



the complete range of
unvented stainless steel cylinders

Warmflow **Cylinders**

warmflow - the perfect choice

Warmflow has been established as a privately owned company since 1970. During this time we have developed into one of the UK and Ireland's leading manufacturers of domestic heating appliances gaining a reputation for high quality, value for money products.

At the core of our success has been our commitment to quality:

‘Quality manufacturing, sales support and back-up service’.

All our products have been independently tested and accredited. Our complete range of unvented cylinders exceed the performance requirements of the latest editions of the Domestic Building Services Compliance Guide (England & Wales), Domestic Technical Handbook (Scotland), Approved Documents Part F & P (Northern Ireland) and Technical Guidance Document L (Republic of Ireland).

In addition, to ensure that we maintain our own in house quality standards, we have in place a BSI approved monitoring system, certified to BS EN ISO 9001:2008.



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Wake up to **lashings** of hot water

with warmflow **cylinders**



The ideal choice of mains pressure hot water cylinders

The cylinder range from Warmflow has been designed to satisfy the hot water needs of even the most demanding consumer. We have focussed our attention on ensuring the largest hot water volumes, shortest heat up times and lowest possible heat losses are achieved throughout our range of KIWA approved unvented cylinders. From the large coil-in-coil heat exchangers to the high performance foam insulation, no effort has been spared in developing a market leading hot water cylinder.

Because our cylinders work at mains pressure, they provide outstanding hot water flow rates, far exceeding those experienced with a combi boiler or traditional vented cylinder. As a result, baths fill quickly and showers are invigorating. And, because we supply an inlet control group with a balanced cold water connection, all the hot and cold taps in the house operate at the same pressure, so blending valves work at their best to ensure consistent comfortable hot water temperatures.

Environmental Investment

Because we use a thicker layer of high quality polyurethane insulation our cylinder range has amongst the lowest fully certified heat loss levels currently on the market, saving precious fuel and reducing carbon dioxide emissions. Our insulation is also CFC/HCFC-free, has a zero Ozone Depletion Potential (ODP) and a Global Warming Potential of only 2. Due to the large surface areas of our coil-in-coil heat exchangers it is also possible for a condensing boiler to work in condensing mode for longer, and cycle less frequently when heating the hot water, thereby helping to further reduce fuel use and emissions.

Quality design with built-in reliability

Rather than using thin wall corrugate flexible tube for our heat exchanger coils, we use rigid coil-in-coil exchangers formed from high quality stainless steel pipe, as we believe this provides greater stability, quality and durability. Because our coils are formed from long lengths of pipe, they have large surface areas for heat transfer - the performance figures speak for themselves.

All our models are manufactured from high quality Duplex stainless steel, a strong and light weight material ideal for pressurised cylinders, and are fully 3rd party tested, approved and certified. Employing patented design features*, innovative manufacturing techniques and industry best practice our cylinders have a 'crevice free' construction which, combined with the use of Duplex stainless steel, ensures corrosion resistance and a long service life. This, and the fact that we test every cylinder to in excess of the maximum pressure it will experience in operation, means we can confidently offer a 25 year guarantee*. So peace of mind comes as standard.

Ease of installation

Our cylinders are supplied with all the necessary parts for a quick, easy, professional installation. We supply only high quality components from recognised, market leading suppliers and factory fit the temperature and pressure relief valve (T&P) and all cylinder thermostats for convenience and safety.



Components supplied include:

- Inlet group complete with
 - strainer
 - pressure reducing valve
 - check valve
 - expansion relief valve
 - balanced cold connection
- Expansion vessel complete with
 - flexible connection hose
 - hanging bracket
- Incoloy 3kW immersion heater(s)
- 2-port zone valve (except Direct models)
- Tundish

