Rectangular Tanks

A range of Elson alternative products from Gledhill Building Products
The Gledhill Direct Combination Tank is an electrically heated combination hot water storage unit providing gravity hot water and can be installed at high level in a cupboard or in a roof space.

It is available in three standard capacities as a neat, compact unit it is the cost-effective alternative to inefficient, old-fashioned cylinders and tanks. Designed for use with all off-peak tariffs, the thermal properties of the HCFC free insulation ensure low energy costs to the consumer.

The Direct Combination Tank ensures a fast, simple installation that will save money, time and materials, and can be supplied with 2x3 kilowatt immersion heaters and thermostats factory-fitted to make installation even quicker.

By using the latest insulation, heat loss is kept to a minimum – providing low running costs for the consumer.

The lower heater offers maximum storage using low-rate electricity and the upper a fast, economical boost. For optimum efficiency the Electricity Association recommend that the lower thermostat be set at 65°C and the upper at 55°C.

The Direct Combination Tank is available in a large range of bespoke capacities, which can be specified at the time of order, therefore can be confidently specified to suit any domestic application and a wide range of commercial applications.

<table>
<thead>
<tr>
<th>Direct Combination Tank Technical Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Appliance height</td>
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<tr>
<td>Appliance width</td>
</tr>
<tr>
<td>Appliance depth</td>
</tr>
<tr>
<td>Approx weight (full)</td>
</tr>
<tr>
<td>Total volume (nominal)</td>
</tr>
<tr>
<td>Property size</td>
</tr>
</tbody>
</table>

Please note other sizes/bespoke designs are available on request, contact your local manufacturing depot for more details.
The Indirect Combination Tank is an indirectly heated combination hot water storage unit which provides gravity hot water, and can be installed at high level in a cupboard or in a roof space.

It has been specifically designed for sealed primary systems, district heating schemes and central boiler plants. It is also suitable for use with open vented primary systems using an external primary feed and expansion tank and cold water feed cistern.

As a result of the design and HCFC-free insulation, significant savings can be made on the installation time and the energy costs.

The Indirect Combination is suitable for use with system boilers as well as individual sealed heating systems. When using this unit instead of a cylinder and header tank, you are able to make significant financial savings.

The Indirect Combination Tank is available in a large range of bespoke capacities, which can be specified at the time of order, therefore can be confidently specified to suit any domestic application and a wide range of commercial applications.

<table>
<thead>
<tr>
<th>Indirect Combination Tank Technical Specification</th>
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<tr>
<td>Description</td>
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<tr>
<td>Appliance height (mm)</td>
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<td>Appliance width (mm)</td>
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<tr>
<td>Appliance depth (mm)</td>
</tr>
<tr>
<td>Approx weight (full) (kg)</td>
</tr>
<tr>
<td>Total volume (nominal) (litres)</td>
</tr>
<tr>
<td>Property size</td>
</tr>
</tbody>
</table>

Please note other sizes/bespoke designs are available on request, contact your local manufacturing depot for more details.
Seagull
Alternative to Elson Diamond, Emerald and Sapphire

A fully packaged plumbing unit, the cold water supply tank, the primary feed and expansion tank and the domestic hot water storage tank are all fully packaged in rectangular or circular formats. The minimum of installation time is required because the time wasted in making connections between remote sited tanks and the hot water storage tank has been completely removed.

Specified by local authorities and leading architects and consultants, the Seagull packaged plumbing units are designed to make the maximum use of available space. The rectangular version is particularly suitable for use in restricted areas and in roof areas where headroom is limited. Circular patterns are also available.

Seagull packaged plumbing units are another method by which dry roof spaces may be achieved. This is becoming more important as insulation standards are increasing.

Features

Gledhill non standard domestic products are all produced under an ISO 9001:2008 Quality System accepted by the British Standards Institution. Combination tanks can be manufactured to comply with BS3198 if requested. The size and position of tappings can be specified at the time of order and compression fittings can be requested. Pumped and gravity systems are available, please state when ordering. Units are normally supplied insulated to the water line.
The Seagull has integral primary and secondary cold feed tanks complete with their own ball valves and overflows. A genuine double feed tank: either can be drained down for maintenance, leaving the other circuit intact. There is complete safety in using primary circuit additives because the true double feed format - two ball valves - prevents additive migration from primary to secondary systems.

**Insulation**

Units are supplied factory insulated. Steel Ace insulation is available on both the rectangular and circular patterns, and has a Plastisol finish. Designed for maximum efficiency and long life the zinc alloy steel outer case covers the thick layer of insulation. Circular patterns can be supplied with Flexilag insulation which is covered with a strong PVC sleeve.

**Installation**

The rate of flow from a hot tap is dependant on the height of the tank above the tap. The cold water level should be 1 metre above the highest hot tap. It is important to adjust the fitted ball valves whilst the system is cold to give a water level top up to the swaged water level lines in both the primary and the secondary feed tanks.

