Cledhill
the cylinder specialist

# StainlessLite

*Unvented mains pressure water storage in Duplex stainless steel*

SUPPLIERS TO THE MERCHANT TRADE FOR OVER 35 YEARS



# StainlessLite

Providing powerful, mains-pressure performance, it incorporates high flow rate controls, ideal for multi bathroom homes where baths fill very quickly.

There are Indirect and Direct patterns for gas/oil and electricity with model sizes from 60 litres to 400 litres in each pattern with an additional eight options for solar energy.

## Duplex Stainless Steel

The Stainless Lite uses the very latest high specification Duplex to resist all forms of corrosion including crevice and stress whilst its high mechanical strength gives it durability.

The very latest automated welding procedures along with full post weld treatments guarantee welds that are as strong as the parent metal. Stainless Lite is pressure tested in the factory to a full 12 bar which is four times the normal working pressure.

## Corrugated Coil

Stainless Lite uses a high heat transfer corrugated tube heat exchanger to give a 20% faster recovery than plain tube. It is also lighter and stronger than plain tube making the vessel the lightest and easiest to handle on site.

## Maximum Capacity

The unique Gledhill diffuser reduces turbulence when cold water enters the store by baffling the flow. The end result is that the hot water output is equal to the capacity. A 180 litre vessel will produce 180 litres of hot water!

## Gledhill - The Cylinder Specialist

The Gledhill name is synonymous with a family of water heating and storage products that lead the field in terms of innovation and quality. We are respected for our world-leading range of primary stores, but we have also produced unvented cylinders from the very beginning. Stainless Lite is an unvented mains pressure store in Duplex stainless steel that establishes new criteria for quality, performance and life.

## Heat Loss

All Gledhill Stainless Lite cylinders are manufactured using the very latest HCFC free EnviroFoam insulation. This has an Ozone Depletion Potential (ODP) of zero and an industry leading Global Warming Potential (GWP) of 0.7.

Tests show that the 50mm of EnviroFoam insulation injected into the case and covering both domes achieves astonishingly low levels of heat loss, which ensures it is fully compliant with 2010 Part L requirements for both new build and replacement cylinders.

## 25 Year Guarantee

The 25 year guarantee underlines the usual Gledhill confidence in its own products. We regularly have copper cylinders returned to us that we made more than 40 years ago – why should anyone expect less from stainless steel?

## Service

Buying a good reputable product is critical – but it must be available when needed. Gledhill has strategically located manufacturing units so that delivery can be made to a merchant anywhere within hours.

## Quality Standard - EN 12897

All Stainless Lite cylinders are manufactured in accordance with BS EN 12897 the specification for unvented water storage vessels. The cylinders have been tested by KIWA a member of the European Organisation for Technical Approvals (EOTA) and found to comply with Building Regulations G3 and Water Regulations.

In performance, it complies with the requirements of BS6700 and meets the NHBC criteria for domestic properties.

Gledhill also operates a quality management system audited and accepted by the BSI in accordance with BS EN ISO 9001:2008.

The Stainless Lite cylinders are supplied with all the quality fittings, according to model, needed including;

- Immersion heater(s)
- Wiring centre (indirect)
- Inlet control set
- Expansion vessel kit
- Benchmark log book
- 2 port zone valve (indirect)
- Dual thermostat (indirect)
- Tundish
- Installation manual
- Temperature and pressure relief valve (unvented only)
- Control thermostat and drain valve

**Our complete range of stainless steel cylinder options are explained in this brochure:**

# Direct and Indirect

## Unvented cylinders for use with a conventional boiler or electric power

Gledhill Building Products manufacture 16 standard direct and indirect cylinders, ranging from 90 litres to 400 litres capacity.

The Stainless Lite direct model is supplied with two immersions for off-peak and on-peak use (except 90 litre model which only has an on-peak immersion). Therefore, the store of water in the cylinder can be heated utilising the off-peak electricity, making the unit extremely efficient. These cylinders are ultimately lightweight, easy to install answer for electric hot water options.

The immersion heater(s) must be connected to the supply through a double pole linked isolating switch with a minimum breaking capacity of 13A.


All models have a temperature and pressure relief valve factory set at 6 bar and 95°C.

The indirect range has a high efficiency corrugated tube coil which is connected to a conventional boiler to heat the cylinder of water. The coils corrugated design gives you much faster re-heat times than can be achieved with plain tube coils. All indirect models come with an on-peak immersion but only the 250, 300 and 400 litre models are supplied with an off-peak immersion.

