

# COPPER HOT WATER CYLINDERS

**SOLAR & HEAT PUMP  
UNITS AVAILABLE**



**UNCOMPLICATED QUALITY & VALUE**



**MCDONALD ENGINEERS**  
HOT WATER SYSTEMS

# COPPER HOT WATER CYLINDERS

McDonald Engineers are the UK's most experienced manufacturer of Copper Hot Water Cylinders. We manufacture a wide range of products - Vented, Unvented, Thermal Stores, Calorifiers, Plumbing Units, Solar Cylinders, Heat Pump Cylinders, Back Boilers, etc. A large part of production is tailor made cylinders to customer requirements.

We use Copper as it has been used for millenia! It's resilient, recyclable and extremely healthy. It does not harbour microbiological growth such as Legionella and E-Coli. Copper is still the best choice for hot water storage!

**Contact McDonald Engineers with any Hot Water Storage requirements.**

## WHY CHOOSE McDONALD ENGINEERS

- Experienced technical advice
- UK's most experienced cylinder manufacturer
- Excellent service
- Highest quality products
- After sales back-up

## THE ADVANTAGES OF COPPER

- Tried and tested material
- Healthy, safe and kills germs
- Long-lasting
- Sustainable - 100% recyclable, which benefits the environment

# STANDARD INDIRECT & DIRECT CYLINDERS

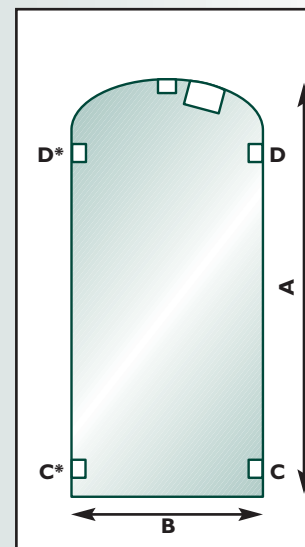
BS 1566:1:2002

Available in Grades - **1** -25 metres (82 feet) maximum working head  
**2** -15 metres (49 feet) maximum working head  
**3** -10 metres (33 feet) maximum working head

B.S. Ref.	Size (mm) (A) x (B)	Size (inches) (A) x (B)	Capacity Ltrs	Height from ground of Screwed Connections		
				D	C&E	F
1	900 x 350	36 x 14	72	700	100	400
2	900 x 400	36 x 16	96	700	100	400
3	1050 x 400	42 x 16	114	800	100	470
4	675 x 450	27 x 18	84	450	100	300
5	750 x 450	30 x 18	95	550	100	340
6	825 x 450	33 x 18	106	625	100	370
7	900 x 450	36 x 18	117	700	100	400
8	1050 x 450	42 x 18	140	800	100	470
9	1200 x 450	48 x 18	162	950	100	540
9E	1500 x 450	60 x 18	206	1200	100	620
10	1200 x 500	48 x 20	190	950	150	540
11	1500 x 500	60 x 20	245	1200	150	670
12	1200 x 600	48 x 24	280	950	150	540
13	1500 x 600	60 x 24	360	1200	150	670
14	1800 x 600	72 x 24	440	1350	150	800

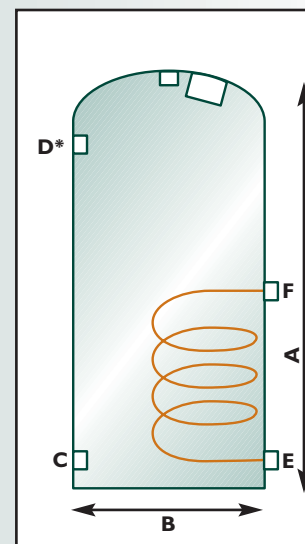
The coil heat exchangers are designed for reheat time to 60°C (140°F) in 20 minutes if by pumped circulation and 1 hour, if by gravity circulation at 82°C (180°F).

