and the Copper exterior coating is just 3/32 of an inch thick.

**Efficiency**

Copper bottomed boats were built to stop barnacles and seaweed from growing and this hugely improved ship’s speed and efficiency.

Copper bottomed pans are preferred by all of the top chefs as they maximise heat transfer.

**Nature**

Copper nails are hammered into tree stumps to stop them re-growing.

Copper strip can be used to prevent slugs getting onto plants.

**Drink**

Whisky “the water of life” may be matured in oak casks, however it is only ever made in Copper stills as Copper is the only material which removes the unwanted elements from the spirit. And whilst the whisky industry has experimented with other materials, it just cannot match the performance of Copper.