Key features

Available in Indirect, Twin Coil, Triple Coil, Direct and Eco Direct models

Volumes from 90 to 300 litres

Duplex stainless steel construction

316 stainless fittings

High performance rigid coils

White leathergrain casing

22mm pipe connections throughout



Triple Coil TR300UV



Twin Coil TW250UV



Eco Direct ED210UV



Indirect IN180UV



Direct DI190UV

*patent pending

* terms & conditions apply, full details available on request

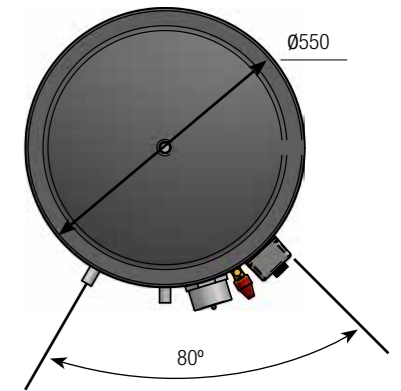
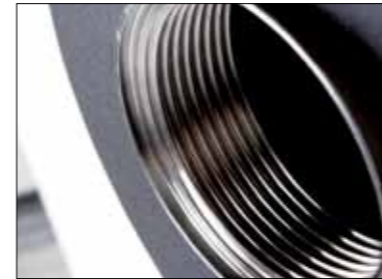
Indirect



Available in six sizes from 120 to 300 litres to suit the vast majority of domestic installations, our Indirect models are the core of our cylinder range. Thanks to our large surface area, high performance heat exchanger coils the Indirect models boast impressive heat up times - the 180 litre model taking just 25 minutes to reach 60°C from cold.

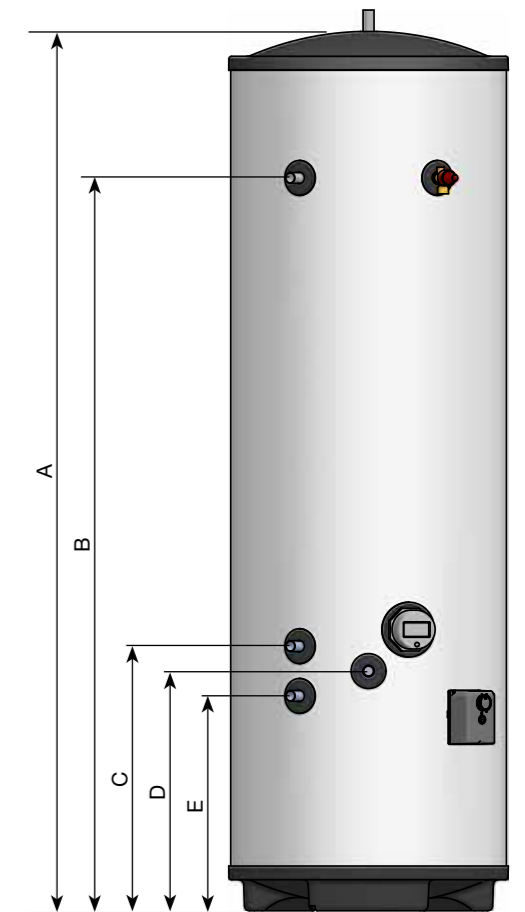
Our Indirect models, like the rest of the range, are designed to be fed directly from the mains water supply via the inlet group supplied, which is capable of receiving incoming water at pressures up to a maximum of 10 bar*.

In order to achieve the best performance from our unvented cylinders the mains water supply must be capable of supplying a flow rate of at least 20 litres per minute with a dynamic pressure of at least 1.5 bar. Should the supply performance be less than this the hot water flow rates will be reduced, however a Warmflow unvented cylinder may still be installed and the benefits of a fast heat up time and minimal heat losses can still be enjoyed.



Indirect Cylinder

	IN120UV	IN150UV	IN180UV	IN210UV	IN250UV	IN300UV
DIMENSIONS						
(A) Overall height (mm)	952	1142	1327	1517	1767	2077
(B) Secondary return connection (mm)	n/a	n/a	n/a	1223	1473	1783
(C) Primary coil upper connection (mm)	462	462	532	532	532	532
(D) Cold inlet connection (mm)	412	412	482	482	482	482
(E) Primary coil lower connection (mm)	362	362	432	432	432	432
OPERATING DATA						
Cold water capacity (litres)	115	146	175	205	245	295
Weight when full (kg)	142	175	207	243	286	340
Standing heat loss (kWh/24h)	1.16	1.36	1.55	1.74	1.99	2.32
PERFORMANCE						
Primary coil rating @ 15L/min (kW)	17.5	17.2	21.3	19.9	22.2	20.4
Heat up time (EN12897) (mins)	19	25	25	31	34	41



*the inlet group, which must be fitted, has a working pressure of 3 bar.

