



Copper Hot Water Products



*Total Hot Water Solutions*



# selection guide

Copperform Ltd is part of the Kingspan Hot Water Systems Group of companies, and manufactures a variety of water heating products. Mainly domestic and industrial hot water cylinders in Direct, Indirect and Combination versions.

They are all built to the highest possible standards with a focus on being environmentally friendly. This is part of the philosophy on which the group has grown, and it forms the basis of our mission statement for the future.

This information is a general guide for selecting the correct size of cylinder for use in domestic applications. If you are in any doubt or have a more specialist application such as a nursing home, sports centre or youth hostel, please ring us

The following are two main factors to take into account:

- The storage volume required to meet peak demand.  
Typical hot water demand (litres of water at 60°C)
  - Standard bath           60 litres
  - Corner bath            120 litres
  - Shower                   30 litres
  - Power shower         60 litres
  - Wash basins           60 litres
  - Kitchen sink           60 litres
- How quickly can the energy source heat the water.

With gas or oil boilers, fast recovery cylinders such as Ultracoil can help you to achieve quicker reheats and reduce the amount of water that needs to be stored.

When off peak electricity (Economy 7/10) is used for water heating, it is most economical to heat the total contents of the cylinder overnight. This reduces the need to use immersion heater boost periods during the day when electricity is more expensive.

Economy Seven cylinders, which meet the Maxistore specifications are recommended for all electric applications.



# selection guide



**Standard Indirect**

**Ultracoil**

**Combi Unit**

**E7 Direct**

**Stored hot water required (litres)**

1 Bedroom + Shower	60	60	65	120
1 Bedroom + Bath	80	80	85	144
2 Bedrooms + Standard Bath	100	80	115	144
1/2 Bedrooms + Corner Bath	140	120	140	210
3 Bedrooms + Standard Bath	120	100	115	210
3/4 Bedrooms + Bath + Ensuite	140	120	140	210
3/4 Bedrooms + Corner Bath	160	140	206	210
4 Bedrooms + Corner Bath + Ensuite	200	160	206	245
2/3 Bedrooms + 2 Baths	200	160	206	245
4/5 Bedrooms + 2 Baths	245	210	206	290



# a guide to storage capacities



## direct cylinders capacities - litres (less 2.5% for indirects)

height		diameter					
inches	mm	12" 300mm	14" 350mm	15" 375mm	16" 400mm	18" 450mm	20" 500mm
24	600	32	-	-	-	-	-
27	675	37	55	64	69	86	-
30	750	46	64	69	78	98	-
33	825	51	69	78	86	109	-
36	900	55	74	86	98	120	151
39	975	60	83	98	106	133	166
42	1050	64	92	98	116	144	179
44	1125	69	98	109	124	156	193
48	1200	74	98	120	133	166	200
54	1350	83	116	133	151	193	235
56	1425	92	124	143	161	207	248
59	1500	98	133	152	166	210	255
62	1575	98	138	156	179	230	281
65	1650	106	144	166	189	239	294
68	1725	109	151	175	198	253	308
71	1800	116	161	184	207	267	322

## standard combination copper cylinders

height (A) mm	diameter (B) mm	capacity hot (litres)	capacity hot (gals)	capacity cold (litres)	capacity cold (gals)
750	450	60	13	20	4
900	450	85	19	20	4
1075	450	115	24	20	4
1200	450	120	26	40	9
1400	450	145	32	40	9
1850	450	210	46	40	9
1200	450	145	32	45	10