All tappings are within a 90˚segment to make installation easier.

| Stainless Lite Direct Technical Specification | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | | **D90** | **D120** | **D150** | **D180** | **D210** | **D250** | **D300** | **D400** |
| Height | mm | 732 | 920 | 1107 | 1295 | 1483 | 1733 | 2020 | 2040 |
| Diameter | mm | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 13 | 18 | 22 | 24 | 28 | 32 | 37 | 48 |
| Weight (full) | kg | 103 | 138 | 172 | 204 | 238 | 282 | 337 | 448 |
| Capacity | litres | 90 | 120 | 150 | 180 | 210 | 250 | 300 | 400 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 12 | 12 | 18 | 18 | 24 | 24 | 35 | 2 x 24 |
| kW rating of primary coil | kW | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Recovery time after 70% draw off | min | 58 | 90 | 121 | 157 | 192 | 224 | 263 | 358/179 |
| Standing losses | kWhr/24hr | 0.80 | 1.00 | 1.20 | 1.40 | 1.60 | 1.75 | 1.93 | 3.33 |

| Stainless Lite Direct Model Selection Guide | | |
|---|---|---|
| **Maximum hot water demand** | **Maximum number of bed spaces (bedrooms)** | **Model** |
| 1 shower room | Bedsit (0) | D120 |
| 1 bathroom | 2 (2) | D150 |
| 1 bathroom | 4 (3) | D180 |
| 1 bathroom & separate shower room | 6 (4) | D210 |
| 1 bathroom & 2 separate shower rooms or 2 bathrooms | 7 (5) | D210 |
| 2 bathrooms & separate shower room | 7 (5) | D250 |
| 2 bathrooms & 2 separate shower rooms | 7 (5) | D300 |
| 3 bathrooms & 2 separate shower rooms | 9 (6) | D400 |

| Stainless Lite Indirect Technical Specification | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | | **IND90** | **IND120** | **IND150** | **IND180** | **IND210** | **IND250** | **IND300** | **IND400** |
| Height | mm | 732 | 920 | 1107 | 1295 | 1483 | 1733 | 2020 | 2040 |
| Diameter | mm | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 19 | 22 | 26 | 28 | 33 | 38 | 44 | 55 |
| Weight (full) | kg | 109 | 142 | 176 | 208 | 243 | 288 | 344 | 455 |
| Capacity | litres | 90 | 120 | 150 | 180 | 210 | 250 | 300 | 400 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 12 | 12 | 18 | 18 | 24 | 24 | 35 | 2 x 24 |
| kW rating of primary coil | kW | 16.5 | 18.0 | 18.5 | 19.0 | 20.5 | 21.5 | 25.0 | 30.5 |
| Recovery time after 70% draw off | min | 16 | 19 | 19 | 21 | 26 | 30 | 32 | 36 |
| Standing losses | kWhr/24hr | 0.80 | 1.00 | 1.20 | 1.40 | 1.60 | 1.75 | 1.93 | 3.33 |

| Stainless Lite Indirect Model Selection Guide | | |
|---|---|---|
| **Maximum hot water demand** | **Maximum number of bed spaces (bedrooms)** | **Model** |
| 1 shower room | Bedsit (0) | IND90 |
| 1 bathroom | 2 (2) | IND120 |
| 1 bathroom | 4 (3) | IND120 |
| 1 bathroom & separate shower room | 6 (4) | IND150 |
| 1 bathroom & 2 separate shower rooms or 2 bathrooms | 7 (5) | IND180 |
| 2 bathrooms & separate shower room | 7 (5) | IND210 |
| 2 bathrooms & 2 separate shower rooms | 7 (5) | IND250 |
| 3 bathrooms & 2 separate shower rooms | 9 (6) | IND300 |
| 3 bathrooms & 3 separate shower rooms | 9 (6) | IND400 |

**Notes:**

1 Recovery time is based on primary coil/immersion heater duty (ie. assumes the boiler output is adequate).
2 All connections are supplied with compression fittings for direct connection to copper pipework.
3 The heat up times shown for the D400 model indicate the times when 1 or 2 immersions are fitted.
4 The model sizes shown are based on a typical days hot water use assuming an Economy 7 tariff is provided. A reduction of one model size can normally be made with an Economy 10 tariff.
5 When using the Direct model for high specification developments, an increase of one model size should be considered.

# StainlessLite Solar

## *Unvented cylinders incorporating a solar coil*

Gledhill has developed a range of cylinders specifically for solar applications in mind, therefore providing an efficient way of providing domestic hot water. Each model features a dedicated high performance solar coil, transferring the maximum amount of heat from the solar circuit to the stored water.

The cylinders are compatible with a wide range of solar systems available through the United Kingdom and have been designed to maximise the dedicated solar volume.

The direct models are electrically heated cylinders, using the 3kW immersion heater supplied with the unit, with a high performance solar coil. They are capable of meeting the requirements of Building regulations, provided that it is matched to the panels and the hot water requirement correctly. The indirect cylinders are heated by a conventional boiler (either gas or oil) through a second high performance coil.