Quality design with built-in reliability



Twin Coil

Our Twin Coil models have all the features and benefits of the Indirect models but come with an additional coil for use with a renewable heat source, or an additional boiler. The models feature large dedicated renewable volumes, making them suitable for use with solar thermal systems in line with the recommendations in the Domestic Building Services Compliance Guide 2010.

The renewable coil (the lower of the two coils) has a large surface area to maximise the use of available low grade heat from a renewable resource. The cylinder thermostats for both coils are factory-fitted and an immersion heater is supplied for back-up. All Twin Coil model feature a dedicated 22mm connection for use with a secondary return (pumped circulation).

Twin coil

	TW210UV	TW250UV	TW300UV
DIMENSIONS			
(A) Overall height (mm)	1517	1767	2077
(B) Secondary return connection (mm)	1223	1473	1783
(C) Primary coil upper connection (mm)	1078	1078	1388
(D) Primary coil lower connection (mm)	978	978	1288
(E) Renewable coil upper connection (mm)	532	532	532
(F) Cold inlet connection (mm)	482	482	482
(G) Renewable coil lower connection (mm)	432	432	432
OPERATING DATA			
Cold water capacity (litres)	201	240	290
Weight when full (kg)	242	287	340
Standing heat loss (kWh/24h)	1.74	1.99	2.32
Dedicated renewable volume	100	100	150
PERFORMANCE			
Primary coil rating @ 15L/min (kW)	21.3	20.2	21.0
Renewable coil rating @ 15L/min (kW)	22.3	22.0	20.7
Heat up time (EN12897) by primary coil (mins)	16	23	22

