Hot Water Energy Storage
Unvented Cylinders
GB & NI

Kingspan Albion
Ultrasteel & Aerocyl
Product Guide

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Kingspan Albion Hot Water Solutions

The Hot Water People

For over 60 years, Kingspan Albion has been designing and manufacturing products that store and deliver consistently reliable hot water throughout people's homes. Our unvented hot water cylinders have continued to meet the evolving and demanding hot water needs of the UK homes.

Following ongoing investment in research and development, the Kingspan Albion Ultrasteel cylinder was launched in 2008, and the latest addition to the range is the Ultrasteel Plus.

All Kingspan Albion cylinders are known for their outstanding reliability and straightforward functionality. With a simple maintenance schedule, they will reliably store and generate hot water for years to come. Our commitment to quality and standards is demonstrated by our BS EN ISO 9001 accreditation.

Kingspan Albion has been part of the Kingspan Group PLC since 2005. As well as the high level of customer service you'd expect, we offer a technical specialist helpline giving confidence that we can support you over the lifetime of your product and beyond.

This brochure includes information about when to use a hot water cylinder, the features and technical specifications of the Albion Ultrasteel and Ultrasteel Plus ranges, how to choose and install the right sized cylinder for the job, and details of the high-grade materials used in every Kingspan Albion unvented hot water cylinder.

Contents

Why Installers Choose Kingspan Cylinders

With modern heating systems needing commissioning by competent installers, registered with a suitable accreditation body, and greater customer expectations, the role of the modern heating engineer has never been so important. Installers need to keep up-to-date with a wider range of products than ever before, and it's never been more complex with so many variables to consider, selecting the right combination of products for a heating system can be challenging.

That's why good installers are looking to work with a select range of reputable manufacturers, to help their business, navigate the range of solutions available and get the best products and service to support their business in meeting the needs of their customers.

We have listed below some of the key reasons an installer would choose Kingspan:

*Available upon request, excludes weekends, bank holidays & Christmas shutdown, deliveries to GB mainland, charges may vary.

Premium brand

Enhances your reputation & provides your customers peace of mind that they're dealing with a reputable trade professional by using top brands.

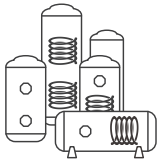
Available next day*

For the convenience of you and your customers, so that you can provide them with the best service possible and win more work.

Superior quality

Protects your reputation and reduces the risk of call back to a problem job, saving you both time, money and gaining potential future work.

Comprehensive range



Gain maximum value by surpassing your customers expectations and providing them with the best product for their application.

Technical support

Never be stuck again with help and advice on product selection, tricky installations or system diagnostics & problem solving.

When to use a cylinder?

"Is this hot water system capable of meeting the demands it could face?"

That's the crucial question you can ask yourself when working with your customers on adaptations, retrofits and extensions to their home. If the answer is "no", it's an opportunity for you to upgrade your customer to an unvented hot water cylinder.

Combi boilers can be just the job for smaller homes with only one bathroom, they're often left lagging when using more than one hot water outlet at the same time.

If your customer is adding a bathroom, building an extension for a new utility room or a workshop with hot water, it could be time to consider adding an element of stored hot water to the system. It's no good installing the most luxurious en-suite shower or beautiful new bathroom if your customer is left disappointed because the bath takes forever to fill or the shower becomes a trickle as soon as someone turns on the kitchen sink tap.

That's where hot water cylinders are the best product for the job. Whether it's in a home with one bathroom and an en-suite, or in a multiple-occupancy home with four or five bathrooms, they can handle hot water being used simultaneously in multiple places throughout the home.

Choosing the Right Hot Water Cylinder

Cylinder selection guide for installers

There are four key steps in choosing the right hot water cylinder to meet the needs of your customer and their household hot water usage. Following this simple guide will help you select the best type and size of cylinder for their needs.

This guide is aimed at professionally trained and qualified installers.

STEP 1: Identify the cylinder type needed for the system – vented or unvented?

Vented cylinders
Vented cylinders were the traditional way to supply hot water in most British homes between the 1940s and 1990s. A vented cylinder gets its cold-water feed from a header tank, usually located in the loft. It then uses gravity to feed the cylinder with its water supply, as opposed to being fed directly by the cold mains.

Relatively speaking, vented cylinders offer poor performance in terms of water pressure. If you're looking to replace an old vented cylinder that has failed, a like-for-like replacement with another vented cylinder will provide the easiest and cheapest way of getting the hot water back up and running quickly and with the least disruption.

Unvented cylinders
Unvented cylinders use the mains cold-water supply and not a cold tank in the loft. This allows them to provide high flow rates and mains pressure hot water (regulated to 3bar) for the fast filling of baths and powerful showers respectively.

Unvented cylinders are ideal for homes with multiple bathrooms or where the home has both a kitchen and utility room, as they can support multiple hot water outlets at the same time. Modern unvented cylinders are very well insulated for minimum heat loss and come in a protective casing to give an aesthetically pleasing appearance.

Thermal stores
When you're assessing a home's current hot water system, you may also come across a thermal store. Before unvented cylinders were developed, if you wanted mains pressure hot water, you would need a thermal store.

As the name suggests, a thermal store enables water to be stored at a very high temperature and uses that stored water to heat the mains pressure cold water. This is passed through the cylinder's heat exchanger - essentially working in reverse to a traditional cylinder - with the heat exchanger taking heat out of the cylinder instead of putting it in.

Advantages of a thermal store are that they integrate well into systems with multiple heat sources or where the heat source is unregulated, for example a solid fuel wood burner.

STEP 2: Specifying the cylinder depending on its heat source

Once you've decided whether the household needs a vented or unvented cylinder or a thermal store, the next step is to confirm the heat source and what that means for the type of cylinder you need.

Immersion heater using electricity
When the only option for the property is to heat the cylinder electrically through an immersion heater, you need to select a "direct" cylinder.

Gas or oil boiler
When your customer has a conventional boiler as a heat source, you need to select an "indirect" cylinder.

Renewable energy - solar thermal or heat pump
When the property has rentable heat sources available, you need to select either a "solar indirect" or "heat pump" cylinder. Solar indirect cylinders feature two heat exchanger coils, one for connecting to the solar heat source and the other for connecting to a conventional boiler for when insufficient solar energy is available.

Solid fuel or Aga or other unregulated heat source
When dealing with any unregulated heat source or there are multiple heat sources available, a "thermal store" will usually provide the best solution.

STEP 3:

What size cylinder do you need?

When choosing the cylinder capacity for your customers' home, you should always look to future-proof the installation by considering any likely change in their hot water needs: for example if you know they have a growing family, or intend to add an additional en-suite bathroom.

For those not familiar with hot water storage, it is important to remember it is usually held at about 60°C, but is intended to be mixed with cold water down to a usable temperature. A bath using 100 litres of hot water at 40°C actually only equates to 60 litres at 60°C. A shower can use 18 litres of hot water per minute at 40°C, which is only 11 litres at 60°C.