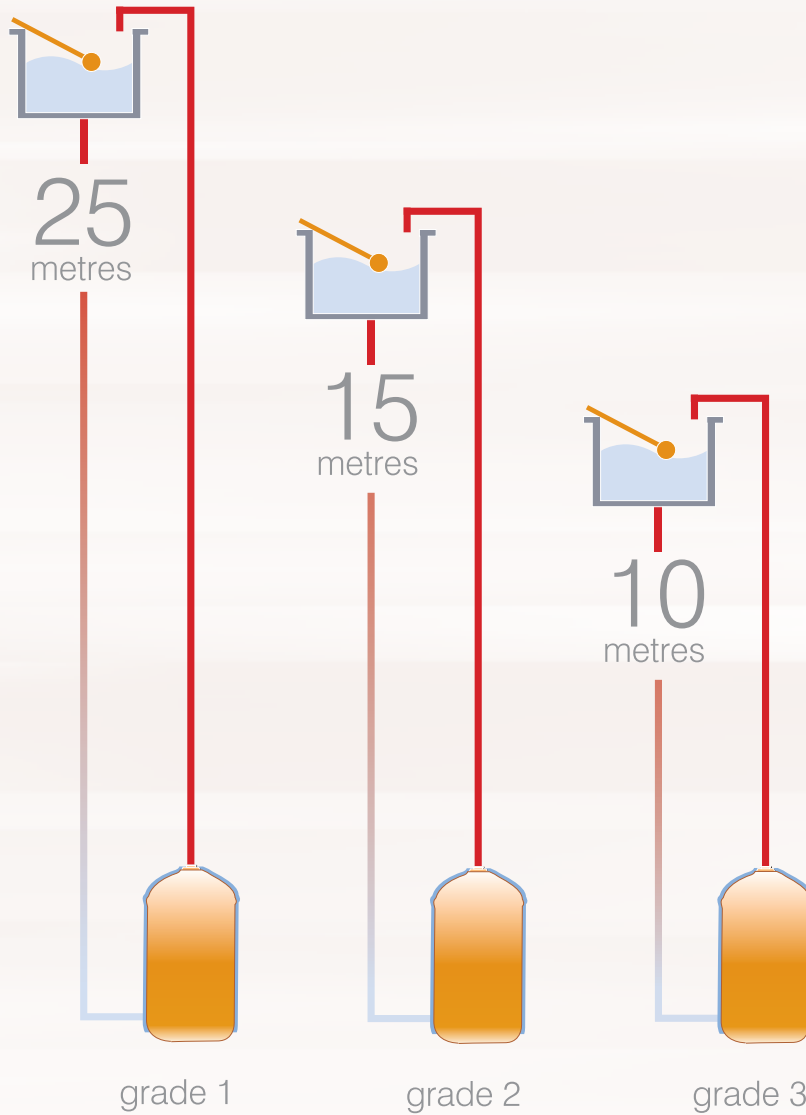
## direct cylinders capacities - gallons (less 2.5% for indirects)

height		diameter					
inches	mm	12" 300mm	14" 350mm	15" 375mm	16" 400mm	18" 450mm	20" 500mm
24	600	7	-	-	-	-	-
27	675	8	12	14	15	19	-
30	750	10	14	15	17	22	-
33	825	11	15	17	19	24	-
36	900	12	16	19	21	26	33
39	975	13	18	21	23	29	36
42	1050	14	20	22	25	32	39
44	1125	15	21	24	27	34	42
48	1200	16	22	26	29	37	44
54	1350	18	25	29	33	42	51
56	1425	20	27	31	35	45	54
59	1500	21	29	33	37	47	56
62	1575	22	30	34	39	50	61
65	1650	23	32	36	41	52	64
68	1725	24	33	38	43	55	67
71	1800	25	35	40	45	58	70

## useful conversions

**Litres to Gallons:** Multiply by 0.22  
**Gallons to Litres:** Multiply by 4.546

# working heads



<b>Test Pressure</b>	3.65 Bar / 53 P.S.I.	2.20 Bar / 32 P.S.I.	1.45 Bar / 21 P.S.I.
<b>Working Pressure</b>	2.5 Bar / 36 P.S.I.	1.5 Bar / 22 P.S.I.	1.0 Bar / 14.5 P.S.I.

# standard indirect cylinders

20 minute recovery (approx) on a fully pumped system

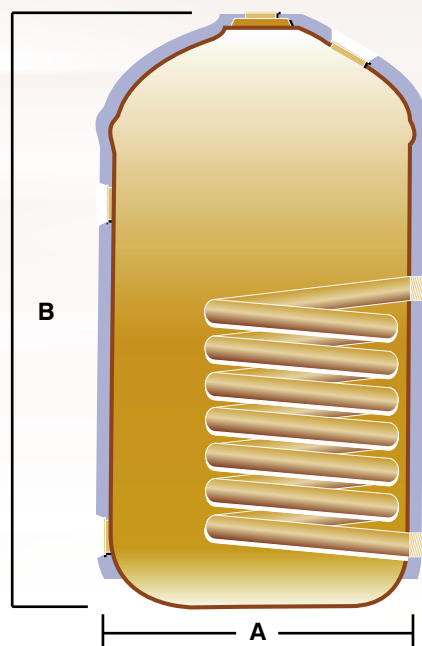


BS 1566:2002  
where applicable  
(part L compliant)

