

**POWERFLOW**

BESPOKE RANGE OF  
UNVENTED HOT WATER CYLINDERS



**McDonald**  
**Water Storage**

Hot Water Storage Solutions

The POWERflow copper unvented hot water cylinder range provides fantastic benefits with the use of copper providing the most efficient heat transfer not only in standard units but also bespoke units, tailored to your size and requirements.

The POWERflow 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 **POWERflow** Unvented Cylinder

- Unique bespoke design flexibility to provide an unvented solution to suit any installation requirement
- Direct, Indirect and Solar models
- Compression fittings as standard for ease of installation
- External expansion for ease of servicing
- Premium grade copper providing superior performance
- Proven reliability with 25 year guarantee
- Being copper provides complete peace of mind, killing 99% of bacteria
- Standard operating pressure of 2.1 bar, with optional 1.5 or 3.0 bar
- Available with white case and high density pouring foam insulation or spray foam insulation (50mm or 100mm)

## WHY POWERFLOW

The bespoke design flexibility of the POWERflow range overcomes the restrictions of its stainless steel alternative. 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.

Manufactured from premium grade copper, our POWERflow unvented hot water system delivers unrivalled performance thanks, in part, to copper's superior thermal transfer properties.

One of our key advantages is the efficient heat transfer of the standard boiler coils and finned copper coil which we incorporate in the POWERflow solar cylinder, ensuring faster reheat times, improving efficiency and reducing ongoing costs.

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## Ready To Install

The POWERflow 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 supplied fitted on all the POWERflow cylinders to provide a quicker installation process.

The table opposite shows what is included with your POWERflow cylinder, dependant on model.

COMPONENT	Direct	Indirect	Direct Solar	Indirect Solar
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 - Primary Heat Source (Fitted)	●		●	
3kW Immersion Heater - Back Up Heat Source (Fitted)	●	●	●	●
Expansion Vessel	●	●	●	●
Dual Control and Overheat Thermostat		●		●
Two Port Motorised Zone Valve		●		●
Flexible Hose For Connection to Expansion Vessel	●	●	●	●

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

The table opposite provides a guideline to the cylinder size required. When specifying a solar cylinder, take in to consideration the availability of the solar thermal input and appropriate dedicated solar volume required.

## Why Choose Copper?

We are all aware that manufacturing cylinders from copper provides the best heat transfer and lifespan, exceeding that of the stainless steel alternative.

However another major benefit is the flexibility of being able to bespoke manufacture the cylinder to suit the individual installation requirements.

No reason to settle for standard - Tell us what you need!



## Direct Models

The POWERflow Direct unvented hot water cylinder is designed to heat the store solely via the electric immersion heaters.

They heat up quickly via the 3kW immersions and retain the temperature for a long period, with extra kW input if required. Each cylinder also features a backup 3kW immersion heater that can act as a boost.

The POWERflow provide excellent low heat loss, benefitting SAP ratings and lowering running costs.

The POWERflow Direct is bespoke manufactured to the specific installation requirements (indicative sizes shown below), whether slimline models or change of tapping positions, providing the ultimate unvented hot water solution.



### COMPONENTS

- |  |                          |
|--|--------------------------|
| 1. Hot Draw                            | 6. Discharge Tundish     |
| 2. Cold Feed (with spreader pipe)      | 7. Drain                 |
| 3. Secondary Return*                   | 8. Immersion (Off Peak)  |
| 4. Expansion Relief Valve              | 9. Immersion (On Peak)** |
| 5. Pressure & Temperature Relief Valve |                          |

\* Optional up to 180L capacity \*\* Optional up to 150L capacity

### KEY BENEFITS

- Bespoke design to suit any installation space
- Maximises the benefit of off-peak electricity supply
- High density pouring foam insulation for low heat loss
- Models from 75 litres and diameters from 400mm
- Factory fitted discharge valves and pipework
- Standard operating pressure of 2.1 bar, with 1.5 or 3.0 bar options

### All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 3kW Immersion Heaters (inc. thermostats) Fitted
- Secondary return on 180 litre and above as standard
- Second immersion on 150 litre and above as standard

STORAGE CAPACITY	75	120	150	180	210	250	300
ERP Class	C	C	C	C	C	C	C
Standing Heat Loss (watts)	41	49	55	59	65	72	80
Height	950	950	1150	1350	1550	1550	1850
Diameter	450	550	550	550	550	600	600

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

## Indirect Models

The POWERflow Indirect unvented hot water cylinder is designed to heat the store with gas or oil boilers, either sealed system or open vented.

Utilising the high efficiency copper coil with high heat transfer provides the fastest reheat possible of the cylinder. All units are also supplied with a back-up electric immersion heater.

The POWERflow provide excellent low heat loss, benefitting SAP ratings and lowering running costs.