The following average consumption levels of hot water (40°C) per person per day can be used as a guide:

Low consumption = 20–30 litres

Average consumption = 30–50 litres

High consumption = 50–70 litres

Old British Standards recommend the following, but do not fully consider the number of users:

Hot water demand	Bedrooms	Indirect cylinder capacity (litres)	Direct cylinder capacity (litres)
1 standard bath or shower	Bedsit/1 bed	90 /120	120 / 150
	2-3 bed	120	180
	3-4 bed	150	210
1 standard bath	2-3 bed	120	180
	3-4 bed	150	210
1 bath and en-suite	2-3 bed	150	210
	3-4 bed	150	210
	4-5 bed	180	250
2 standard baths	2-3 bed	180	210
	3-4 bed	180	210
	4-5 bed	210	250
3 bathrooms	3-4 bed	250	300
	4-5 bed	250	300
	5-6 bed	300	300

STEP 4:

Other key installation considerations

In addition to the type of cylinder and its capacity, installers also need to consider any physical restrictions that may apply. Examples include the amount of space available in the airing cupboard, if there are any narrow loft hatches you need to get the cylinder through, or if installation time is an issue. We outline the main considerations and their solutions here:

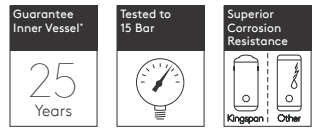
Slimline cylinders
With a smaller footprint to height ratio, slimline cylinders can often allow you to get through those narrow loft hatches or fit the cylinder in a tight airing cupboard. However, you will be compromising on the cylinders' energy efficiency slightly, as tall cylinders such as these lose more heat than shorter fatter cylinders.

Horizontal cylinders
Another space-saving solution, a horizontal cylinder allows you to maintain cylinder capacity in situations where height restrictions apply. However, you should be aware horizontal cylinders are marginally less energy efficient with slightly higher heat loss.

Bubble-top cylinders
All unvented cylinders, being a sealed system, need some form of thermal expansion control. Cylinders using internal thermal expansion control (also known as bubble-top cylinders) can eliminate the need for an external expansion vessel, saving space in the airing cupboard and providing an average of 14% more hot water output. Bubble-top cylinders are quicker and easier to install and offer slightly improved system reliability.

Pre-plumb cylinders
With a large proportion of the plumbing work already done at the factory, a pre-plumb cylinder can substantially cut onsite installation time by around 70%, reducing the amount of disruption to the customer. On installations using multiple cylinders, pre-plumb cylinders help ensure consistency from one installation to the next.

Ultrasteel Plus and Ultrasteel



Small things make the biggest difference

Key Features:

- Mains pressure hot water (regulated up to 3 bar) for powerful showers
- Good flow rates for fast filling of baths, ideal for multiple bathrooms
- Well insulated – economical to run with low heat loss
- Low reheat times for fast availability of hot water
- Gas purged, TIG welded, Duplex stainless steel inner vessel for superior corrosion resistance
- Dip pipe with diffuser maximises hot water output and eliminates separate drain-off connection for reduced heat loss
- Advanced coil-in-coil heat exchanger design for optimum heat transfer

Introducing Ultrasteel

The practical Ultrasteel series has been one of Kingspan Albion's most popular stainless steel unvented hot water cylinders since its launch in 2008.

Made from high-grade engineering materials such as Duplex stainless steel and tried and tested components such as valves, control sets and thermostats, the Ultrasteel's functional features strike the perfect balance for installers and homeowners between reliability, aesthetics and good value.

Quick recovery coils mean homeowners have low reheat times for the fast availability of hot water. High flow rates are perfect for multiple bathrooms and energy-efficient insulation keeps running costs low.

With capacities ranging from 90 to 500 litres and a choice of cylinder models available including Direct, Indirect, Slimline, Horizontal and Pre-Plumb options – installers and homeowners can choose the model that best suits the specific application.

* See installation instructions for full terms and conditions, only 10 years for Aerocyl cylinders and 2 years for parts.

Ultrasteel Plus with Built-in Thermal Expansion

Hassle-free installation and setup

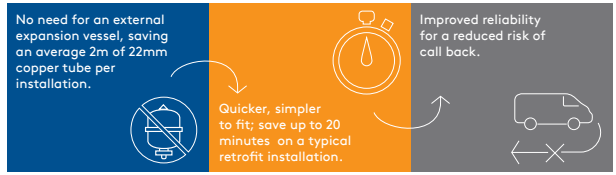
The latest addition to the Kingspan Albion portfolio, the Ultrasteel Plus takes all the best practical features of the popular Ultrasteel and adds extra functionality to make homeowners and installers' lives even easier.

Key Features:

More Hot Water

14% more

- Built-in thermal expansion simpler to install, saves space and aids annual maintenance
- Air pocket provides further reductions in heat loss
- Side mounted hot water draw off for easier access
- High flow rates for fast filling of baths, ideal for multiple bathrooms
- Available in capacities from 120 to 300 litres



Introducing Ultrasteel Plus

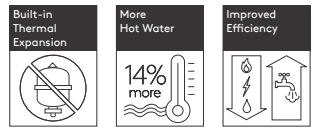
With built-in thermal expansion – rather than a separate thermal expansion vessel - annual maintenance of the Ultrasteel Plus has the ultimate no hassle factor.

Incorporating thermal expansion capabilities into the cylinder itself saves precious airing cupboard space. The outlet on the Ultrasteel Plus is on the side rather than on the top of the unit – which means a homeowner can install shelving above the cylinder. It also gives easier access for installation and maintenance.

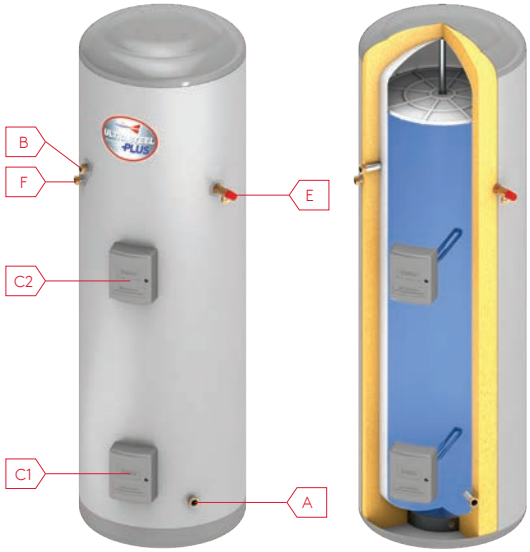
The Ultrasteel Plus provides all the features that make its sister product, the Ultrasteel, so popular with installers – high build quality including Duplex stainless steel, fast flow rates, quick recovery coils and energy-efficient insulation.

With a choice of three models available – for Direct, Indirect or Solar Indirect heat sources, Ultrasteel Plus is an ideal option for every homeowner, regardless of their current heating system.

*14% more hot water - average increase in hot water output at 40°C compared to the equivalent standard Ultrasteel using the new V40 testing in accordance with BS EN 12897:2016 standard.