The solar range is based on the standard Stainless Lite cylinders, therefore still providing you with mains pressure hot water, low standing heat losses and lightweight construction. The range of cylinders is suitable for properties from a bedsit to a 5 bedroom family home.

| Stainless Lite Direct Solar Technical Specification | | | | | | |
|---|---|---|---|---|---|---|
| **Description** | | **SOL180d** | **SOL210d** | **SOL250d** | **SOL300d** | **SOL400d** |
| Height | mm | 1295 | 1483 | 1733 | 2020 | 2040 |
| Diameter | mm | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 26 | 30 | 34 | 39 | 49 |
| Weight (full) | kg | 206 | 240 | 284 | 339 | 449 |
| Capacity | litres | 180 | 210 | 250 | 300 | 400 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 18 | 24 | 24 | 35 | 2 x 24 |
| kW rating of primary coil | kW | n/a | n/a | n/a | n/a | n/a |
| Recovery time after 70% draw off | min | 90 | 115 | 139 | 187 | 260 |
| Standing losses | kWhr/24hr | 1.40 | 1.60 | 1.75 | 1.93 | 3.33 |
| Surface area of solar coil | $m^2$ | 0.680 | 0.680 | 0.970 | 0.970 | 1.270 |
| Dedicated solar volume | litres | 60 | 70 | 84 | 100 | 150 |

| Model Selection Guide | | | |
|---|---|---|---|
| **Maximum hot water demand** | **Maximum solar panel area ($m^2$)** | **Bedrooms** | **Model** |
| 1 shower room | 2.4 | Bedsit | SOL180d |
| 1 bathroom | 2.8 | 1-3 | SOL210d |
| 1 bathroom & separate shower room | 3.36 | 1-3 | SOL250d |
| 1 bathroom & 2 separate shower rooms | 4.0 | 2-4 | SOL300d |
| 2 bathrooms & separate shower room | 6.0 | 4-5 | SOL400d |

**Notes:**

1 Recovery time is based on primary coil/immersion heater duty (ie. assumes the boiler output is adequate).
2 All connections are supplied with compression fittings for direct connection to copper pipework.
3 The model sizes shown are based on a typical days hot water use assuming an Economy 7 tariff is provided. A reduction of one model size can normally be made with an Economy 10 tariff.
4 When using the Direct model for high specification developments, an increase of one model size should be considered.
5 When selecting a solar model, it is important to check the dedicated solar volume is suitable for either the total floor area of the dwelling or the total net area of the solar panel to ensure compliance with Building Regulations.
6 Maximum solar panel area is calculated based on 25l/$m^2$ of net solar panel area.

| Stainless Lite Indirect Solar Technical Specification | | | | | | |
|---|---|---|---|---|---|---|
| **Description** | | **SOL180i** | **SOL210i** | **SOL250i** | **SOL300i** | **SOL400i** |
| Height | mm | 1295 | 1483 | 1733 | 2020 | 2040 |
| Diameter | mm | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 30 | 35 | 40 | 46 | 59 |
| Weight (full) | kg | 210 | 245 | 290 | 346 | 459 |
| Capacity | litres | 180 | 210 | 250 | 300 | 400 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 18 | 24 | 24 | 35 | 2 x 24 |
| kW rating of primary coil | kW | 18.0 | 18.5 | 19.0 | 20.5 | 22.0 |
| Recovery time after 70% draw off | min | 16 | 16 | 19 | 20 | 24 |
| Standing losses | kWhr/24hr | 1.40 | 1.60 | 1.75 | 1.93 | 3.33 |
| Surface area of solar coil | $m^2$ | 0.680 | 0.680 | 0.970 | 0.970 | 1.270 |
| Dedicated solar volume | litres | 70 | 90 | 107 | 125 | 165 |

| Model Selection Guide | | | |
|---|---|---|---|
| **Maximum hot water demand** | **Maximum solar panel area ($m^2$)** | **Bedrooms** | **Model** |
| 1 bathroom | 2.8 | 1-3 | SOL180i |
| 1 bathroom & separate shower room | 3.6 | 1-3 | SOL210i |
| 1 bathroom & 2 separate shower rooms | 4.8 | 2-4 | SOL250i |
| 2 bathrooms & separate shower room | 5.0 | 3-4 | SOL300i |
| 2 bathrooms & 2 separate shower rooms | 6.6 | 4-5 | SOL400i |

**Notes:**

1 Recovery time is based on primary coil/immersion heater duty (ie. assumes the boiler output is adequate).
2 All connections are supplied with compression fittings for direct connection to copper pipework.
3 When selecting a solar model, it is important to check the dedicated solar volume is suitable for either the total floor area of the dwelling or the total net area of the solar panel to ensure compliance with Building Regulations.
4 Maximum solar panel area is calculated based on 25l/$m^2$ of net solar panel area.

# StainlessLite Slimline

## *Unvented cylinders designed for restricted spaces with optional solar coil*

The new Stainless Lite Slimline cylinders have been added to our range of Duplex stainless steel cylinders, to enable you to utilise those smaller storage areas.

The standard size Stainless Lite cylinders are 550mm in diameter but the new slimline range has a reduced diameter of 475mm.This now enables installers to fit the new cylinders into smaller properties or older homes where there are space limitations, and so provide the benefits of mains pressure hot water.