A minimum clear space of 225mm should be left above the unit to allow access to the ball valve for servicing and adjustment. 2 x 22mm compression overflow fittings are fitted as well as domestic cold water byelaw 30 kits. A G½ (15mm) threaded boss for a drain cock is fitted at the time of manufacture.

For systems with pumped primaries using a motorised valve the primary feed and expansion tank is supplied with a straight feed pipe suitable for compression fittings so that the installer can connect the primary feed and expansion and open safety vent on site to suit the particular layout.

The unit should be installed to allow the immersion heater to be removed for servicing. If units are to be fitted in the roofspace they should be ordered with full insulation including the lid.

Special patterns can be supplied for use with ancilliary solar heat source. Please ask for further details.

**Sizes and Capacities**

A wide range of capacities and sizes are available in both circular and rectangular patterns. An indication of the space requirement is given below but alternative sizes can be made on request in 72 hours.

The rectangular Seagull can be supplied to the dimensions required by the customer. The table above gives an indication of some regular sizes. The only limiting dimensions are the length of the feed tanks which must be a minimum of 440mm including insulation in order to allow ball float operation, and a minimum width of 380mm overall.

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<table>
<thead>
<tr>
<th>Description</th>
<th>SRCT115</th>
<th>SRCT135</th>
<th>SRCT160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance height (mm)</td>
<td>946</td>
<td>1047</td>
<td>1170</td>
</tr>
<tr>
<td>Appliance width (mm)</td>
<td>530</td>
<td>530</td>
<td>530</td>
</tr>
<tr>
<td>Appliance depth (mm)</td>
<td>530</td>
<td>530</td>
<td>530</td>
</tr>
<tr>
<td>Approx weight (full) (kg)</td>
<td>155</td>
<td>175</td>
<td>214</td>
</tr>
<tr>
<td>Total volume (nominal) litres</td>
<td>115</td>
<td>135</td>
<td>160</td>
</tr>
</tbody>
</table>

Please note other sizes/bespoke designs are available on request, contact your local manufacturing depot for more details.
Gledhill, the cylinder specialist, one of the UK’s leading manufacturers of stainless steel and copper cylinders, has developed a stainless steel version of its popular PulsaCoil thermal storage cylinder. The PulsaCoil Stainless provides mains pressure hot water utilising off-peak electric and is specifically designed for use in apartments situations.

The PulsaCoil Stainless provides cost-effective, trouble-free installation and its advanced construction ensures long-life.

An important feature of the PulsaCoil Stainless is that hot water is supplied directly from the mains at conventional flow rates without the need for temperature and pressure relief safety valves or expansion vessels. This is achieved by passing the mains cold water through a plate heat exchanger, instantaneously heating the hot water, and eliminating any risk from Legionella. The outlet temperature of the domestic hot water is maintained by a printed circuit control board, which controls the speed of the pump circulating the primary water from the store through the plate heat exchanger.

As this product is open vented, and does not require a safety discharge from a temperature and pressure relief valve, any installations will be easy to incorporate into the building and will not be subject to Part G Building Regulations discharge requirements associated with unvented cylinders.

The PulsaCoil Stainless’s innovative design helps make installation and ongoing maintenance straightforward for the installer.

Other benefits of the PulsaCoil Stainless include the fact that the immersion elements are situated in the same primary water at all times and this water is not renewed so no scaling takes place, even in hard water areas. As the cylinder can utilise the off-peak electricity supply it keeps the running costs for the householder down to a minimum. Also, the advanced construction and primary store design mean that no annual service is required, unlike with an unvented cylinder.
## PulsaCoil Stainless Technical Specification

<table>
<thead>
<tr>
<th>Description</th>
<th>PCS 150</th>
<th>PCS 180</th>
<th>PCS 220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance height</td>
<td>mm</td>
<td>1145</td>
<td>1275</td>
</tr>
<tr>
<td>Appliance width</td>
<td>mm</td>
<td>560</td>
<td>560</td>
</tr>
<tr>
<td>Appliance depth</td>
<td>mm</td>
<td>630</td>
<td>630</td>
</tr>
<tr>
<td>Approx weight (empty)</td>
<td>kg</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Approx weight (full)</td>
<td>kg</td>
<td>192</td>
<td>213</td>
</tr>
<tr>
<td>Total volume (nominal)</td>
<td>litres</td>
<td>147</td>
<td>165</td>
</tr>
<tr>
<td>Volume heated (on-peak)</td>
<td>litres</td>
<td>80</td>
<td>85</td>
</tr>
<tr>
<td>Heat loss</td>
<td>kWh/24hr</td>
<td>1.35</td>
<td>1.44</td>
</tr>
<tr>
<td>Max. hot water flow rate</td>
<td>litres/minute</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

### Model Selection Notes:
* To maximise the use of cheaper rate off-peak electric, it is recommended that a larger cylinder is fitted when only a standard 7 hour off-peak tariff is available. With a 10 hour tariff, a smaller cylinder can be used as it is heated up by off-peak electric more frequently. This is shown in the model selection table below.