Ultrasteel Plus Direct



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater*

C2. Secondary immersion heater*

D. N/A

E. ½" BSP x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Load Profile	AEC kWh/Year	Efficiency (%)	dB
AUXD120ERP	120	997	550	C	M	1394	36.8	15
AUXD150ERP	150	1185	550	B	M	1310	39.2	15
AUXD180ERP	180	1367	550	C	L	2468	40.0	15
AUXD210ERP	210	1557	550	C	L	2706	37.8	15
AUXD250ERP	250	1802	550	C	L	2594	39.5	15
AUXD300ERP	300	2072	550	C	L	2622	39.0	15

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
½" BSP x 15mm
(10 bar / 90°C)

Integrated dual thermostat*
(Immersion)

Integrated immersion Heater*
3kW - 14"

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1 (mm)	C2 (mm)	E (mm)	F (mm)
120	184	651	244	532	619	N/A
150	184	837	244	632	805	N/A
180	184	1021	244	732	989	N/A
210	184	1087	244	832	1055	1022
250	184	1332	244	972	1300	1267
300	184	1584	244	1123	1552	1519

Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Heat-up Time (min)	3kW immersion heater
120	125	30	120	2x Standard
150	154	35	170	2x Standard
180	183	40	190	2x Standard
210	207	45	256	2x Standard
250	243	50	295	2x Standard
300	287	55	373	2x Standard

* Factory fitted to cylinder.

Ultrasteel Direct

Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater (Smart)

C2. Secondary immersion heater

D. N/A

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Load Profile	AEC kWh/Year	Efficiency (%)	dB
AUD90ERP	90	745	550	C	L	2689	38.1	15
AUD120ERP	120	933	550	B	M	1222	34.9	15
AUD150ERP	150	1120	550	C	L	2628	39.0	15
AUD180ERP	180	1308	550	C	L	2425	41.0	15
AUD210ERP	210	1496	550	C	L	2672	38.3	15
AUD250ERP	250	1746	550	C	L	2669	38.4	15
AUD300ERP	300	2055	550	C	L	2504	40.9	15

Smart Immersion Heater

Lower Electricity Usage

Up to 20% reduction

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Smart Immersion Heater*
3kW - 14"

Immersion Heater*
3kW - 14"

Potable water expansion vessel

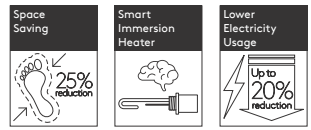
Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1 (mm)	C2 (mm)	E (mm)	F (mm)
90	160	745	195	N/A	520	N/A
120	160	933	195	510	705	N/A
150	160	1120	195	610	895	N/A
180	160	1308	195	710	1080	N/A
210	160	1496	195	810	1270	1150
250	160	1746	195	950	1520	1400
300	160	2055	195	1830	1687	1600

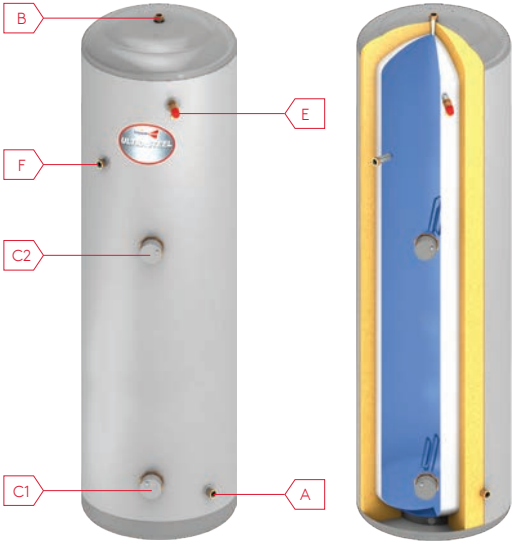
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Expansion vessel - DHW Cap. (L)	Heat-up Time (min)	3kW immersion heater
90	91.0	25	18	98	1x Smart
120	123.8	30	18	114	1x Smart 1x Standard
150	154.6	35	18	127	1x Smart 1x Standard
180	185.0	40	18	140	1x Smart 1x Standard
210	215.4	45	18	153	1x Smart 1x Standard
250	255.7	50	18	170	1x Smart 1x Standard
300	305.0	55	25	182	1x Smart 1x Standard

* Factory fitted to cylinder.



Ultrasteel Slimline Direct



Connections

A. 22mm Cold feed with deflector in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater (Smart)*

C2. Secondary immersion heater*

D. N/A

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return - (cylinders with a capacity of 210 litres only)

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Smart Immersion Heater*
3kW - 14"

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1 (mm)	C2 (mm)	E (mm)	F (mm)
90	175	1091	210	610	858	N/A
120	175	1279	210	710	1046	N/A
150	175	1467	210	810	1234	N/A
180	175	1717	210	910	1484	N/A
210	175	2030	210	1110	1797	1500

Basic information

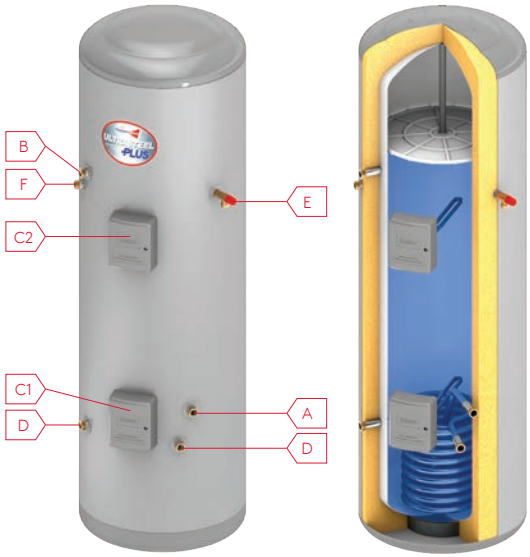
Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Load Profile	AEC kWh/Year	Efficiency (%)	dB
AUD90SLMERP	90	1091	478	B	M	872	58.9	15
AUD120SLMERP	120	1279	478	C	L	2589	39.5	15
AUD150SLMERP	150	1467	478	C	L	2689	38.1	15
AUD180SLMERP	180	1717	478	C	L	2640	38.8	15
AUD210SLMERP	210	2030	478	C	L	259	39.4	15

Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Expansion vessel - DHW Cap. (L)	Heat-up Time (min)	3kW immersion heater
90	91.0	29	12	80	1x Smart 1x Standard
120	122.0	38	18	105	1x Smart 1x Standard
150	154.0	46	18	125	1x Smart 1x Standard
180	181.0	54	18	140	1x Smart 1x Standard
210	210.0	60	18	160	1x Smart 1x Standard

* Factory fitted to cylinder.

Ultrasteel Plus Indirect



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater‡

C2. Secondary immersion heater‡ (250 and 300ltr cylinders only)

D. 22mm Boiler coil connections

E. ½" BSP x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss (W)
AUXN120ERP	120	997	550	B	51
AUXN150ERP	150	1185	550	B	55
AUXN180ERP	180	1367	550	C	67
AUXN210ERP	210	1557	550	C	78
AUXN250ERP	250	1802	550	C	89
AUXN300ERP	300	2072	550	C	93

Built-in Thermal Expansion

More Hot Water 14% more

Improved Efficiency

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" BSP x 15mm
(10 bar / 90°C)

Integrated dual thermostat*
(Boiler & Immersion)

Integrated immersion Heater*
3kW - 14"

Two port valves
22mm

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1‡ (mm)	C2‡ (mm)	D (mm)	E (mm)	F (mm)
120	455	651	355	N/A	315	619	N/A
150	455	837	385	N/A	345	805	N/A
180	490	1021	415	N/A	375	989	N/A
210	490	1087	415	N/A	375	1055	1022
250	530	1332	450	1105	410	1300	1267
300	530	1584	450	1255	410	1552	1519