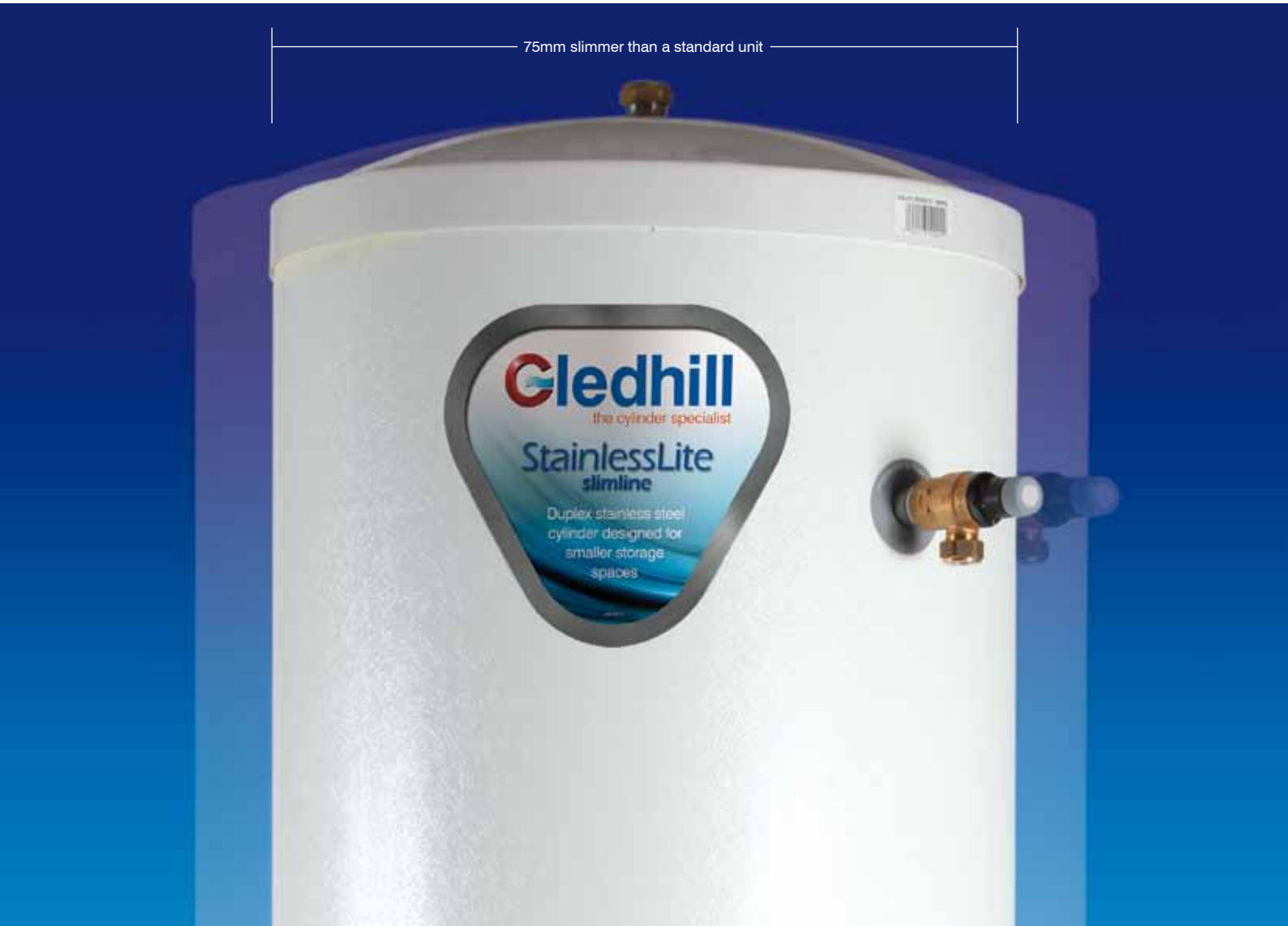
The new range of Stainless Lite Slimline cylinders come in sizes from 60 litres to 210 litres in both indirect and direct versions. In addition, it also comes with a solar option in 180 litre and 210 litre sizes. This now means there will be a model to suit most homes.

The introduction of the Slimline solar range enables homeowners to not only upgrade to a Duplex stainless steel cylinder, but also have the added benefit of being able to utilise solar power to contribute to the heating of the store.

Properties that previously could not enjoy mains pressure hot water can now enjoy powerful, mains-pressure performance, incorporating high flow rate controls, ideal for multi bathroom homes, where baths fill very quickly.

You will still benefit from the high heat transfer corrugated tube giving 20% faster recovery than plain tubing, controlled stratification and minimal heat loss.

