

ECO FLOW

BESPOKE RANGE OF UNVENTED HEAT PUMP
HOT WATER CYLINDERS



McDonald
Water Storage

Hot Water Storage Solutions



The ECOflow copper unvented heat pump hot water cylinder range provides fantastic benefits the most important of all is ensuring maximum efficiency from your heat pump. The use of copper allows the most efficient heat transfer not only in standard units but also bespoke units, tailored to your size and requirements.

The ECOflow range is built to deliver superior mains pressure simultaneously for showers, sinks and wash hand basins. Since its introduction in 1993, we have developed our unvented cylinder range, concentrating on ease of installation, reliability and a reduction in maintenance.

Discover The Benefits of a **ECOflow** Unvented Heat Pump Cylinder

- Unique bespoke design flexibility to provide an unvented solution to suit any installation requirement
- Heat Pump and Heat Pump Solar models
- High heat transfer double or triple pass finned copper coil, maximising heat pump efficiency and reducing running costs
- Standard cylinder or tank on tank with integrated buffer store
- Suitable for all models of air source and ground source heat pumps
- Compression fittings as standard for ease of installation
- Proven reliability with 25 year guarantee
- Being copper provides complete peace of mind, killing 99% of bacteria
- Available with white case and high density pouring foam insulation or spray foam insulation (50mm or 100mm)

WHY ECOFLOW

The bespoke design flexibility of the ECOflow range overcomes the restrictions of stainless steel alternatives. With a wide range of diameters available to choose from, and the ability to adjust the tapping positions to suit the installation, it has become the perfect choice for installers.

Designed to maximise the performance of heat pumps, the ECOflow copper hot water cylinder comes pre-fitted with our high performance double or triple pass finned copper coil to maximise heat transfer, provide higher flow rates and reduce pressure drop from the heat pump.

Our Tank On Tank unit, the first introduced in the UK, combines a buffer vessel situated below the ECOflow cylinder. Where a buffer vessel is required on the system, the unit has only one footprint.

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Ready To Install

The ECOflow is supplied with all the necessary components required to install the unit, including a flexible hose connection and fixing bracket for the expansion vessel.

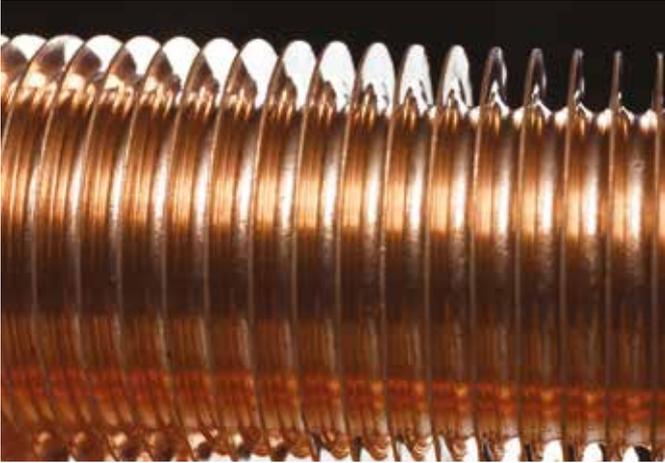
Compression fittings are fitted as standard on all the ECOflow cylinders to provide a quicker installation process.

The table opposite shows what components are included with your ECOflow cylinder, dependant on model.

COMPONENT	Cylinder Only	Tank on Tank
Pressure Reducing Valve Set at 2.1 Bar	●	●
Temperature and Pressure Relief Valve (Fitted)	●	●
Expansion Relief Valve (Fitted)	●	●
Tundish (Fitted)	●	●
Check Valve	●	●
3kW Immersion Heater - Back Up Heat Source (Fitted)	●	●
3kW Immersion Heater - Buffer Vessel (Optional - Fitted)		●
Expansion Vessel	●	●
High Limit Thermostat	●	●
Flexible Hose For Connection to Expansion Vessel	●	●

PROPERTY SIZE	MODEL SIZE
1 bedroom + bath/shower	75/120
2 bedroom + bath/shower	150
3 bedroom + bath/shower	180
4 bedroom + bath/shower	210/250
Larger Properties	300+

Other sizes and capacities readily available on request.



How To Specify

As a general principal, when sizing the cylinder, each occupant of the property will require between 35 and 45 litres of hot water per day.

When specifying a solar cylinder, take in to consideration the availability of the solar thermal input and appropriate dedicated solar volume required. Also, do you require a tank on tank model with integral buffer tank or cylinder only model.

Why Copper For Heat Pumps?

Maximising the lower temperatures from the heat pump to heat the cylinder is critical.

The integron finned copper coil used in our cylinders provides the best heat transfer possible, hugely exceeding the performance of the stainless steel alternative.

Combined with the unique header design, the double and triple pass coil configuration provides;

- High flow rates
- Low pressure drop
- Maximum heat transfer



Heat Pump Models

The ECOflow heat pump unvented hot water cylinder is designed to heat the store with either air source or ground source heat pumps.

Utilising the double or triple pass high efficiency copper finned coil, provides a high heat transfer and higher flow rates from the heat pump, enabling the fastest reheat possible of the cylinder. All units are also supplied with an electric immersion heater to raise the store temperature to 60 degrees.

The ECOflow Heat Pump cylinders are standard (shown below) or bespoke manufactured to the specific installation requirements, whether slimline models, change of tapping positions or increasing coil surface area, providing the ultimate unvented hot water solution.