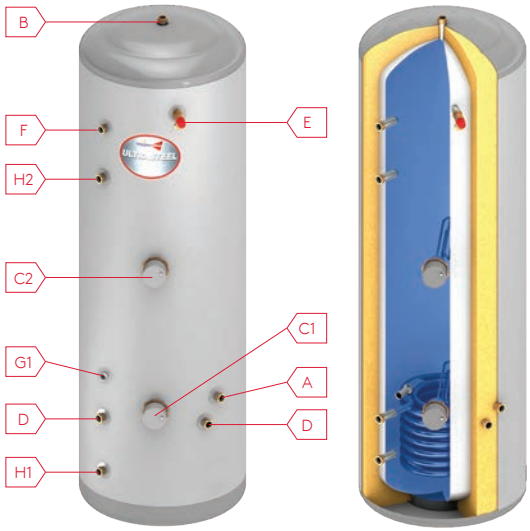
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Heat-up Time (min)	Indirect Coil (kW Rating)	Heat Loss (kW/24h)	3kW immersion heater
120	119	35	21	14.44	1.22	1x Standard
150	149	40	24	16.85	1.31	1x Standard
180	179	45	27	18.88	1.61	1x Standard
210	205	50	31	17.08	1.87	1x Standard
250	242	55	33	20.31	2.13	2x Standard
300	286	60	42	19.61	2.24	2x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source

Fast Heat-Up Times

Ultrasteel Indirect



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder (1" Female BSP connection on 400/500L models with no diffuser)

B. 22mm Hot water outlet (1" Female BSP connection on 400/500L models)

C1. Immersion heater‡

C2. Secondary immersion heater‡ (250L and above only)

D. 22mm Boiler coil connections

E. ½" NPT x 15mm Temperature & Pressure relief valve* (90-300L) ¾" Temperature & Pressure relief valve* (400-500L)

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G. Dry stat pocket

H1. Destratification (400/500L)

H2. Destratification (400/500L)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss (W)
AUI90ERP	90	745	550	C	49
AUI120ERP	120	933	550	B	50
AUI150ERP	150	1120	550	C	68
AUI180ERP	180	1308	550	C	69
AUI210ERP	210	1496	550	C	73
AUI250ERP	250	1746	550	C	91
AUI300ERP	300	2055	550	C	87
AUI400ERP	400	1657	693	C	102
AUI500ERP	500	1946	693	C	110

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Dual thermostat
(Boiler)

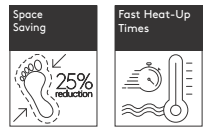
Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1‡ (mm)	C2‡ (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H1 (mm)	H2 (mm)
90	390	745	330	N/A	290	520	N/A	385	N/A	N/A
120	390	933	330	N/A	290	705	N/A	385	N/A	N/A
150	465	1120	370	N/A	330	895	N/A	425	N/A	N/A
180	465	1308	370	N/A	330	1080	N/A	425	N/A	N/A
210	465	1496	405	N/A	365	1270	1150	465	N/A	N/A
250	465	1746	405	950	365	1520	1400	560	N/A	N/A
300	465	2055	405	1100	365	1830	1600	660	N/A	N/A
400	197	1657	767	1057	692	1387	1347	827	197	1247
500	197	1946	767	1357	692	1687	1647	827	197	1547

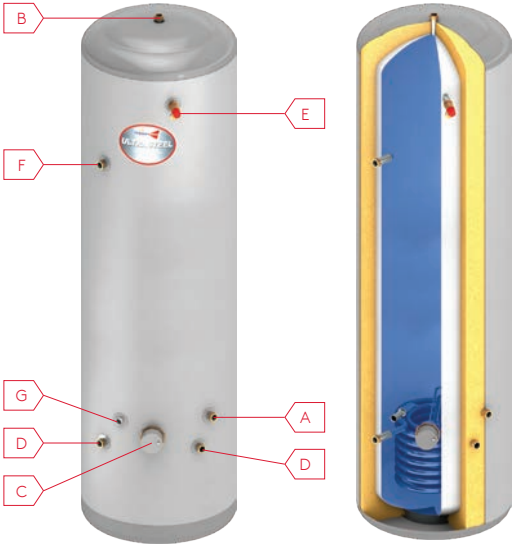
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Expansion vessel (L)	Weight empty (kg)	Heat-up Time (min)	Indirect Coil (kW Rating)	Heat Loss (kW/24h)	3kW immersion heater
90	87.9	12	30	18	17.98	1.18	1x Standard
120	120.1	18	35	24	18.49	1.19	1x Standard
150	150.4	18	40	27	19.72	1.62	1x Standard
180	180.6	18	45	33	20.17	1.66	1x Standard
210	210.6	18	50	35	21.35	1.76	1x Standard
250	250.9	18	55	41	22.40	2.19	2x Standard
300	300.3	25	60	52	21.43	2.09	2x Standard
400	397.0	25	85	48	27.70	2.45	2x Standard
500	495.0	25	95	55	28.80	2.65	2x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source



Ultrasteel Slimline Indirect



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C. Immersion heater‡

D. 22mm Boiler coil connections

E. ½" NPT x 15mm Temperature relief & Pressure valve*

F. 22mm Secondary return)cylinders with a capacity of 210 litres only)

G. Dry stat pocket - boiler

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss
AUI90SLMERP	90	1091	478	C	55
AUI120SLMERP	120	1279	478	C	58
AUI150SLMERP	150	1467	478	C	65
AUI180SLMERP	180	1717	478	C	73
AUI210SLMERP	210	2030	478	C	87

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Dual thermostat
(Boiler)

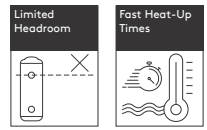
Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C‡ (mm)	D (mm)	E (mm)	F (mm)	G (mm)
90	440	1091	380	340	858	N/A	395
120	440	1279	380	340	1046	N/A	395
150	520	1467	420	380	1234	N/A	520
180	520	1717	420	380	1484	N/A	610
210	520	2030	420	380	1797	1500	710

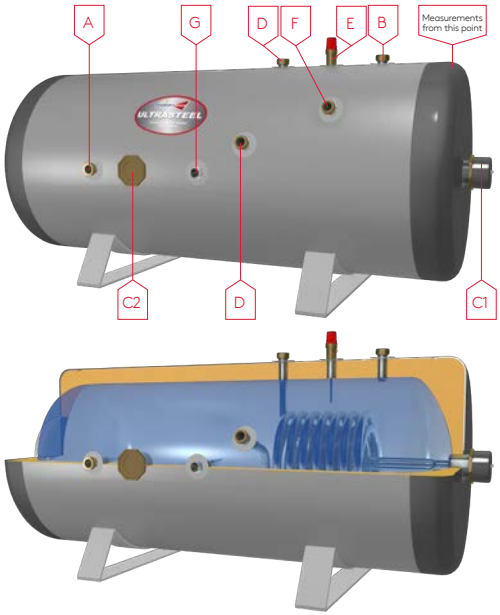
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Expansion vessel (L)	Heat-up Time (min)	Indirect Coil (kW Rating)	Heat Loss (kW/24h)	3kW immersion heater
90	101.0	36	12	21	17.41	1.32	1x Standard
120	123.2	44	18	26	17.15	1.38	1x Standard
150	144.0	52	18	27	19.90	1.57	1x Standard
180	172.1	60	18	33	19.69	1.76	1x Standard
210	207.5	68	18	43	18.02	2.09	1x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source