All slimline models come complete with an on-peak immersion and the 120-210 direct models also have an off-peak immersion.



| Stainless Lite Direct Slimline and Solar Technical Specification | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | | **D60-SL** | **D90-SL** | **D120-SL** | **D150-SL** | **D180-SL** | **D210-SL** | **SOL 180d-SL** | **SOL 210d-SL** |
| Height | mm | 704 | 976 | 1284 | 1520 | 1790 | 2005 | 1790 | 2005 |
| Diameter | mm | 475 | 475 | 475 | 475 | 475 | 475 | 475 | 475 |
| Weight (empty) | kg | 13 | 16 | 22 | 30 | 31 | 32 | 32 | 36 |
| Weight (full) | kg | 73 | 106 | 142 | 180 | 211 | 242 | 212 | 246 |
| Capacity | litres | 60 | 90 | 120 | 150 | 180 | 210 | 180 | 210 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 12 | 12 | 12 | 18 | 18 | 24 | 18 | 24 |
| kW rating of primary coil | kW | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Recovery time after 70% draw off | min | 39 | 58 | 90 | 121 | 157 | 192 | 90 | 115 |
| Standing losses | kWhr/24hr | 0.95 | 1.25 | 1.52 | 1.77 | 2.01 | 2.23 | 2.01 | 2.23 |
| Surface area of solar coil | $m^2$ | n/a | n/a | n/a | n/s | n/a | n/a | 0.680 | 0.680 |
| Dedicated solar volume | litres | n/a | n/a | n/a | n/a | n/a | n/a | 60 | 70 |

| Stainless Lite Indirect Slimline and Solar Technical Specification | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Description** | | **IND60-SL** | **IND90-SL** | **IND120-SL** | **IND150-SL** | **IND180-SL** | **IND210-SL** | **SOL 180i-SL** | **SOL 210i-SL** |
| Height | mm | 704 | 976 | 1284 | 1520 | 1790 | 2005 | 1790 | 2005 |
| Diameter | mm | 475 | 475 | 475 | 475 | 475 | 475 | 475 | 475 |
| Weight (empty) | kg | 14 | 19 | 23 | 28 | 31 | 34 | 33 | 37 |
| Weight (full) | kg | 74 | 109 | 143 | 178 | 211 | 244 | 213 | 247 |
| Capacity | litres | 60 | 90 | 120 | 150 | 180 | 210 | 180 | 210 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 12 | 12 | 12 | 18 | 18 | 24 | 18 | 24 |
| kW rating of primary coil | kW | 15.0 | 16.5 | 18.0 | 18.5 | 19.0 | 20.5 | 18.0 | 18.5 |
| Recovery time after 70% draw off | min | 11 | 16 | 19 | 19 | 21 | 26 | 16 | 16 |
| Standing losses | kWhr/24hr | 0.95 | 1.25 | 1.52 | 1.77 | 2.01 | 2.23 | 2.01 | 2.23 |
| Surface area of solar coil | $m^2$ | n/a | n/a | n/a | n/s | n/a | n/a | 0.680 | 0.680 |
| Dedicated solar volume | litres | n/a | n/a | n/a | n/a | n/a | n/a | 60 | 70 |

| Model Selection Guide | | | |
|---|---|---|---|
| **Maximum hot water demand** | **Maximum number of bed spaces (bedrooms)** | **Direct Model** | **Indirect Model** |
| 1 shower room | Bedsit (0) | D120-SL | IND90-SL |
| 1 bathroom | 2 (2) | D150-SL | IND120-SL |
| 1 bathroom | 4 (3) | D180-SL | IND120-SL |
| 1 bathroom & separate shower room | 6 (4) | D210-SL | IND150-SL |
| 1 bathroom & 2 separate shower rooms or 2 bathrooms | 7 (5) | D210-SL | IND180-SL |
| 2 bathrooms & separate shower room | 7 (5) | - | IND210-SL |

| Solar Model Selection Guide | | | | |
|---|---|---|---|---|
| **Maximum hot water demand** | **Maximum solar panel area ($m^2$)** | **Bedrooms** | **Direct Model** | **Indirect Model** |
| 1 shower room | 2.4 | Bedsit | SOL180d-SL | - |
| 1 bathroom | 2.4 | 1-3 | - | SOL180i-SL |
| 1 bathroom | 2.8 | 1-3 | SOL210d-SL | - |
| 1 bathroom & separate shower room | 2.8 | 1-3 | - | SOL210i-SL |

**Notes:**

1 Recovery time is based on primary coil/immersion heater duty (ie. assumes the boiler output is adequate).
2 All connections are supplied with compression fittings for direct connection to copper pipework.
3 The Direct model sizes shown are based on a typical days hot water use assuming an Economy 7 tariff is provided. A reduction of one model size can normally be made with an Economy 10 tariff.
4 When using the Direct model for high specification developments, an increase of one model size should be considered.
5 When selecting a solar model, it is important to check the dedicated solar volume is suitable for either the total floor area of the dwelling or the total net area of the solar panel to ensure compliance with Building Regulations.
6 Maximum solar panel area is calculated based on 25l/$m^2$ of net solar panel area.

# StainlessLite HP

## *Unvented cylinders specifically designed to work with a heat pump*

Gledhill have produced an unvented stainless steel unit specifically for heat pump applications providing mains pressure domestic hot water. Utilising the well established Gledhill Stainless Lite unvented hot water cylinder, this product has been developed to maximise the lower temperatures available from the heat pump.