## features and benefits

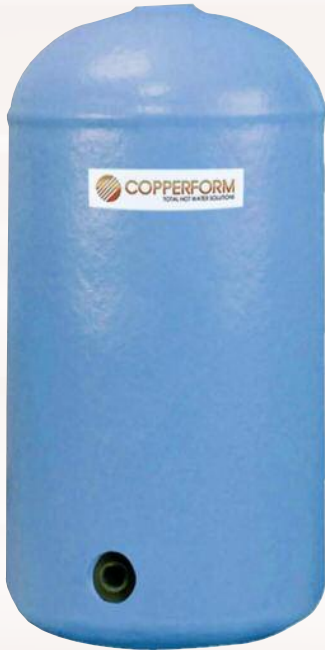
- Available in plain or foam lagged.
- Grades 1, 2 & 3.
- A full range of sizes available.
- For use in conjunction with a central heating system.
- Optional High Recovery coil types available.
- Immersion heater bosses fitted for potential electrical use.
- A variety of coil types available, eg. Cross Flow and Stretch Coils.
- Extra tapings and immersion heater bosses can be fitted dependent on individual requirements.
- Available with compression fittings.
- Available with a double thickness of CFC free foam lagging which adds approximately 100mm to the cylinder diameter.

BS ref	ext. dia (A) mm	ext. ht (B) mm	capacity litres	heating surface m <sup>2</sup>
0	300	1600	96	0.42
1	350	900	72	0.31
2	400	900	96	0.42
3	400	1050	114	0.50
4	450	675	84	0.37
5	450	750	95	0.48
6	450	825	106	0.53
7	450	900	117	0.61
8	450	1050	140	0.70
9	450	1200	162	0.79
9E	450	1500	206	0.96
10	500	1200	190	0.88
11	500	1500	245	1.10
12	600	1200	280	1.18
13	600	1500	360	1.57
14	600	1800	440	1.97



- Height stated for primary flow connection (M) is a minimum measurement and may vary.
- If the cylinder is to be used on a gravity circulation primary circuit it is recommended that the height of the primary flow connection above datum should be larger.

# standard direct cylinders

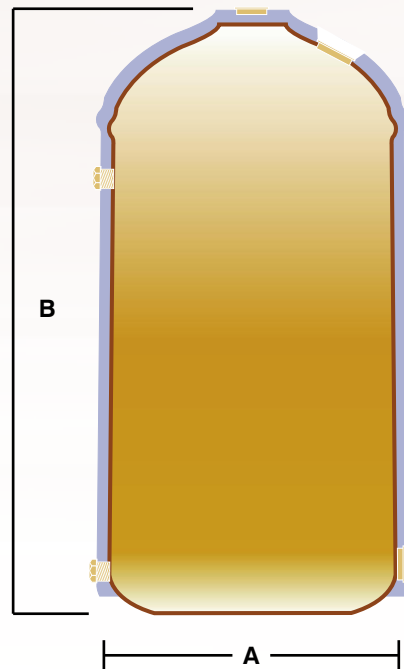


BS 1566:2002  
where applicable  
(part L compliant)

## features and benefits

- Available in plain or foam lagged.
- Grades 1, 2 & 3.
- A full range of sizes available.
- For use in conjunction with an electric immersion heater.
- Can also be heated by a back boiler.
- Extra tapings and immersion heater bosses can be fitted dependent on individual requirements.
- Available with compression fittings.

BS ref	ext. dia	ext. ht	capacity
	(A) mm	(B) mm	
0	300	1600	98
1	350	900	74
2	400	900	98
3	400	1050	116
4	450	675	86
5	450	750	98
6	450	825	109
7	450	900	120
8	450	1050	144
9	450	1200	166
9E	450	1500	210
10	500	1200	200
11	500	1500	255
12	600	1200	290
13	600	1500	370
14	600	1800	450



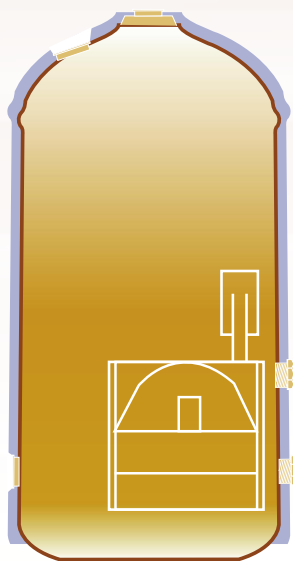
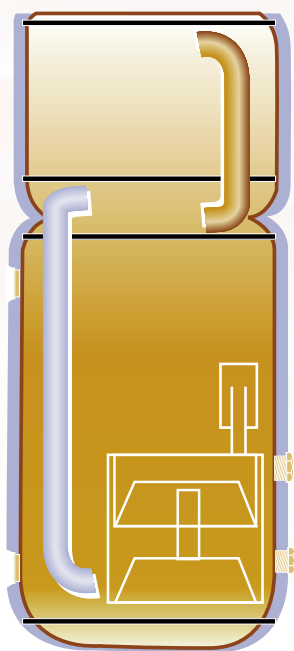
# self-priming cylinders & combination units



## features and benefits

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- Available in plain or foam lagged.
- Cylinders are available in Grades 2 & 3.
- A full range of sizes available.
- Extra tapings and immersion heater bosses can be fitted dependent on individual requirements.
- Eliminates the need for a separate feed and expansion tank.
- Reduces installation costs.
- Available with compression fittings.
- For use in conjunction with a central heating system.
- Not suitable for fully pumped systems and systems where there is an uncontrollable heat source.