**NB** Dimensions do not include the insulation.



### DIRECT CYLINDERS

BS 1566:1:2002  
 4-9E only  
 Grades 2 & 3  
 C = Cold Feed  
 D = Secondary Returns or Back Boiler Connection



### INDIRECT CYLINDERS

BS 1566:1:2002  
 4-9E only  
 Grades 2 & 3  
 C = Cold Feed  
 D = Secondary Returns or Back Boiler Connection  
 E = Coil Return  
 F = Coil Flow

\*Optional

# TECHNICAL HELPLINE 01592 611123

## POWERflow 2000

### Invented Mains Pressure System

'POWERflow 2000' - providing Unvented Mains Pressure Hot Water.

See our 'POWERflow 2000' brochure for details.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Capacity	Sizes
75 litres	925 x 450 mm
120 litres	925 x 550 mm
150 litres	1125 x 550 mm
180 litres	1325 x 550 mm
210 litres	1525 x 550 mm
250 litres	1525 x 600 mm
300 litres	1825 x 600 mm

SIZE INCLUDES INSULATION

## THERMflow

### Thermal Storage System

For 'Vented' Mains Pressure Hot Water

See our 'THERMflow' brochure for details.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Model	Combination Unit	Cylinder Unit
120	1130 x 550 mm	900 x 550 mm
140	1250 x 550 mm	1050 x 550 mm
180	1500 x 550 mm	1300 x 550 mm
210	1500 x 550 mm	1500 x 550 mm
250	1700 x 600 mm	1500 x 600 mm
300	2050 x 600 mm	1800 x 600 mm

SIZE INCLUDES INSULATION

## CALORIFIERS

### For Industrial and Commercial Use

Manufactured in accordance with BS 853 from copper. Quotations on request. Delivery often within one week.

See our 'CALORIFIER' brochure for details.

PLATEflow combined buffer vessel and PHE also now available.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Sizes	Capacity
1800 x 675 mm	600 litres
2150 x 675 mm	700 litres
1950 x 750 mm	800 litres
2200 x 750 mm	900 litres
2400 x 750 mm	1000 litres
1750 x 900 mm	1000 litres
2175 x 900 mm	1250 litres
2400 x 900 mm	1400 litres
2300 x 1050 mm	1800 litres
1950 x 1200 mm	2000 litres
2250 x 1200 mm	2300 litres
2450 x 1200 mm	2500 litres

## COMBINATION CYLINDERS

### Compact & Convenient

Available in direct pattern, double feed indirect and "MACMATIC" single feed indirect.

An integral primary feed and expansion tank may be fitted to the indirect if required.

MANUFACTURED TO BS 3198.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Height x Diameter	Capacity Hot / Cold
750 x 450 mm	65 litres / 20 litres
900 x 450 mm	85 litres / 20 litres
1050 x 450 mm	110 litres / 20 litres
1200 x 450 mm	135 litres / 20 litres
1400 x 450 mm To Maxistore 7 spec	144 litres / 40 litres
1850 x 450 mm To Maxistore 7 spec	210 litres / 40 litres

## "MAXISTORE 7"

### To suit 'Off Peak' Electric Heating

MAXISTORE 7 specification cylinders are available in direct or indirect pattern, in all grades and sizes, with the main range being Kitemarked. They feature as standard cold feed baffles, 2 side entry immersion heater bosses, double thickness insulation.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Sizes	Capacity
900 x 450 mm	120 litres
1050 x 450 mm	144 litres
1200 x 450 mm	166 litres
1500 x 450 mm	210 litres
1400 x 450 mm combination	40/144 litres
1850 x 450 mm combination	40/210 litres

## TIMEsaver

### Plumbing Units

The 'TIMEsaver' all in one plumbing unit is quick and easy to install. See our 'TIMEsaver' brochure for details.

Option of fitted pump to provide 'Mains' Pressure.

ALTERNATIVE SIZES CAN BE MADE ON REQUEST.