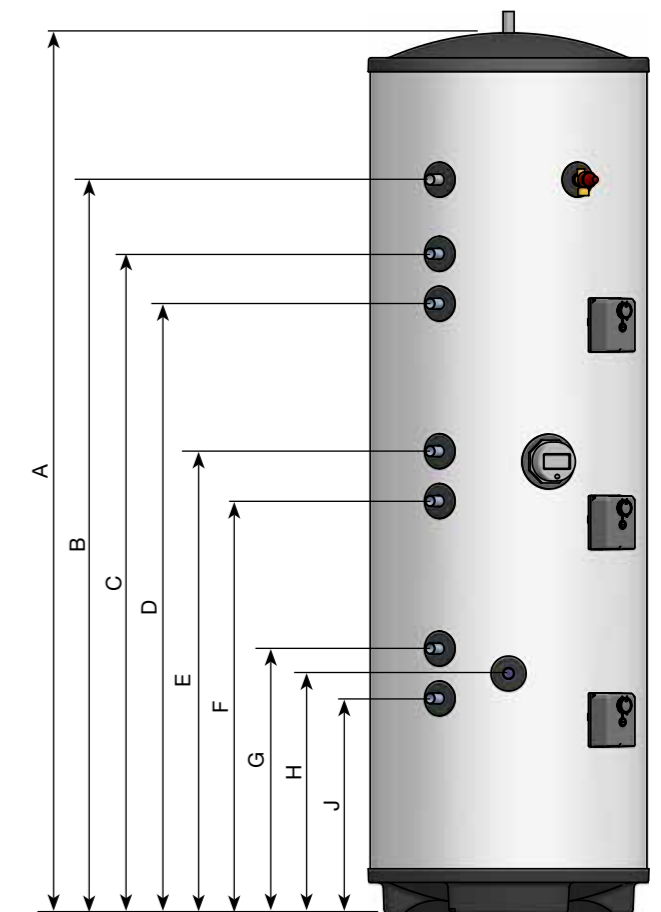
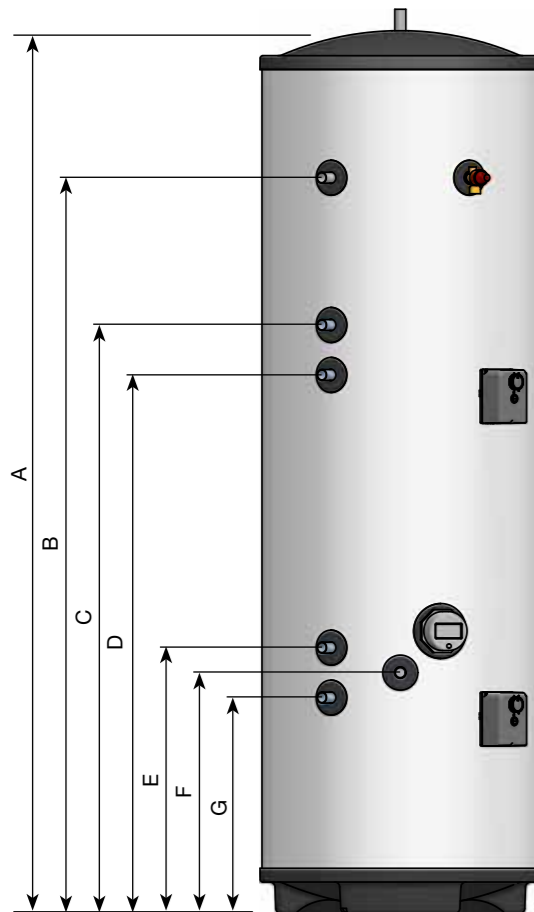
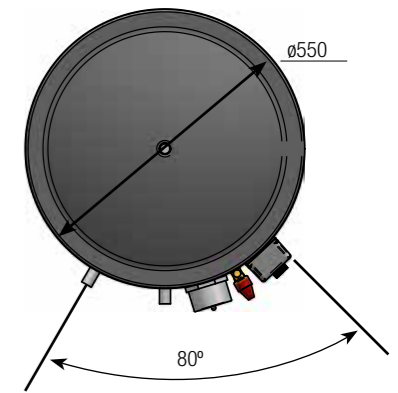
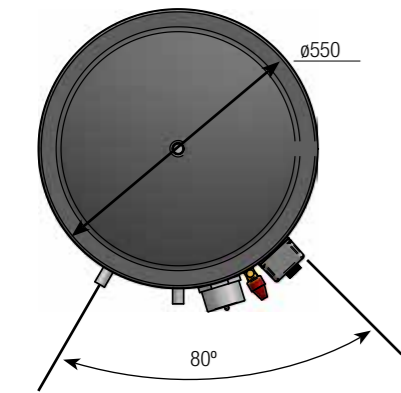
Triple Coil

Similar in specification to the Twin Coil models our Triple Coil models feature a third heat exchanger coil for a further additional heat source. So, for example, the cylinder might be heated by a solar thermal system via the bottom coil, a wood pellet boiler supplying the centre coil and a back-up gas or oil boiler at the top.



Triple coil

	TR250UV	TR300UV
DIMENSIONS		
(A) Overall height (mm)	1767	2077
(B) Secondary return connection (mm)	1473	1783
(C) Primary coil upper connection (mm)	1324	1479
(D) Primary coil lower connection (mm)	1224	1379
(E) Tertiary coil upper connection (mm)	928	1083
(F) Tertiary coil lower connection (mm)	828	983
(G) Renewable coil upper connection (mm)	532	532
(H) Cold inlet connection (mm)	482	482
(J) Renewable coil lower connection (mm)	432	432
OPERATING DATA		
Cold water capacity (litres)	235	285
Weight when full (kg)	286	341
Standing heat loss (kWh/24h)	1.99	2.32
Dedicated renewable volume (litres)	75	100
PERFORMANCE		
Primary coil rating @ 15L/min (kW)	21.3	21.7
Renewable coil pressure @ 15L/min (kW)	20.7	18.9
Tertiary coil rating @ 15L/min (kW)	20.1	19.9
Primary heat up time (EN12897) (mins)	10	12

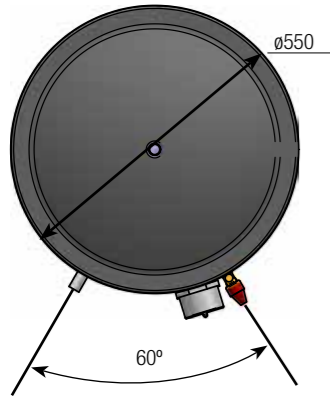


When specifying a system incorporating any unvented cylinder, including Triple Coil models, it is important to note that:

- uncontrolled solid fuel appliances must NOT be used
- gravity circulation is NOT permitted

Controlled solid fuel appliances, such as wood pellet stoves or wood chip boilers, may be used provided their controls are wired through the cylinder thermostat. An additional zone valve may be required.