# twin coiled cylinders

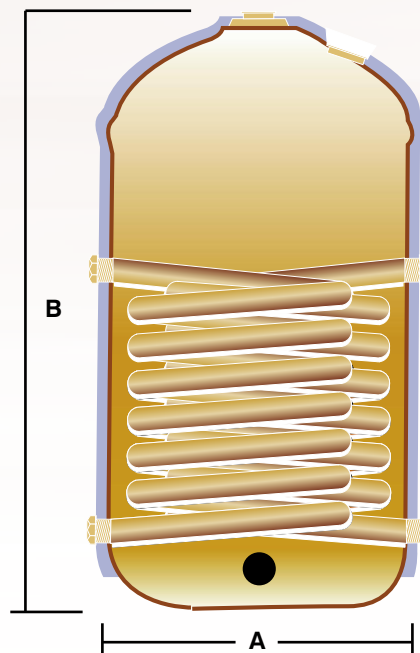


Twin coiled cylinders are for use where **two heat sources** are available; eg. solid fuel (Aga) or Solar, as well as a conventional boiler.

## features and benefits

- Grades 1, 2 & 3.
- Available in plain or foam lagged.
- A full range of sizes available.
- Extra tappings and immersion heater bosses can be fitted dependent on individual requirements.
- Optional Higher Recovery coil types available.
- Coils can be fitted either opposite each other or stacked.
- Available with compression fittings.

ext. dia (A) mm	ext. ht (B) mm	heating surface mm
300	1600	0.42 x 2
350	900	0.31 x 2
400	900	0.42 x 2
400	1050	0.50 x 2
450	675	0.37 x 2
450	750	0.48 x 2
450	825	0.53 x 2
450	900	0.61 x 2
450	1050	0.70 x 2
450	1200	0.79 x 2
450	1500	0.96 x 2
500	1200	0.88 x 2
500	1500	1.10 x 2
600	1200	1.18 x 2
600	1500	1.57 x 2
600	1800	1.97 x 2



# superheat multicoil cylinders



## features and benefits

- The Superheat 45 and the Superheat 80 come complete with 4 x 22mm compression fittings and I.H. Boss.
- The larger tanks in the range have 4 x 28mm tappings as standard and I.H. Boss.
- All have a 15mm female probe stat facility.
- The Superheat range is designed for conventional fully pumped systems.
- Probe stat available on request.

## superheat 45 litre

- Rapid recovery.
- Small conventional cylinder.
- Fully Pumped System.
- Multi Coil Heat Exchanger.
- Extra space in airing cupboard.
- Replaces standard size cylinder.
- Saves on gas bills.
- Reduces boiler cycling.
- Maximum Boiler Efficiency.
- Will fill a standard bath.
- Works like an instantaneous hot water cylinder.
- It's recovering as its being used.
- Probe thermostat recommended for efficient boiler response.
- Foam insulated.
- Immersion heater available.
- 350mm diameter x 600mm ht. on Superheat 45 litre model.

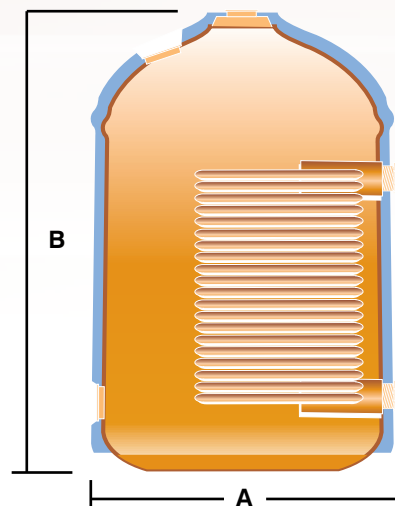
## specification

ext. dia (A) mm	ext. ht (B) mm	capacity litres
400	750	80
450	900	120
450	1050	140
450	1200	160
450	1390	180
450	1500	210

## recovery chart

Time in minutes to raise contents through 40°C

Boiler output	45	80	120	140	160	180	210
9kw	15	23	30	34	38	42	47
12kw	10	17	22	25	28	31	36
15kw	8	14	18	20	22	25	28
24kw	5	8	11	13	15	17	20



# direct & indirect combination units



BS 3198:1984  
 where applicable  
 (part L compliant)

**Eliminates** the need for a cold water storage tank and **removes the complication** of running pipes to and from the cold water system.