The heat exchanger is a totally new design. It consists of a multi-pass corrugated stainless steel tube in parallel to reduce the pressure loss whilst maximising the heat exchange. Many medium to large heat pumps need heat exchangers in the store that will cope with the higher flow rates associated with primary temperatures that are typically 50˚C or 60˚C.

All the usual features of the Gledhill Stainless Lite are maintained together with all the necessary controls and expansion devices included.

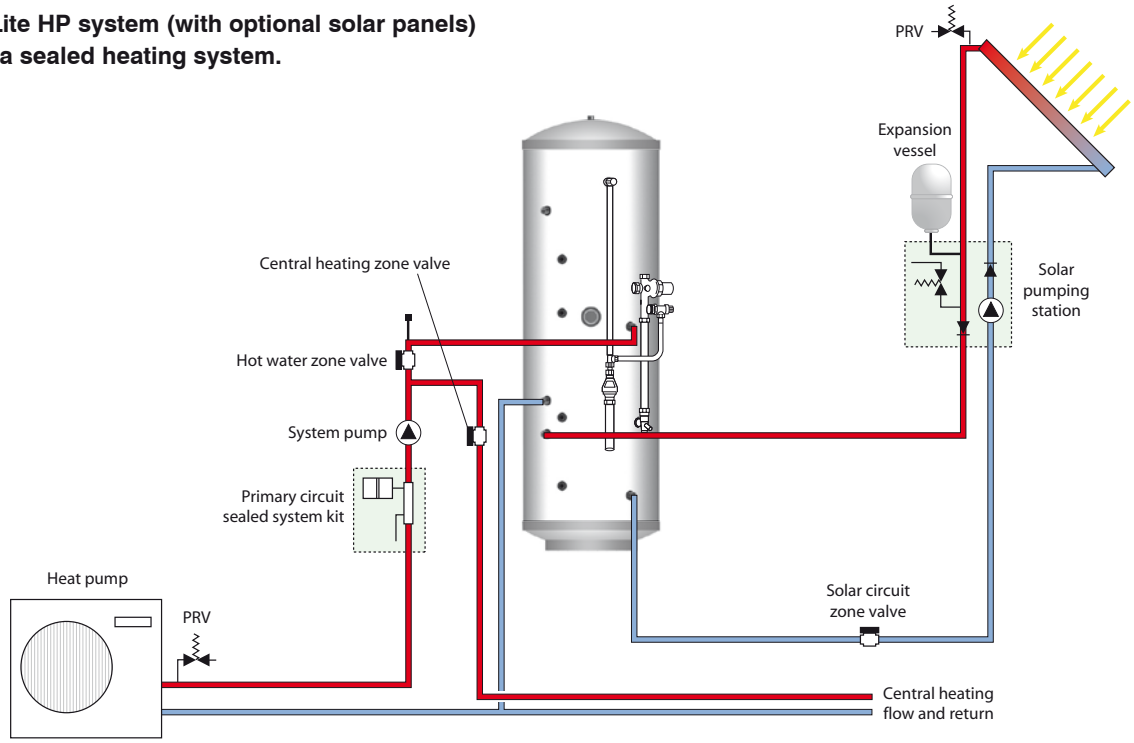
Due to the fact that many heat pumps will not raise the stored water temperature to 60˚C, which is necessary to prevent the growth of legionella, the Stainless Lite HP model is supplied with an immersion heater tapping and a thermostat pocket.

It is recommended that a thermostat is fitted which brings the immersion heater 'on' at a temperature just below the heat pump maximum and switches off at 60˚C or 65˚C. In this way the use of 'direct' electricity is minimised and most of the water heating is achieved through the heat pump.


The key features of the Stainless Lite HP are:

- The latest and highest quality Duplex Stainless Steel.
- A 25 year guarantee.
- Fast reheat rate from its purpose designed low resistance coil.
- One of the highest insulation ratings on offer today.
- The Stainless Lite HP is supplied with all the necessary connections including two dry thermostat pockets.

**Stainless Lite HP system (with optional solar panels) for use on a sealed heating system.**




| Stainless Lite HP Technical Specification | | | | | | |
|---|---|---|---|---|---|---|
| **Description** | | **HP180IND** | **HP210IND** | **HP250IND** | **HP300IND** | **HP400IND** |
| Height | mm | 1295 | 1483 | 1733 | 2020 | 2040 |
| Diameter | mm | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 33 | 38 | 43 | 49 | 61 |
| Weight (full) | kg | 213 | 248 | 293 | 349 | 461 |
| Capacity | litres | 180 | 210 | 250 | 300 | 400 |
| Pressure regulator | bar | 3 | 3 | 3 | 3 | 3 |
| Expansion vessel size | litres | 18 | 24 | 24 | 35 | 2 X 24 |
| kW rating of heat pump coil | kW | 24.3 | 26.2 | 27.5 | 34.2 | 47.2 |
| Heat pump coil pressure loss | bar | 0.048 | 0.054 | 0.060 | 0.019 | 0.027 |
| Surface area of heat pump coil | $m^2$ | 1.36 | 1.56 | 1.94 | 2.04 | 2.91 |
| Standing losses | kWhr/24hr | 1.40 | 1.60 | 1.75 | 1.93 | 3.33 |
| Surface area of solar coil | $m^2$ | 0.680 | 0.680 | 0.970 | 0.970 | 1.270 |
| Dedicated solar volume | litres | 65 | 75 | 90 | 105 | 130 |