Ultrasteel Horizontal Indirect



Connections

A. 22mm Cold feed with deflector in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater*

C2. Secondary immersion heater* (250 and 300ltr cylinders only)

D. 22mm Boiler coil connections

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G. Dry stat pocket

Basic information

Code	Nominal Cap. (L)	Length (mm)	Height with Cradle & T&P (mm)	Dia. (mm)	ErP Rating	Standing Loss
AUIH180ERP	180	1258	680	550	C	72
AUIH210ERP	210	1446	680	550	C	76
AUIH250ERP	250	1696	680	550	C	89
AUIH300ERP	300	2009	680	550	C	88

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Dual thermostat
(Boiler)

Connection locations

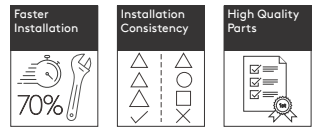
Nominal Cap. (L)	A (mm)	B (mm)	C2 (mm)	D (mm)	E (mm)	F (mm)	G (mm)
180	925	209	798	483	346	N/A	609
210	1213	209	898	483	346	248	609
250	1363	209	898	483	346	248	609
300	1676	209	898	483	346	248	609

Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Expansion vessel (L)	Heat-up Time (min)	Indirect Coil (kW Rating)	Heat Loss (kW/24h)	3kW immersion heater
180	178.0	60	18	33	18.48	1.72	1x Standard
210	204.6	65	18	35	19.75	1.83	1x Standard
250	247.0	70	18	41	20.68	2.12	2x Standard
300	300.3	75	25	52	21.43	2.11	2x Standard

* Factory fitted to cylinder. ǂ Not to be used as the primary heat source.

Ultrasteel Pre-Plumb Unvented Cylinders



Key Features:

- Up to 70% quicker to install
- Seven day programmable room thermostat with timed domestic hot water control
- Separate central heating and hot water zones
- Automatic bypass valve for system efficiency
- Advanced 'A' rated variable speed circulating pump
- Central heating expansion vessel pack
- Capacity ranging from 120 to 300 litres

Improved installation efficiency

x 2.5 faster

than installing a regular non-pre-plumb option

More than speed

In addition to significant reductions in installation times, Pre-plumb cylinders bring a consistency to each installation for a neater, more aesthetically appealing finish.

They can also represent a substantial reduction in hassle and disruption to the homeowner or a house built as part of a planned build project.

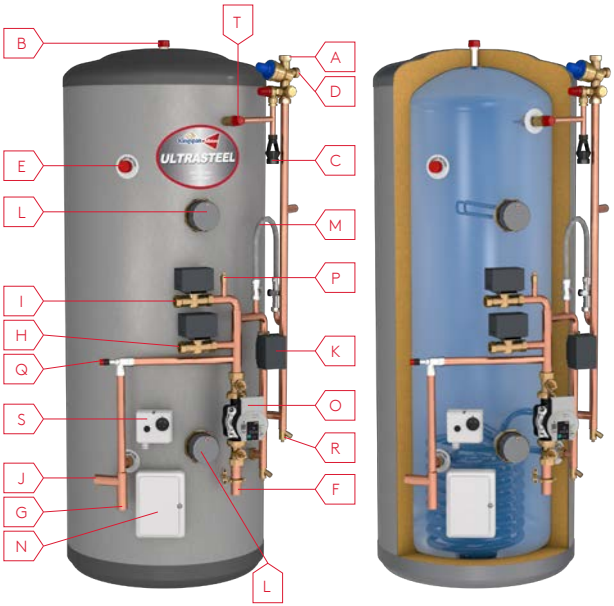
Using our standard Ultrasteel cylinder with Duplex stainless steel inner vessel for superior corrosion resistance, the cylinder is then factory fitted with all pipework and key components, including circulating pump, thermostat, inlet control set, two port valves, and electric wiring box.

With the most time consuming aspects of the installation taken care of, all the plumber has to do is hook up the cylinder, fit the external expansion, do a quick check of all the connections, ready for commissioning.

Includes TPOne Controls

Faster Installation | Installation Consistency | High Quality Parts

Ultrasteel Pre-Plumb Indirect



Connections

- **A.** 22mm Inlet control set - cold feed
- **B.** 22mm Hot water draw-off
- **C.** 22mm Tundish drain-off
- **D.** 22mm Balanced cold
- **E.** Secondary return (210L to 300L)
- **F.** 28mm Flow from boiler
- **G.** 28mm Return to boiler
- **H.** 22mm Central heating flow - Zone 1
- **I.** 22mm Central heating flow - Zone 2 (only fitted on twin zone)
- **J.** 28mm Return from radiator circuit
- **K.** 22mm DHW two port valve
- **L.** Immersion heater*
- **M.** Filling loop flexible hose
- **N.** Wiring box
- **O.** Circulating pump
- **P.** Manual bottle air eliminator
- **Q.** Auto bypass valve
- **R.** Cold feed drain
- **S.** Thermostat
- **T.** ½" NPT x 15mm Temperature & Pressure relief valve

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss (W)
AUI120P4ERP	120	933	550	B	50
AUI150P4ERP	150	1120	550	C	68
AUI180P4ERP	180	1308	550	C	69
AUI210P4ERP	210	1496	550	C	73
AUI250P4ERP	250	1746	550	C	91
AUI300P4ERP	300	2055	550	C	87

For Twin zone models add 'T' after the 'P' in the code, e.g. AUI120P4ERP becomes AUI120PT4ERP.

Supplied with


Acetal Tundish
22mm x 15mm


Inlet control set with balanced cold
22mm x 15mm


Temperature & pressure relief valve
1/2" NPT x 15mm


Filling loop with servicing & check valves
15mm


Immersion Heater*
3kW - 14"


Auto bypass valve
22mm


Two port valves
22mm


Circulating pump & gate valves
22mm


Programmable thermostatic control‡


Heating system expansion vessel


Potable water expansion vessel


Dual thermostat
(Boiler)

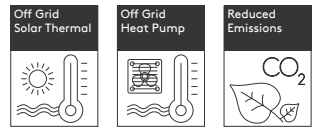
Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I † (mm)	J (mm)
120	883	933	573	836	N/A	142	171	470	590	246
150	1070	1120	782	1025	N/A	142	212	550	670	287
180	1325	1308	1037	1280	N/A	142	212	550	670	287
210	1445	1496	1157	1400	1150	277	246	685	805	321
250	1695	1746	1407	1650	1400	277	246	685	805	321
300	2008	2055	1720	1963	1602	383	246	790	910	321

Technical information - See Indirects page 22

* Not to be used as the primary heat source. † Twin zone models only.
‡ TPOne M with single zone models, TPOne M and B with Twin zone models.