## features and benefits

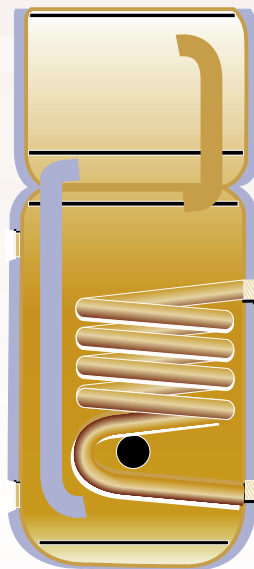
- British Standard or other sizes manufactured to suit individual requirements.
- Reduces installation costs.
- Suitable for properties without loft space; ie flats, bungalows and bedsits.
- Available in High Recovery and Twin Coil.
- Direct is for use with an immersion heater.
- Indirect to be used in conjunction with a Central Heating System.
- Available with compression fittings.
- 20 minute recovery (approx) on a fully pumped system.

## direct specifications

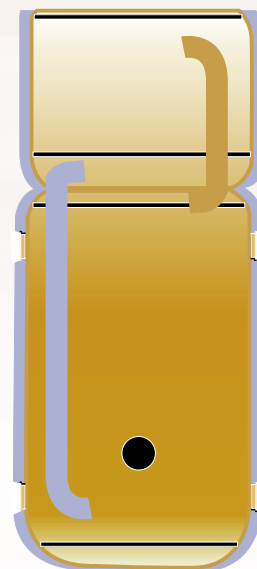
ext. ht mm	ext. dia mm	capacity (litres)	
		hot	cold
900	400	65	15
900	450	85	20
1075	450	115	20
1200	450	120	40
1400	450	144	40
1500	450	160	40
1850	450	210	40
900	500	115	20
1200	500	145	45
1700	500	115	160
1700	500	160	115
2050	500	115	228

## indirect specifications

ext. ht mm	ext. dia mm	capacity (litres)	
		hot	cold
900	400	65	15
900	450	85	20
1075	450	115	20
1200	450	120	40
1400	450	144	40
1500	450	160	40
1850	450	210	40
900	500	115	20
1200	500	145	45
1700	500	115	160
1700	500	160	115
2050	500	115	228



\*1/2" Drain Boss



\*1/2" Female Drain Boss

- If the indirect combination unit is to be used on a gravity circulation primary circuit it is recommended that the height of the primary flow connection above datum should be larger.

# direct maxistore combination units



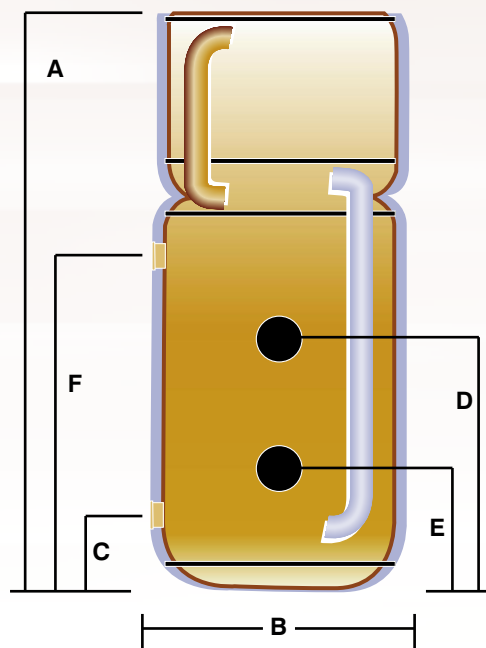
BS 3198:1981  
where applicable



## features and benefits

- Baffle plate fitted over cold feed to minimise mixing of hot and cold water.
- Foam insulated 'double thickness' to minimise heat loss.
- Used in conjunction with low tariff electricity.
- 2 Side entry immersion heater bosses.
- Fitted bottom heater for 'Economy-7' overnight tariff. Top heater being a booster.
- Extra tapings and immersion heater bosses can be fitted dependent on individual requirements.
- Indirect combination units are also available to the above specification but are not covered by the Maxistore Scheme.

ht (A) mm	dia (B) mm	C	D	E	F	capacity litres	
						hot	cold
1200	450	150	500	150	700	120	40
1400	450	150	650	150	900	144	40
1850	450	150	1100	150	1350	210	40



# maxistore direct & indirect cylinders



BS 1566:2002



## features and benefits

- Available in Grades 1, 2 & 3.
- Baffle plate fitted over cold feed to minimise mixing of hot & cold water.
- Foam insulated 'double thickness' to minimise heat loss (refer to heat loss table).
- Used in conjunction with 'low tariff' electricity.
- 2 Side entry immersion heater bosses.
- Bottom heater for Economy-7 overnight tariff. Top heater being a booster.