| Model Selection Guide | | | | |
|---|---|---|---|---|
| **Maximum hot water demand** | **Maximum solar panel area ($m^2$)** | **Bedrooms** | **Model (without solar heating input)** | **Model (with solar heating input)** |
| 1 bathroom | 2.6 | 1-3 | HP180IND | HP180IND |
| 1 bathroom & separate shower room | 3.0 | 2-3 | HP180IND | HP210IND |
| 1 bathroom & 2 separate shower rooms | 3.6 | 2-3 | HP180IND | HP250IND |
| 2 bathrooms & separate shower room | 4.2 | 2-4 | HP210IND | HP300IND |
| 2 bathrooms & 2 separate shower rooms | 5.2 | 2-4 | HP250IND | HP400IND |
| 2 bathrooms & 2 separate shower rooms | - | 3-5 | HP300IND | - |
| 2 bathrooms & 3 separate shower rooms | - | 4-5 | HP400IND | - |

**Notes:**

1 All connections are supplied with compression fittings for direct connection to copper pipework.
2 The suggested model sizes shown are based on a typical days hot water use assuming that the heat pump will heat the domestic hot water to approximately 50˚C.
3 When connecting to solar heating input, it is important to check the dedicated solar volume is suitable for the total floor area to comply with Building Regulations.
4 The Stainless Lite HP units are the same whether you are running solar thermal systems in conjunction with heat pump or just using a heat pump input only.
5 The solar dedicated volume is only applicable when used in conjunction with solar thermal systems.
6 When selecting a solar model, it is important to check the dedicated solar volume is suitable for either the total floor area of the dwelling or the total net area of the solar panel to ensure compliance with Building Regulations.
7 Maximum solar panel area is calculated based on 25 l/$m^2$ of net solar panel area.
8 Heat pump kW rating performed at 80˚C and 0.25 l/s.

# Buffer Store

## Vented store for use with a heat pump


Buffer vessels are simply a duplex stainless steel tank that contains a volume of water, increasing the overall volume of the heating distribution system. This extra volume of water is designed to absorb any extra heat generated by the heat pump in low load conditions.

If the building cannot absorb the extra heat generated the return temperature to the heat pump will increase and will potentially cause the heat pump to turn off. If the temperature drops in the water returning to the heating appliance, then it will turn itself back on. If this cycling occurs at a greater frequency than the minimum run time for the appliance, this is classed as short cycling. The aim of a buffer vessel is to remove the possibility of any short cycling of the heating appliance.

These buffer vessels are designed to work at up to 3.5 bar pressure for primary water only. They should **not** be used for potable domestic hot water and are not approved for this purpose.

| Stainless Lite Direct Buffer Store Technical Specification | | | | | | |
|---|---|---|---|---|---|---|
| **Description** | | **90D** | **120D** | **210D** | **300D** | **400D** |
| Height | mm | 732 | 920 | 1483 | 2020 | 2030 |
| Diameter | mm | 550 | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 13 | 18 | 28 | 37 | 51 |
| Weight (full) | kg | 103 | 138 | 238 | 337 | 451 |
| Capacity | litres | 90 | 120 | 210 | 300 | 400 |
| Standing losses | kWhr/24hr | 0.80 | 1.00 | 1.60 | 1.93 | 3.33 |

| Stainless Lite Indirect Buffer Store Technical Specification | | | | | |
|---|---|---|---|---|---|
| **Description** | | **120IND** | **210IND** | **300IND** | **400IND** |
| Height | mm | 920 | 1483 | 2020 | 2030 |
| Diameter | mm | 550 | 550 | 550 | 630 |
| Weight (empty) | kg | 22 | 33 | 44 | 55 |
| Weight (full) | kg | 142 | 243 | 344 | 455 |
| Capacity | litres | 120 | 210 | 300 | 400 |
| Standing losses | kWhr/24hr | 1.00 | 1.60 | 1.93 | 3.33 |

# StainlessLite Triple Coil

## Open vented cylinders for use with multiple heat sources

To satisfy the growing demand for a stainless steel cylinder being capable of accepting multiple heat sources, Gledhill has developed a triple coil version of the Stainless Lite cylinder, which can accept solar and uncontrolled heat sources such as solid fuel or wood burning appliances.

The cylinder has a dedicated solar coil at the bottom of the cylinder. It then has a double coil for the solid fuel heat supply and a single coil for the gas/oil boiler. It also has a back up heat source in the form of an immersion heater.