Cylinders for Renewable Applications



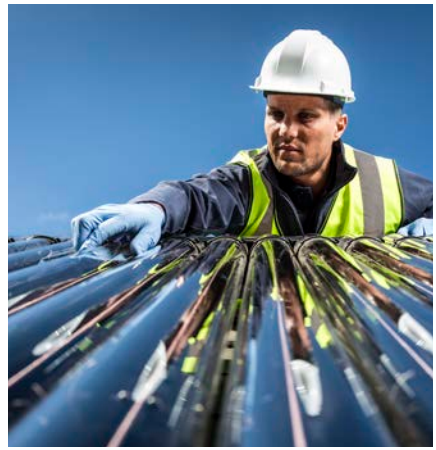
Key Features:

- Models available to suit a range of renewables applications including solar indirect, solar direct, heat pump & solar or heat pump only
- 100% of the hot water demand could be fulfilled using the cylinder in conjunction with a heat pump
- Used in conjunction with solar thermal to provide up to 70% of the hot water demand
- Capacity ranging from 150 to 500 litres
- Coil heat exchanger optimised for renewable application

Harnessing the power of

FREE ENERGY

to reduce fuel bills and CO_2 emissions

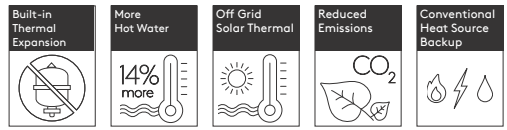


Solar & Heat Pump Options

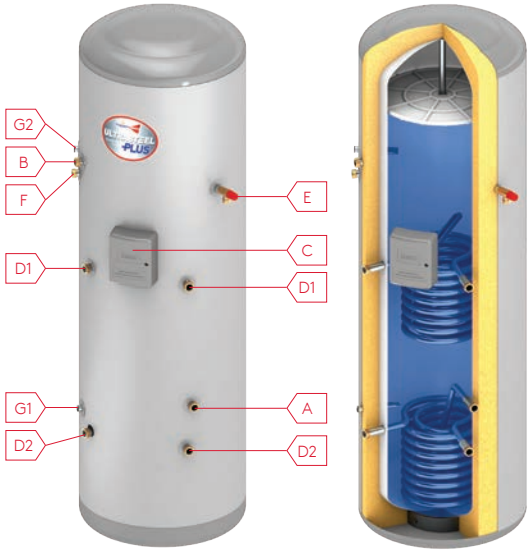
Purpose-designed heat exchanger coils allow for the maximum heat transfer of renewable energy into the stored water inside the cylinder to meet the domestic hot water requirements of even the largest properties.

With a broad range of cylinder models and sizes available there are options to suit both monovalent or a bivalent system design whilst ensuring compatibility with a wide selection of solar thermal and heat pump units on the UK market today.

In addition to the unvented cylinders listed within this guide a selection of buffer vessels is available. Call our sales office for more details.



Ultrasteel Plus Solar Indirect



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C. Immersion heater

D1. 22mm Boiler coil connections

D2. 22mm Solar coil connections

E. ½" BSP x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G1. Dry stat pocket (solar)

G2. Dry stat pocket (high limit)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss
AUXSN180ERP	180	1367	550	C	67
AUXSN210ERP	210	1557	550	C	78
AUXSN250ERP	250	1802	550	C	89
AUXSN300ERP	300	2072	550	C	93

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" BSP x 15mm
(10 bar / 90°C)

Integrated dual thermostat*
(Boiler & Immersion)

Integrated immersion Heater*
3kW - 14"

Two port valves
22mm

High limit thermostat

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C (mm)	D1 (mm)	D2 (mm)	E (mm)	F (mm)	G1 (mm)	G2 (mm)
180	530	1021	910	855	345	989	N/A	400	1021
210	530	1087	960	905	375	1055	1022	430	1087
250	530	1332	1030	975	375	1300	1267	430	1332
300	530	1584	1060	1005	410	1552	1519	465	1584

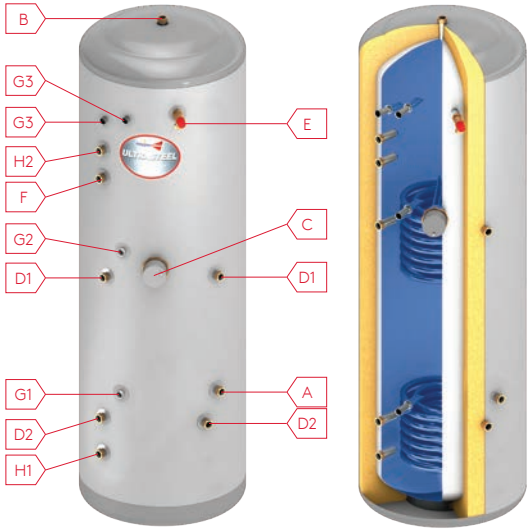
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Dedicated Solar Vol. (L)	Weight empty (kg)	Heat-up Time (min)	Indirect Coil (kW Rating)	Solar Coil (kW Rating)	Heat Loss (kW/24h)	3kW immersion heater
180	175	57	60	27	14.50	16.77	1.61	1x Standard
210	201	69	65	29	12.80	17.67	1.87	1x Standard
250	242	78	70	35	15.60	18.55	2.13	1x Standard
300	285	97	75	40	15.90	19.64	2.24	1x Standard

* Factory fitted to cylinder.

Off Grid Solar Thermal | Reduced Emissions | Conventional Heat Source Backup

Ultrasteel Solar Indirect



Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder (1" Female BSP connection on 400/500L model with no diffuser)

B. 22mm Hot water outlet (1" Female BSP connection on 400/500L)

C. Immersion heater*

D1. 22mm Boiler coil connections

D2. 22mm Solar coil connections

E. ½" NPT x 15mm Temperature & Pressure relief valve* (90-300L)
¾" NPT x 15mm Temperature & Pressure relief valve* (400-500L)

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G1. Dry stat pocket (solar)

G2. Dry stat pocket (boiler)

G3. Dry stat pocket (high limit)

H1. Destratification (400/500L models only)

H2. Destratification (400/500L models only)

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss
AUSI180ERP	180	1308	550	C	69
AUSI210ERP	210	1496	550	C	73
AUSI250ERP	250	1746	550	C	91
AUSI300ERP	300	2055	550	C	87
AUSI400ERP	400	1657	693	C	102
AUSI500ERP	500	1946	693	C	110

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Destratification

Nominal Cap. (L)	H1 (mm)	H2 (mm)
400	196	1286
500	196	1546

Dual thermostat
(Boiler)

High limit thermostat

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C (mm)	D1 (mm)	D2 (mm)	E (mm)	F (mm)	G1 (mm)	G2 (mm)	G3 (mm)
180	390	1308	725	674	290	1080	N/A	345	729	1080
210	465	1496	830	779	365	1270	1150	420	834	1270
250	465	1746	1000	950	365	1520	1400	420	1005	1520
300	465	2055	1030	980	365	1830	1600	420	1035	1830
400	196	1656	766	1156	691	1386	1346	826	1286	1386
500	196	1946	766	1356	691	1686	1646	826	1491	1686