## heat loss table

The daily (24 hour) heat loss when carried out using the required procedure shall not be more than the following:

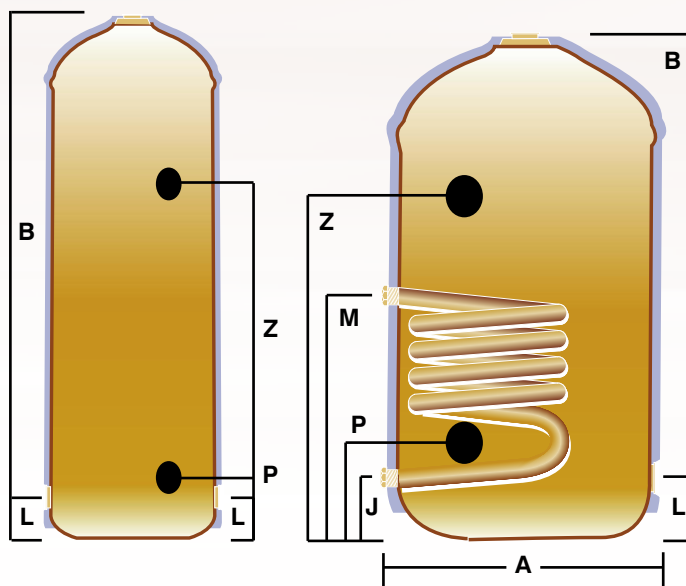
capacity of hot water storage	maximum daily storage
litres	kWh
120	2.4
144	2.5
210	2.7

## direct

	BS7	BS8	BS9E
<b>capacity</b> litres	120	144	210
<b>dimensions</b> mm			
A	450	450	450
B	900	1050	1500
L	100	100	100
P	150	150	150
Z	500	650	1100

## indirect

	BS7	BS8	BS9E
<b>capacity</b> litres	117	140	206
<b>dimensions</b> mm			
A	450	450	450
B	900	1050	1500
L	100	100	100
P	150	150	150
Z	600	650	1100
J	100	100	100
M	500	550	650



# indirect F10 combi unit



BS 3198:1984  
where applicable  
(part L compliant)

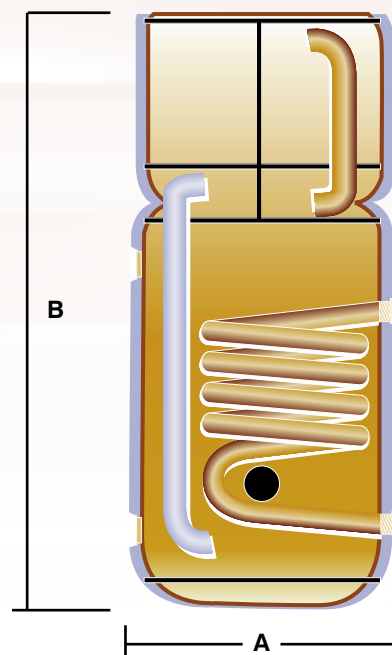
The F10 combination units are **self contained** heating and hot water cylinders which do not require a separate cold water storage or expansion tanks.

## features and benefits

- frees loft of all water storage.
- cheaper and quicker to fit than a conventional system.
- fully compliant with part L of the building regulations.
- sizes start from 1200mm high (120 litre hot).
- suitable for properties without loft space ie flats, bungalows and bedsits.
- available in high recovery and twin coiled units.
- available with compression fittings.

ext. dia (A) mm	ext. ht (B) mm	capacity litres	
		hot	cold*
450	1200	120	20
450	1300	130	20
450	1400	140	20
450	1500	160	20
450	1600	180	20
450	1850	210	20

\*refers to each cold cistern



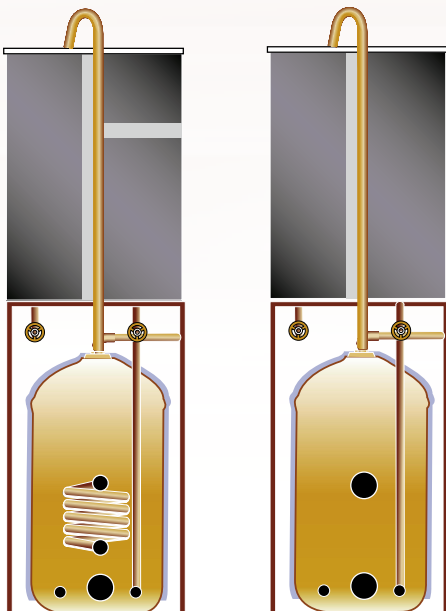
# formpak



Formpak integrates a Grade 3 copper cylinder with a black polythene cold feed tank and is a **complete steel-framed unit** with inter-connecting pipework. These units offer a **practical and efficient** solution where space and easy installation are an important factor. Available as **indirect and direct**, the direct comes complete with two side entry immersion heaters. All units have 227 ltr cold storage tanks.