The three separate coils will work independently providing the maximum heat to the store, and subsequently reduce the households fuel bills. The boiler coil and solar coil are both 22mm and the solid fuel gravity circulation are 28mm.

| Stainless Lite Triple Coil Technical Specification | | | |
|---|---|---|---|
| **Description** | | **IND300-STC** | **IND400-STC** |
| Height | mm | 2020 | 2040 |
| Diameter | mm | 550 | 630 |
| Weight (empty) | kg | 46 | 60 |
| Weight (full) | kg | 346 | 460 |
| Capacity | litres | 300 | 400 |
| kW rating of primary coil | kW | 20.5 | 20.5 |
| Recovery time after 70% draw off | min | 41 | 45 |
| Standing losses | kWhr/24hr | 1.93 | 3.33 |
| Surface area of solar coil | $m^2$ | 0.97 | 1.27 |
| Dedicated solar volume | litres | 100 | 150 |
| Maximum solar panel area | $m^2$ | 4.0 | 6.0 |

**Notes:**

1 Recovery time is based on primary coil/immersion heater duty (ie. assumes the boiler output is adequate).
2 All connections are supplied with compression fittings for direct connection to copper pipework.
3 When selecting a solar model, it is important to check the dedicated solar volume is suitable for either the total floor area of the dwelling or the total net area of the solar panel to ensure compliance with Building Regulations.
4 Maximum solar panel area is calculated based on 25l/$m^2$ of net solar panel area.

# StainlessLite Vented

## Open vented cylinder for use with uncontrolled heat sources

The Stainless Lite Vented provides a high quality open vented stainless steel cylinder for use in a traditional vented cylinder installation. As an open vented cylinder, it also permits the connection of an uncontrolled heat source such as a solid fuel or wood burning appliance, which is not permitted with an unvented cylinder.

The technical and dimensional data for the Stainless Lite Vented is the same as the Stainless Lite direct and Stainless Lite Solar, both of which are available in direct and indirect configurations. Full technical details can be found on pages 5-8 in this brochure.

The only difference between the vented and unvented range of stainless steel cylinders is that instead of being supplied with the unvented kit, the vented option is supplied with a control thermostat and a drain valve.

The traditional vented storage water heater has a proven track record of reliability and safety. The operating pressure is dictated by the vertical distance between the cistern tank and the bottom of the heater.

The open vented system is renowned for its safety because the open vent that discharges in to the cistern tank automatically equalises any excess pressure or vacuum.

The Stainless Lite Vented cylinder is fully compliant with 2010 Part L regulations, therefore it now enables you to fit a vented cylinder into a new build property.

Cledhill
the cylinder specialist
StainlessLite
Mains pressure water storage from a Duplex stainless steel cylinder
MANUFACTURED IN BLACKPOOL

# Providing both quality and performance

# UK Super Depot Infrastructure

**Blackpool**
Head Office and
Stainless Steel Manufacturing Site

**Blackburn**
Depot Manager: Daniel Wilson
Tel: 01254 693844 Fax: 01254 673615

**Bristol**
Depot Manager: Paul Holbrook
Tel: 01275 810699 Fax: 01275 810698

**Dudley**
Depot Manager: John Parton
Tel: 01384 636245 Fax: 01384 413700

**Hemel Hempstead**
Depot Manager: Paul Ranscome
Tel: 01442 862233 Fax: 01442 862234

**Huntingdon**
Depot Manager: Fraser Watt
Tel: 01480 415980 Fax: 01480 413331

**Inverkeithing**
Depot Manager: Stuart Watt
Tel: 01383 414133 Fax: 01383 413123

**Liverpool**
Depot Manager: Craig Dixon
Tel: 0151 227 1574 Fax: 0151 236 0898

**Maidstone**
Depot Manager: Mark Tipping
Tel: 01622 714770 Fax: 01622 882286

**Nottingham**
Depot Manager: Marc Causer
Tel: 01773 580684 Fax: 01773 581129

**Paignton**
Depot Manager: Terry Cooper-Haime
Tel: 01803 557470 Fax: 01803 559213

**Reading**
Depot Manager: Rob Barnes
Tel: 01189 669990 Fax: 01189 669696

**Southampton**
Depot Manager: Rob Gunning
Tel: 01329 846601 Fax: 01329 845881

**For technical advice call**
**01253 474584**


**Gledhill Building Products Limited**
Sycamore Estate, Squires Gate, Blackpool FY4 3RL Tel: 01253 474550 Fax: 01253 474551 sales@gledhill.net

Gledhill Building Products produce cylinders for use with a wide range of heat sources including;

**Gas and oil boilers**
**Ground source heat pumps**
**Electricity**
**Solar energy**
**Air source heat pumps**
**Wood burning stoves**

For further information of Gledhill products can be found on the internet at www.gledhill.net

"Only the best is acceptable"

kiwa approved product
UK WATER SUPPLY REGULATIONS

kiwa approved product
UK BUILDING REGULATIONS

BSI
FM 2057
Gledhill cylinders are produced under an ISO 9001:2008 Quality System accepted by BSI

benchmark
COLLECTIVE MARK
THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS



**Spec 103/02 11/10**