Technical information

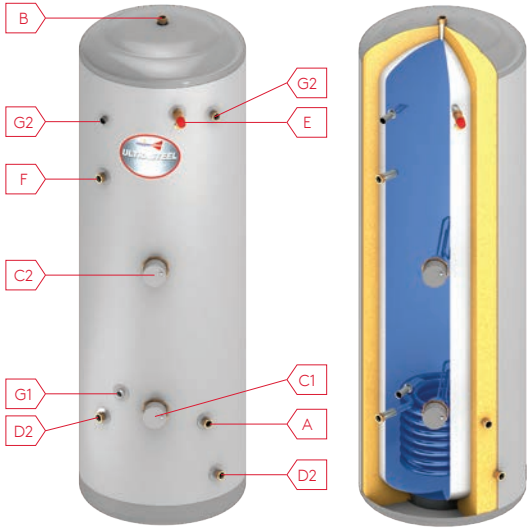
Nominal Cap. (L)	Actual Cap. (L)	Dedicated Solar Vol. (L)	Weight empty (kg)	Expansion vessel (L)	Heat-up Time (min)	Indirect Coil (kW)	Solar Coil (kW)	Heat Loss (kW/24h)	3kW immersion heater
180	178.0	51.8	60	18	36	17.98	18.48	1.66	1x Standard
210	204.6	60.3	65	18	35	19.72	19.75	1.76	1x Standard
250	247.0	72.3	70	18	41	20.17	20.68	2.19	1x Standard
300	295.6	87.1	75	25	48	21.35	22.08	2.46	1x Standard
400	397.7	121.0	85	25	64	22.40	27.70	2.42	1x Standard
500	495.0	151.0	95	25	80	21.43	28.80	2.64	1x Standard

* Factory fitted to cylinder.

Off Grid Solar Thermal

Reduced Emissions

Ultrasteel Solar Direct



Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

High limit thermostat

Connections

A. 22mm Cold feed with dip pipe to diffuser in bottom of cylinder

B. 22mm Hot water outlet

C1. Immersion heater*

C2. Secondary immersion heater*

D2. 22mm Solar coil connections

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G1. Dry stat pocket (solar)

G2. Dry stat pockets (high limit)

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C1‡ (mm)	C2‡ (mm)	D2 (mm)	E (mm)	F (mm)	G1 (mm)	G2 (mm)
180	390	1281	445	710	290	1080	N/A	345	1080
210	465	1469	500	810	365	1268	1150	420	1268
250	465	1719	670	1045	365	1518	1400	420	1518
300	465	2043	670	1100	365	1830	1600	420	1830

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Load Profile	AEC kWh/Year	Efficiency (%)	dB
AUSD180ERP	180	11308	550	C	L	2425	41.0	15
AUSD210ERP	210	1496	550	C	L	2672	38.3	15
AUSD250ERP	250	1746	550	C	L	2669	38.4	15
AUSD300ERP	300	2055	550	C	L	2504	40.9	15

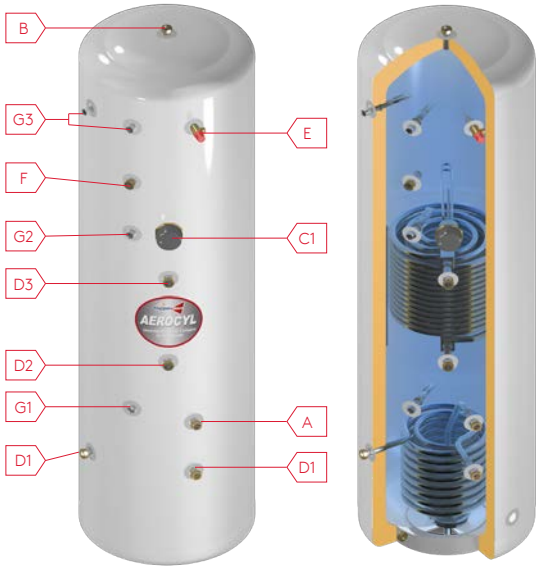
Technical information

Nominal Cap. (L)	Actual Cap. (L)	Weight empty (kg)	Expansion vessel (L)	Heat-up Time (min)	Solar Coil (kW)	Heat Loss (kW/24h)	3kW immersion heater
180	181.7	60	18	36	18.48	1.66	1x Standard
210	209.4	65	18	35	19.75	1.76	1x Standard
250	251.8	70	18	41	20.68	2.19	1x Standard
300	300.4	75	25	48	22.08	2.09	1x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source.

Off Grid Heat Pump | Off Grid Solar Thermal | Reduced Emissions

Aerocyl
Heat Pump and Solar



Connections

A. 22mm Cold feed with dip pipe to diffuser

B. 22mm Hot water outlet

C1. Immersion heater*

D1. 22mm Solar coil connections

D2. Heat pump connection (Return)

D3. Heat pump connection (Flow)

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G1. Dry stat pocket (solar)

G2. Dry stat pocket (heat pump)

G3. Dry stat pockets

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss
HPS180ERP	180	1308	550	C	69
HPS210ERP	210	1496	550	C	73
HPS250ERP	250	1746	550	C	91
HPS300ERP	300	2056	550	C	87

Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Dual thermostat
(Heat Pump)

High limit thermostat

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C‡ (mm)	D1 (mm)	D2 (mm)	D3 (mm)	E (mm)	F (mm)	G1 (mm)	G2 (mm)	G3 (mm)
180	390	1308	868	300	464	808	1080	N/A	355	868	1080
210	465	1496	1008	365	566	910	1270	1150	420	1008	1270
250	465	1746	1100	365	856	1002	1520	1400	420	1100	1520
300	465	2059	1173	365	731	1075	1830	1600	420	1173	1830

Technical information

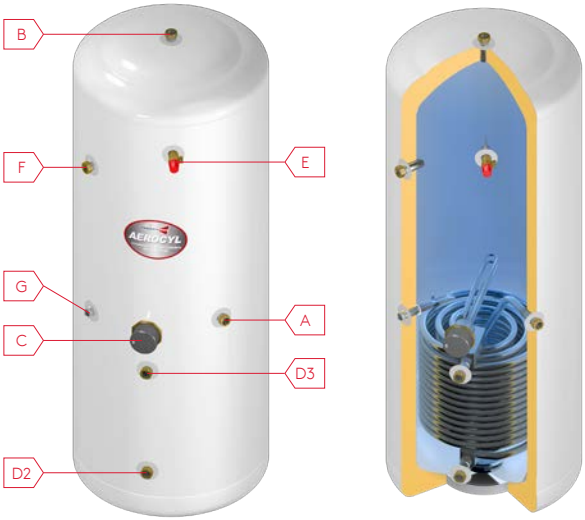
Nom. Cap. (L)	Actual Cap. (L)	Dedicated Solar Vol. (L)	Weight empty (kg)	DHW Expansion vessel (L)	Heat-up Time (min)	HP Coil Rating (kW)	Solar Coil Rating (kW)	Heat Loss (kW/24h)	3kW immersion heater
180	178.0	51.8	58	18	36	28.3	18.48	1.66	1x Standard
210	204.6	60.3	59	18	36	28.1	19.75	1.76	1x Standard
250	247.0	72.3	65	18	41	27.4	20.68	2.19	1x Standard
300	295.6	87.1	77	25	48	26.7	22.08	2.09	1x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source.