## features and benefits

- Extra tapplings and immersion heater bosses can be fitted dependent on individual requirements.
- Indirect unit is for use in conjunction with a central heating system.
- Optional higher recovery coil types available.
- Immersion heater fitted on indirects for potential electrical back-up.
- Suitable for properties without loft space, ie flats, bungalows and bedsits.
- Direct Maxistore version can be used in conjunction with 'low tariff' electricity.
- Reduces installation costs.
- Available with compression fittings.
- Indirect units have an integral feed & expansion tank within the cold tank for the central heating side.



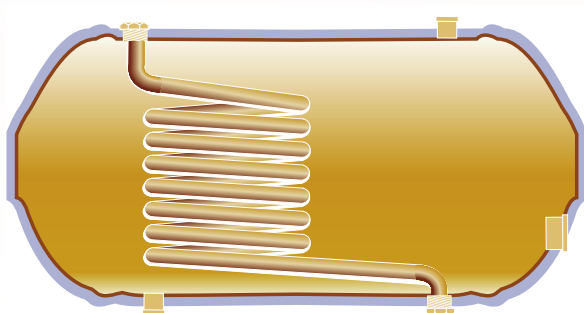
cylinder size h x d	overall height mm	overall width mm	overall depth mm	capacity	
				indirect	direct
900 x 450	2050	600	600	117	120
1050 x 450	2050	600	600	140	144
975 x 500	2050	600	600	162	166
1050 x 500	2050	600	600	205	210

# horizontal cylinders

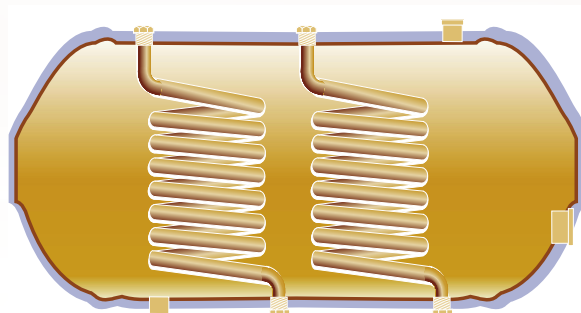
Suitable for loft or attic siting or **where space in a property is limited**.  
 Can be used if existing cylinder cupboard is converted into a shower cubicle.

## features and benefits

- Available as Direct or Indirect units.
- Available in twin coil.
- Cradles available for rigid siting.
- Available plain or foam lagged.
- Grades 1, 2 & 3.
- Suitable for pumped systems only.
- Available with compression fittings.
- Extra tapings and immersion heater bosses can be fitted dependent on individual requirements.



**indirect  
single coil**



**indirect  
twin coil**



# guarantees & approvals

## guarantee terms

Copperform cylinders carry a 2 year guarantee against faulty materials or manufacture provided that:

- They have been correctly installed as per the Installation Instructions and all the relevant standards, regulations and codes of practice in force at the time.
- They have not been modified in any way, other than by Copperform.
- They have not been misused, tampered with or subjected to neglect.
- The system is fed from the public mains water supply.
- They have only been used for the storage of potable water.
- They have not been subjected to frost damage.
- The benchmark sticker on the cylinder has been signed and dated by the Installer
- The guarantee period starts from the date of purchase and no registration is required.
- All the components fitted to/or supplied with the Copperform cylinder carry a 2 year guarantee.

**Exclusions:** The Guarantee does not cover

- The effects of scale build up.
- Any labour charges associated with replacing the unit or its parts.
- Any consequential losses caused by the failure or malfunction of the unit.

Kingspan Hot Waters Systems have a policy of continuous product development and may introduce product modifications from time to time.

As a consequence details given in this brochure are subject to alteration without notice.

## approvals



# To Guarantee Next Day Delivery

on a custom-made cylinder it would have to be  
manufactured in as little as 4 hours...

...So that's what **KWIKCYL 24** do!



12.58PM

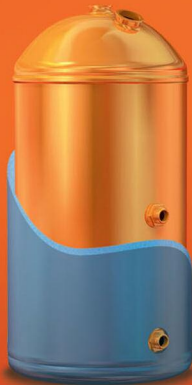
With your exact specification.

1.30PM

Commence manufacture.  
Using your exact specification.

2.15PM

Bosses and Immersions fitted.  
To your exact specification.