The POWERflow Indirect is available in standard sizes (shown below) or bespoke manufactured to the specific installation requirements, whether slimline models or change of tapping positions, providing the ultimate unvented hot water solution.



### COMPONENTS

- |  |                              |
|--|------------------------------|
| 1. Hot Draw                            | 6. Discharge Tundish         |
| 2. Cold Feed (with spreader pipe)      | 7. Drain                     |
| 3. Secondary Return*                   | 8. Boiler Coil Flow & Return |
| 4. Expansion Relief Valve              | 9. Immersion                 |
| 5. Pressure & Temperature Relief Valve | 10. Dual Stat                |

\* Optional up to 180L capacity

### KEY BENEFITS

- Bespoke design to suit any installation space
- Copper coils for maximum heat transfer
- High density pouring foam insulation for low heat loss
- Models from 75 litres and diameters from 400mm
- Factory fitted discharge valves and pipework
- Standard operating pressure of 2.1 bar, with 1.5 or 3.0 bar options

### All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 22mm Flow & Return Boiler connections
- 3kW Immersion Heater (inc. thermostat) Fitted
- Secondary return on 180 litre and above as standard

STORAGE CAPACITY	75	120	150	180	210	250	300
ERP Class	B	B	B	C	C	C	C
Standing Heat Loss (watts)	41	49	55	59	65	72	80
Height	950	950	1150	1350	1550	1550	1850
Diameter	450	550	550	550	550	600	600

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

## Direct Solar Models

The POWERflow Direct Solar unvented hot water cylinder is designed to heat the store with solar thermal input in addition to a 3kW immersion heater.

Utilising the high efficiency copper finned solar coil providing high heat transfer and with 3kW immersion heaters providing the fastest reheat possible of the cylinder.

The POWERflow provide excellent low heat loss, benefitting SAP ratings and lowering running costs.

The POWERflow Direct Solar is available in standard sizes (shown below) or bespoke manufactured to the specific installation requirements, whether slimline models, change of tapping positions or the dedicated solar volume, providing the ultimate unvented hot water solution.



### 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. Immersion               |
| 5. Pressure & Temperature Relief Valve | 11. High Limit Stat - Solar |
| 6. Discharge Tundish                   |                             |

\* Optional up to 180L capacity

### KEY BENEFITS

- Bespoke design to suit any installation space
- Copper finned solar coils for maximum heat transfer
- Maximises the benefit of off-peak electricity supply
- High density pouring foam insulation for low heat loss
- Models from 75 litres and diameters from 400mm
- Factory fitted discharge valves and pipework
- Standard operating pressure of 2.1 bar, with 1.5 or 3.0 bar options

### All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 22mm Flow & Return Boiler connections
- 22mm Flow & Return Solar connections
- 3kW Immersion Heaters (inc. thermostats) Fitted
- Secondary return on 180 litre and above as standard

STORAGE CAPACITY	75	120	150	180	210	250	300
ERP Class	B	B	B	C	C	C	C
Standing Heat Loss (watts)	41	49	55	59	65	72	80
Height	950	950	1150	1350	1550	1550	1850
Diameter	450	550	550	550	550	600	600

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

## Indirect Solar Models

The POWERflow Indirect Solar unvented hot water cylinder is designed to heat the store with solar thermal input in addition to gas or oil boilers, either sealed system or open vented.

Utilising the high efficiency copper coil in conjunction with a finned solar coil, both providing high heat transfer provides the fastest reheat possible of the cylinder from both the boiler or solar inputs. All units are also supplied with a back-up electric immersion heater.

The POWERflow provide excellent low heat loss, benefitting SAP ratings and lowering running costs.

The POWERflow Indirect Solar is available in standard sizes (shown below) or bespoke manufactured to the specific installation requirements, whether slimline models or change of tapping positions or the dedicated solar volume, providing the ultimate unvented hot water solution.



### 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. Boiler Coil Flow & Return |
| 5. Pressure & Temperature Relief Valve | 11. Immersion                 |
| 6. Discharge Tundish                   | 12. High Limit Stat - Solar   |
|  | 13. Dual Stat                 |

\* Optional up to 180L capacity

### KEY BENEFITS

- Bespoke design to suit any installation space
- Copper finned solar coils for maximum heat transfer
- High density pouring foam insulation for low heat loss
- Models from 75 litres and diameters from 400mm
- Factory fitted discharge valves and pipework
- Standard operating pressure of 2.1 bar, with 1.5 or 3.0 bar options

### All Units to Following Specification:

- 22mm Hot Water and Cold Feed connections
- 22mm Flow & Return Boiler connections
- 22mm Flow & Return Solar connections
- 3kW Immersion Heater (inc. thermostat) Fitted
- Secondary return on 180 litre and above as standard

STORAGE CAPACITY	75	120	150	180	210	250	300
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Height	950	950	1150	1350	1550	1550	1850
Diameter	450	550	550	550	550	600	600

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