Off Grid Heat Pump

Reduced Emissions

Aerocyl Heat Pump



Supplied with

Acetal Tundish
22mm x 15mm

Inlet control set with balanced cold
22mm x 15mm

Temperature & pressure relief valve*
1/2" NPT x 15mm
(7 bar / 90°C)

Two port valves
22mm

Immersion Heater*
3kW - 14"

Potable water expansion vessel

Dual thermostat
(Heat Pump)

Connections

A. 22mm Cold feed with dip pipe to diffuser

B. 22mm Hot water outlet

C. Immersion heater*

D2. 22mm Heat pump connection (Return)

D3. Heat pump connection (Flow)

E. ½" NPT x 15mm Temperature & Pressure relief valve*

F. 22mm Secondary return (cylinders with a capacity of 210 litres and above only)

G. Dry stat pocket

Connection locations

Nominal Cap. (L)	A (mm)	B (mm)	C‡ (mm)	D2 (mm)	D3 (mm)	E (mm)	F (mm)	G (mm)
150	681	1120	650	175	519	895	N/A	650
180	681	1308	650	175	519	1080	N/A	650
210	681	1496	650	175	519	1270	1150	650
250	681	1746	650	175	519	1520	1400	650
300	681	2059	650	175	519	1830	1600	650

Basic information

Code	Nominal Cap. (L)	Height (mm)	Dia. (mm)	ErP Rating	Standing Loss
HP150ERP	150	1120	550	C	68
HP180ERP	180	1308	550	C	69
HP210ERP	210	1496	550	C	73
HP250ERP	250	1746	550	C	91
HP300ERP	300	2055	550	C	87

Technical information

Nom. Cap. (L)	Actual Cap. (L)	Weight empty (kg)	DHW Expansion vessel (L)	Heat-up Time (min)	HP Coil Rating (kW)	Heat Loss (kW/24h)	3kW immersion heater
150	150.0	45	12	Refer to the heat pump OMI guide	19.72	1.62	1x Standard
180	178.0	50	18		20.17	1.66	1x Standard
210	204.6	54	18		21.35	1.76	1x Standard
250	247.0	59	18		22.4	2.19	1x Standard
300	295.6	68	25		21.43	2.09	1x Standard

* Factory fitted to cylinder. ‡ Not to be used as the primary heat source.

Standards and Specifications

The Hot Water People

Materials - Ultrasteel, Ultrasteel Plus, Aerocyl

Inner shell – Duplex stainless steel

Coil – 22mm Diameter stainless steel

Bosses – Stainless steel

Polyurethane CFC- and HCFC-free foam insulation, nominal thickness 50mm. This insulation has an Ozone Depletion Potential of Zero and a Global Warming Potential of 3.1.

Casing – Galvanized steel, durable finish

Anode – None fitted/required

Immersion heater

- 1¾" BSP parallel threaded head - (Ultrasteel & Aerocyl)
- Flat face seal with 1¾" locking nut - (Ultrasteel Plus)
- Long life incology sheathed low noise element and thermostat pocket
- Brazed construction
- Combined thermostat and safety cut-out
- Element rating 3kW at 240V A/C

PLEASE NOTE: All connection locations measured from base of cylinder to boss centres with the exception of horizontal cylinders. For horizontal cylinders boss centres taken from cylinder end with hot water outlet.

Pressure and temperature limits of control settings

	Ultrasteel Plus	Ultrasteel / Aerocyl
Pressure reducing valve	3 bar	3 bar
Expansion relief valve	8 bar	6 bar
Pressure and temperature relief valve	10 bar / 90°C	7 bar / 90°C
High limit thermostat - in dual thermostat	85°C	85°C
High limit thermostat - in immersion heater	85°C	85°C
Minimum supply pressure	1.5 bar	1.5 bar
Minimum flow rate supply	25 litres/min	25 litres/min
Maximum supply pressure	12 bar	12 bar

Guarantee*

The Ultrasteel and Ultrasteel Plus stainless steel inner vessel carries a 25-year guarantee against faulty materials or manufacture (10 years for Aerocyl). All parts supplied with the cylinder carry a 2-year guarantee. All guarantees must be registered at www.kingspanenviro.com/guarantee or by completing the Guarantee Card within the installation manual.

Quality systems

We are a BSi registered company, whose manufacturing sites are licensed to British Standards quality assurance BS EN ISO 9001: 2008. This means all our manufacturing plants are monitored by independent inspectors and our quality systems meet the stringent requirements needed to achieve this standard.

hot water association CHARTER MEMBER

As a Charter member of the Hot Water Association (HWA), Kingspan Environmental is committed to uphold the principles and objective of the 'HWA' Charter:

- To supply fit for purpose products clearly and honestly described.
- To supply products that meet, or exceed, appropriate standards and building and water regulations.
- To provide pre and post sales technical support.
- To provide clear and concise warranty details to customers.

'HWA' members are independently audited to ensure independent governance supports the Charter principle of being clear and honest; not only do members have to comply with the Charter standards, they also have to show an external accreditor how they do it.

For more information visit www.hotwater.org.uk

* For full guarantee Terms & Conditions, please refer to the Guarantee Card within the installation manual.

Notes When Installing an Unvented Cylinder

Qualified installer

All unvented units with a capacity over 15 litres must be installed by a competent installer in line with the building regulations. Installers should always refer to the full manufacturer's installation and commissioning instructions, ensuring they fully complete the benchmark checklist.

Location

With no header tanks to consider, Ultrasteel, Ultrasteel Plus and Aerocyl units can be sited almost anywhere in the home and supply outlets both above and below its location.

With Ultrasteel Plus, the side-mounted hot water outlet gives greater flexibility to the homeowner, as the cylinder can be installed under shelving or other equipment.

Water supply

An adequate and reliable mains water supply is essential to ensure Albion Ultrasteel, Ultrasteel Plus and Aerocyl cylinders deliver the quality and reliable performance you'd expect. We recommend a minimum supply pressure of 1.5 bar, with a flow rate of 25 litres/min.

Compatible boilers

Ultrasteel and Ultrasteel Plus cylinders are compatible with gas, electric or oil fired boilers fitted with an integral control thermostat and cut-out. Any heat source that lacks full thermostatic control cannot typically be connected to unvented systems such as the Ultrasteel or Ultrasteel Plus. This includes most solid fuel boilers, e.g. Agas, Rayburns and Stanleys.

The primary circuit may be open vented or sealed, operating at up to 7 bar. The primary circuit must be pumped.

Connection sizes

- Hot and cold inlets, coil connections – 22mm compression*
- Safety valves – 15mm compression outlet
- Inlet control set – 22mm compression inlet and outlet
- Tundish – 15mm compression inlet / 22mm compression outlet

* Only use the compression nuts supplied with the cylinder.

Secondary return

A dedicated 22mm secondary return connection is fitted to the 210, 250 and 300 litre cylinders. A swept tee (not supplied) can be used to provide a secondary return on 120, 150 and 180 litre cylinders.

Electrical wiring

- All electrical wiring must comply with the latest IEE wiring regulations.
- Wire the controls to the boiler/programmer in accordance with the control system used.

Albion Ultrasteel and Ultrasteel Plus cylinders can be used with W or S Plan layouts, although an S Plan layout will reduce installation costs as Kingspan already supply one of the 2 two-port valves required.

Always isolate from the electricity supply before working on the product.

Each immersion heater must have a permanent connection via a double-pole linked isolating switch with a minimum rating of 13 amp.

Cylinder Weight

Always ensure the unvented cylinder is installed in the correct orientation on a flat surface capable of supporting the weight of a fully plumbed cylinder when full.