KEY BENEFITS

- Bespoke design to suit installation space
- Models ranging from 75 litres and 400mm diameter
- Copper finned coils for maximum heat transfer
- Unique heat pump coil design to reduce pressure drop
- High density pouring foam insulation for low heat loss
- Tank on tank configuration with buffer available
- Factory fitted discharge valves and pipework

All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 22mm Flow & Return Heat Pump connections
- 3kW Immersion Heater (inc. thermostat) Fitted
- Secondary return as standard

COMPONENTS

- | | |
|--|---------------------------------|
| 1. Hot Draw | 6. Discharge Tundish |
| 2. Cold Feed (with spreader pipe) | 7. Drain |
| 3. Secondary Return | 8. Heat Pump Coil Flow & Return |
| 4. Expansion Relief Valve | 9. Immersion |
| 5. Pressure & Temperature Relief Valve | 10. High Limit Stat |
| | 11. 10mm Probe Pocket |

STORAGE CAPACITY	180	210	250	300
ERP Class	C	C	C	C
Standing Heat Loss (watts)	59	63	68	75
Height	1350	1550	1850	1850
Diameter	550	550	550	600
HP Coil Surface Area	2 or 3 sqm	3 sqm	3 sqm	3 sqm
HP Coil Pressure Loss	0.045 or 0.035 bar	0.035 bar	0.035 bar	0.035 bar

Sizes shown above are indicative only and include 50mm insulation. Other sizes are available to suit the installation requirements.

CYLINDERS AVAILABLE FROM 75 LITRES

SLIMLINE MODELS AVAILABLE FROM 400MM DIAMETER



Heat Pump Solar Models

The ECOflow Heat Pump Solar unvented hot water cylinder is designed to heat the store with solar thermal input in addition to either air source or ground source heat pumps.

Utilising the double or triple pass high efficiency copper finned coil, provides a high heat transfer and higher flow rates from the heat pump, enabling the fastest reheat possible of the cylinder. All units are also supplied with a copper finned solar coil and an electric immersion heater to raise the store temperature to 60 degrees.

The ECOflow Heat Pump cylinders are standard (shown below) or bespoke manufactured to the specific installation requirements, whether slimline models, change of tapping positions or increasing coil surface area, providing the ultimate unvented hot water solution.



KEY BENEFITS

- Bespoke design to suit installation space
- Models ranging from 75 litres and 400mm diameter
- Copper finned coils for maximum heat transfer
- Unique heat pump coil design to reduce pressure drop
- High density pouring foam insulation for low heat loss
- Tank on tank configuration with buffer available
- Factory fitted discharge valves and pipework

All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 22mm Flow & Return Heat Pump connections
- 22mm Flow & Return Solar connections
- 3kW Immersion Heater (inc. thermostat) Fitted
- Secondary return as standard

COMPONENTS

- | | |
|--|----------------------------------|
| 1. Hot Draw | 7. Drain |
| 2. Cold Feed (with spreader pipe) | 8. Solar Coil Flow & Return |
| 3. Secondary Return | 9. 10mm Solar Probe Pocket |
| 4. Expansion Relief Valve | 10. Heat Pump Coil Flow & Return |
| 5. Pressure & Temperature Relief Valve | 11. Immersion |
| 6. Discharge Tundish | 12. High Limit Stat |
| | 13. 10mm Heat Pump Probe Pocket |

STORAGE CAPACITY	180	210	250	300
ERP Class	C	C	C	C
Standing Heat Loss (watts)	59	63	68	75
Height	1350	1550	1850	1850
Diameter	550	550	550	600
HP Coil Surface Area	2	2	3	3
Solar Coil Surface Area	1.2	1.2	1.5	1.5
HP Coil Pressure Loss	0.045 bar	0.045 bar	0.035 bar	0.035 bar

Sizes shown above are indicative only and include 50mm insulation. Other sizes are available to suit the installation requirements.

CYLINDERS AVAILABLE FROM 75 LITRES

SLIMLINE MODELS AVAILABLE FROM 400MM DIAMETER

Tank on Tank Models

The ECOflow Heat Pump or Heat Pump Solar unvented hot water cylinders are also available with an incorporated buffer store as a tank on tank configuration.

A heat pump system is designed to work continuously and cycle (turn on and off) as little as possible, heating the store and also providing heat to the building to keep up to temperature.

The buffer tank provides extra volume for the heating system. This allows the heat pump to work longer but less often, reducing cycling and increasing the efficiency.

As with ECOflow products, the buffer tanks are bespoke manufactured to the specific installation requirements, and can be added to any of the ECOflow range, either standard diameter or slimline models, providing the ultimate unvented hot water solution.



BUFFER STORE COMPONENTS

- | | |
|----------------------------|--------------------------------|
| 1. Heat Pump Flow & Return | 3. Immersion Heater (Optional) |
| 2. Heating Flow & Return | 4. Thermostat Pocket |

ADDITIONAL BENEFITS OF TANK ON TANKS

- Increases the heating system volume
- Reduces cycling of the heat pump
- Copper finned coils for maximum heat transfer
- Unique heat pump coil design to reduce pressure drop
- High density pouring foam insulation for low heat loss

All Tank on Tanks to Following Specification:

- 22mm Flow & Return Heat Pump connections
- 22mm Flow & Return Solar connections
- 3kW Immersion Heater (inc. thermostat) Optional
- Thermostat

**BUFFER STORES PROVIDE
THE EXPANSION OF THE
HEATING SYSTEM TO
IMPROVE HEAT PUMP
EFFICIENCY**



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