In instances where an uncontrolled appliance is to be used the cylinder MUST be installed in a vented system (with traditional expansion tank and vent pipe) but the T&P valve should remain fitted.

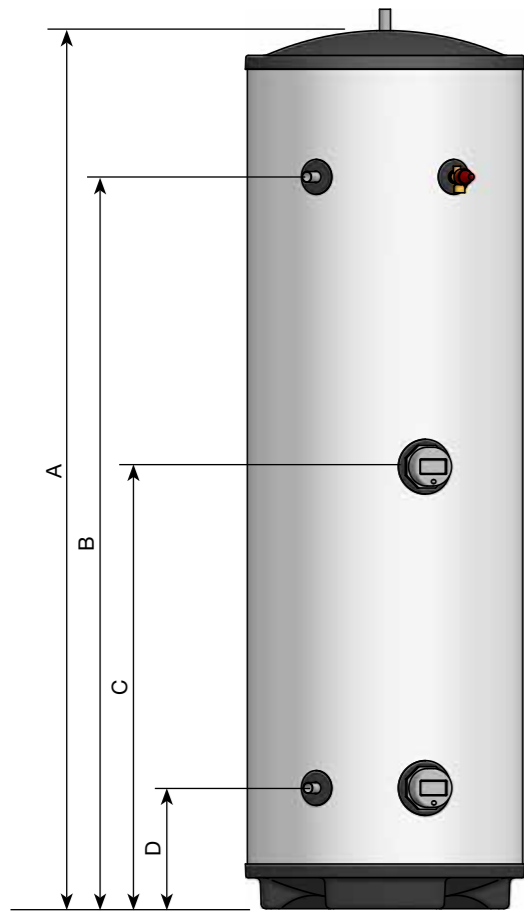
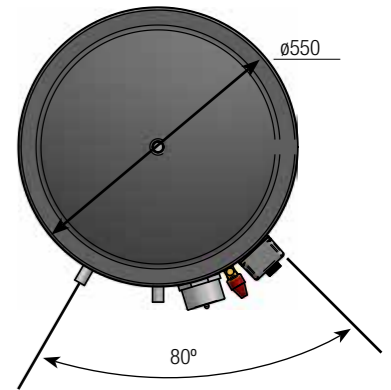


Direct

The electrically heated Direct cylinders are designed for instances where the use of fossil fuels is impractical / unavailable. Featuring two immersion heaters*, one heating the entire cylinder volume and the other heating a boost volume at the top, the cylinders are able to make use of the Economy 7 tariff in order to minimise the cost of hot water. If used in this way, the cylinder should be sized to provide the complete anticipated daily hot water use, thereby reducing the use of the boost element which runs on the more expensive standard tariff.

Eco Direct

The Eco Direct is the Twin Coil equivalent for electric hot water installations. It features two immersion heaters intended for use in the same manner as those of a Direct cylinder, but also has an indirectly heated coil for use with a renewable resource, such as a solar thermal system. The models feature dedicated renewable volumes and large surface area coils to maximise the use of available low grade heat from a renewable resource. By combining the use of renewable energy with the Economy 7 tariff, the Eco Direct models offer improved affordability where the use of fossil fuels is impractical / unavailable.