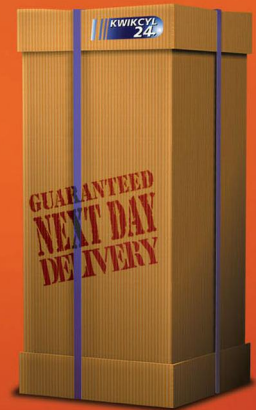
3.00PM

Insulation added.  
As per your exact specification.



4.45PM

Checked and Ready.  
To meet your exact specification.



5.00PM

Boxed for overnight delivery.  
Everything done to your exact specification.

Kwikcyl 24 is the UK's most tried, tested and proven 'next day' service AND it's as simple as ever to use. Just fill in the fax-back form (available from our local Area Sales Manager or download it from our website) ticking 'cylinder type' boxes and sketching boss positions etc. Fax the form back to us on 0800 169 3618 before 1:00pm... and wait for your guaranteed delivery NEXT WORKING DAY!



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Freephone/Freefax 0800 169 36 18

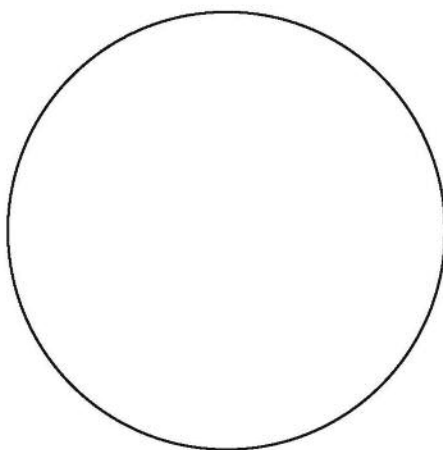
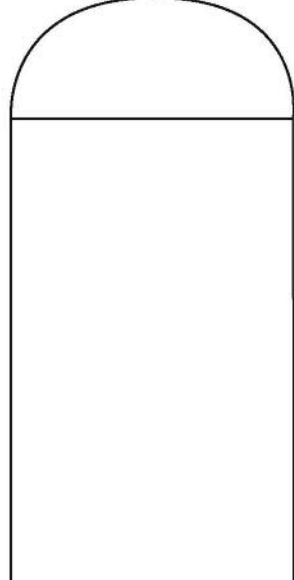
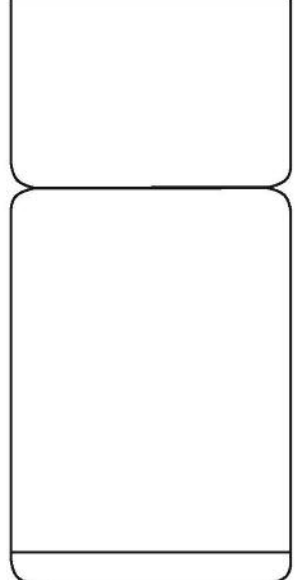


**ORDER:**

**QUOTE:**

**Please sketch position of bosses on drawings.**

**REAR**

**FRONT**

**Dimensions:** Height \_\_\_\_\_ Diameter \_\_\_\_\_ Capacity \_\_\_\_\_

**Type:**

- |           |                          |             |                          |                            |                          |
|-----------|--------------------------|-------------|--------------------------|----------------------------|--------------------------|
| Cylinder  | <input type="checkbox"/> | Combination | <input type="checkbox"/> | Copper Thermal Store       | <input type="checkbox"/> |
| Indirect  | <input type="checkbox"/> | Direct      | <input type="checkbox"/> | Economy 7                  | <input type="checkbox"/> |
| Grade 1   | <input type="checkbox"/> | Grade 2     | <input type="checkbox"/> | Grade 3                    | <input type="checkbox"/> |
| Twin Coil | <input type="checkbox"/> | Horizontal  | <input type="checkbox"/> | with Cradles               | <input type="checkbox"/> |
|           |                          |             |                          | Single Feed (self priming) | <input type="checkbox"/> |
|           |                          |             |                          | Indirect High Recovery     | <input type="checkbox"/> |

**Foam:** Std Thickness  Economy 7

**Your Details**

Company \_\_\_\_\_ Name \_\_\_\_\_

Address \_\_\_\_\_

Tel No. \_\_\_\_\_ Fax No. \_\_\_\_\_

**ORDER NUMBER:**

**PLEASE FAX THIS FORM BY 1.00PM FOR NEXT DAY DELIVERY**

**FREEPHONE/FREEFAX 0800 169 3618**



Hot Water Systems

**Copperform**

PO Box 562, Brunswick House, Wakefield, West Yorkshire WF1 9EX  
tel: 01924 203 020 fax: 01924 203 021 technical support: 0845 260 7260

[www.copperform.co.uk](http://www.copperform.co.uk)  
[www.kingspan.com](http://www.kingspan.com)

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