#### STANDARD UNITS

Size	Capacity
2050 x 590 x 590 mm	227/120 litres
2050 x 590 x 590 mm	227/144 litres
2050 x 590 x 590 mm	227/170 litres
2050 x 650 x 650 mm	227/210 litres

## ELECTRAflow Electric Wet Central Heating

Allows electricity to provide heat for normal 'wet' radiators and hot water.

ALTERNATIVE SIZES  
CAN BE MADE  
ON REQUEST.



### STANDARD UNITS

Heating Load 3-12kW

Dimensions 3-9kW Heating*	Capacity
1300 x 550 mm	120 litres
1500 x 550 mm	150 litres
1700 x 550 mm	180 litres
1900 x 550 mm	210 litres

\* add 100mm for 12kW Heating  
Dimensions include insulation

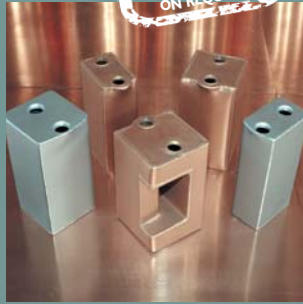
## BACK BOILERS Copper and Stainless Steel

Available in most sizes as block or arch-flue.

When ordering or enquiring please quote sizes as:

Length x Breadth x Height, and specify quantity and location of the tappings.

ALTERNATIVE SIZES  
CAN BE MADE  
ON REQUEST.



### STANDARD UNITS

12 x 4 x 5"
12 x 4 x 6"
12 x 5 x 6"
12 x 6 x 6"
12 x 6 x 8" Arch Flue
11 x 6 1/2 x 6 1/2" Junior Quick Heat

## MACMATICS

No primary feed and expansion tank required.

Single feed indirect copper cylinders, available in Grades 2 and 3, and Combination. Manufactured in various sizes to BS 1566 : 1984.

Suitable for a primary heating capacity of up to 110 litres.

ALTERNATIVE SIZES  
CAN BE MADE  
ON REQUEST.



### STANDARD UNITS

Height x Diameter	Minimum Capacity
675 x 450 mm	75 litres
750 x 450 mm	86 litres
900 x 450 mm	108 litres
1050 x 450 mm	130 litres
1200 x 450 mm	152 litres
950 x 625 x 300 mm Twin	114 litres

## TWIN CYLINDERS

Built for narrow spaces

Available in Grades 1 and 2 in direct pattern, double feed indirect, and MACMATIC single feed indirect.

The table shows the standard "TWINS".

ALTERNATIVE SIZES  
CAN BE MADE  
ON REQUEST.



### STANDARD SIZES

Height x Width x Depth	Minimum Capacity
900 x 580 x 280 mm	95 litres
1040 x 580 x 280 mm	114 litres
1190 x 580 x 280 mm	136 litres
1350 x 580 x 280 mm	159 litres
950 x 625 x 300 mm MACMATIC	114 litres

Dimensions do not include insulation.

## SOLAR AND HEAT PUMPS

Cylinders for renewables

A wide range of our products can be adapted for solar or heat pump input. SOLARsave pre-plumberd units also available.

ALTERNATIVE SIZES  
CAN BE MADE  
ON REQUEST.



SOLAR  
TRADE  
ASSOCIATION

### OPTIONS - Please ask us for any requirements you have.

Although we stock a considerable range of finished products, a large part of our production is manufacturing to our customer's own specifications. Some of the options are as follows:

- **Size to suit.** We can manufacture cylinders in the following diameters (before insulation): 200, 280, 300, 350, 375, 400, 450, 500, 600, 675, 750 mm and upwards in Calorifier sizes. You choose the height and diameter that most suits the installation.
- **Connections positioned to customer requirements,** to make installation easy in awkward spaces.
- **Extra connections** for secondary returns, extra immersion heaters, shower draw off, etc. Compression connections also available.
- **Extra factory applied insulation** for less heat loss and greater energy savings.
- **Horizontal cylinders** for installations where there is insufficient height for a vertical cylinder. Steel cradles available on request.



**McDONALD ENGINEERS  
HOT WATER SYSTEMS**

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