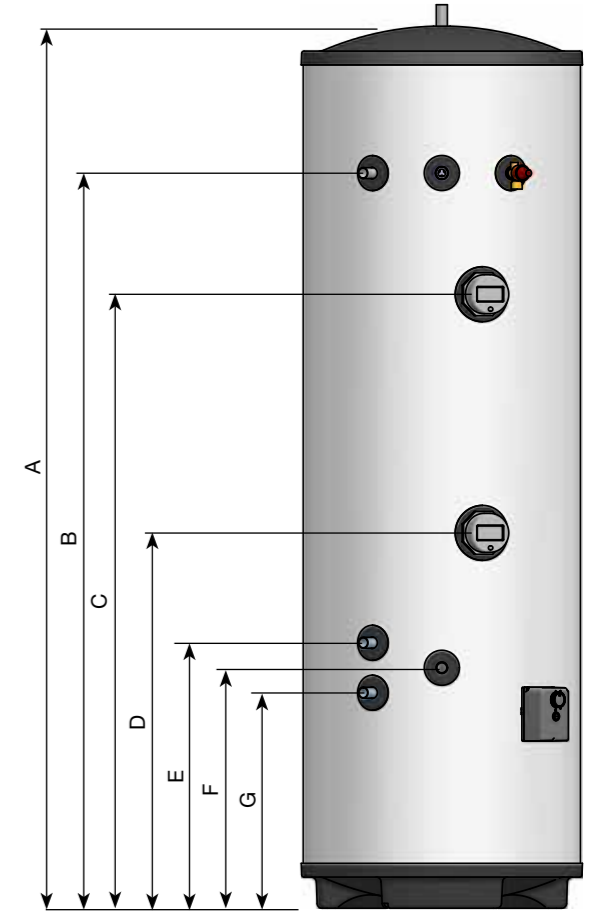
Direct Cylinder

	DI90UV	DI120UV	DI150UV	DI180UV	DI210UV	DI250UV	DI300UV
DIMENSIONS							
(A) Overall height (mm)	767	952	1142	1327	1517	1767	2077
(B) Secondary return connection (mm)	n/a	n/a	n/a	n/a	1223	1473	1783
(C) upper immersion (mm)	n/a	482	577	670	765	890	1045
(D) Cold inlet / lower immersion (mm)	243	243	243	243	243	243	243
OPERATING DATA							
Cold water capacity (litres)	89	118	148	178	208	248	298
Weight when full (kg)	109	142	175	207	243	286	340
Standing heat loss (kWh/24h)	0.97	1.16	1.36	1.55	1.74	1.99	2.32
PERFORMANCE							
Heat up time by lower immersion (mins)	95	126	157	189	220	262	315
Heat up time by upper immersion (mins)	n/a	63	79	95	110	131	157



Eco-Direct Cylinder

	ED210UV	ED250UV	ED300UV
DIMENSIONS			
(A) Overall height (mm)	1517	1767	2077
(B) Secondary return connection (mm)	1223	1473	1783
(C) Upper Immersion (mm)	1078	1230	1540
(D) Lower Immersion (mm)	752	752	1062
(E) Renewable coil upper connection (mm)	532	532	532
(F) Cold inlet connection (mm)	482	482	482
(G) Renewable coil lower connection (mm)	432	432	432
OPERATING DATA			
Cold water capacity (litres)	205	245	295
Weight when full (kg)	243	286	341
Standing heat loss (kWh/24h)	1.74	1.99	2.32
Dedicated renewable volume (litres)	100	100	150
PERFORMANCE			
Renewable coil rating @ 15L/min (kW)	19.9	22.2	20.4
Heat up time by lower immersion (mins)	115	157	157
Heat up time by lower immersion (mins)	63	79	79



*except 90 litre models



quality design with built-in reliability

Warmflow Engineering Co. Ltd. manufacturers a range of products including heating and ventilation, renewable energy, washroom products and gun cabinets, as well as precision sheet metal work and bespoke fabrication in a variety of materials. All of our product brochures can be viewed or downloaded at warmflow.co.uk and are also available in hard copy upon request.



Warmflow Boilers
(brochure 3509)

- Oil-fired boilers
- Flue systems
- Accessories



Warmflow Solar
(brochure 3549)

- Vacuum tube collectors
- Flat panel collectors
- Accessories



Warmflow Sanitary
(brochure 3511)

- Standard urinals
- Premium urinals
- Sanitary ware solutions



Warmflow Fabrication
(brochure 3576)

- General fabrication
- Subcontract manufacture
- Warm air heaters and ducting
- Gun Cabinets

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