## PulsaCoil Stainless Model Selection

<table>
<thead>
<tr>
<th></th>
<th>PCS 150</th>
<th>PCS 180</th>
<th>PCS 220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedroom</td>
<td>1-2</td>
<td>2-3</td>
<td>2-3</td>
</tr>
<tr>
<td>Bathroom</td>
<td>1 or</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>En-suite shower room</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Model selection data * (7 hour off-peak)</td>
<td>Model size</td>
<td>PCS 150</td>
<td>PCS 150</td>
</tr>
<tr>
<td>Model selection data * (10 hour off-peak)</td>
<td>Model size</td>
<td>PCS 150</td>
<td>PCS 150</td>
</tr>
</tbody>
</table>

### Notes:
1. The appliance is supplied on a 100mm high installation base and comes complete with a separate top up cistern. This can be installed with or without an overflow/ warning pipe as required.
2. An allowance for the top up cistern and the 100mm installation base are both included in the minimum cupboard dimensions.
3. Where the mains water hardness exceeds 200ppm provision should be made to treat the feed water to reduce the rate of accumulation of lime scale. The optional factory fitted in-line scale inhibitor should be specified at the time of order for hardness levels between 200 and 300ppm (mg/l). Where the water is very hard ie 300ppm (mg/l) and above the optional polyphosphate type scale inhibitor should be specified at the time of order.
The BoilerMate BP is an open vented thermal store that does not require expensive safety valves and it provides mains pressure hot water. The BoilerMate BP is suitable for use with a gas or an oil boiler and the heating system can be either open vented or sealed. It is also suitable for upgrading existing traditional hot water systems.

BoilerMate BP thermal stores provide:
- Mains pressure hot water giving ‘power shower’ performance
- Up to 22 litres per minute filling a standard bath in 3-4 minutes
- A dry roof space eliminating the risk of freezing pipes/tanks in winter
- Increased system efficiency, reducing running costs

BoilerMate BP can be fitted to existing systems, including the existing boiler and controls, where appropriate. Unlike unvented cylinders, BoilerMate BP does not require expensive safety controls or the need to plumb temperature and pressure relief pipework to outside. External expansion vessels are not required and wiring is the same as any traditional Y, S or W plan system. BoilerMate BP thermal stores do not require any annual maintenance. This complies with HWA spec for thermal stores.

The BoilerMate BP is supplied without any system kit, which can be purchased as optional extras or be provided by the installer. The base unit is suitable for either open vented or sealed heating systems with the appropriate system kit.

The thermal store is manufactured from copper sheet to BSEN 1653:1998. The computer designed heat exchangers are produced from finned tube and incorporate a patented expansion chamber which is sealed for life. The units are tested hydraulically and pneumatically, both during and after manufacture.

BS6700: 1997 states that with unvented cylinders, the “maintenance and periodic easing of temperature relief valves is particularly important”. This is a landlord’s responsibility in tenanted properties and annual checks must be carried out by a CITB trained person or installer, having G3 approval. As BoilerMate BP is vented and therefore inherently safe, there is no requirement for a safety discharge, and it is not subject to Building Control Regulations – thus simplifying installation.

### BoilerMate BP configuration for an open vented central heating system

- Boiler
- Feed and expansion cistern
- Cistern ball valve & float
- Thermostatic blending valve
- Mini expansion vessel

### Parts supplied with both unit types
- Supplied by installer
- Supplied by Gledhill

### Factory fitted option
- In-line scale inhibitor
- Immersion heater

### Supplied by installer for OV units
- Pump with isolating valves
- 3-port flow share valve
- Bypass valve
- Manual air vent
- Immersion heater

### Supplied by installer for SP units
- Pump with isolating valves
- 3-port flow share valve
- Bypass valve
- Manual air vent
- Pressure relief valve
- CH expansion vessel
- System filling kit including hose and pressure gauge
- Immersion heater
### BoilerMate BP Technical Specification

<table>
<thead>
<tr>
<th>Description</th>
<th>BMBP 125</th>
<th>BMBP 145</th>
<th>BMBP 185</th>
<th>BMBP 215</th>
<th>BMBP 225</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance height (mm)</td>
<td>1262</td>
<td>1262</td>
<td>1423</td>
<td>1584</td>
<td>1784</td>
</tr>
<tr>
<td>Appliance width (mm)</td>
<td>580</td>
<td>580</td>
<td>580</td>
<td>580</td>
<td>580</td>
</tr>
<tr>
<td>Appliance depth (mm)</td>
<td>595</td>
<td>595</td>
<td>595</td>
<td>595</td>
<td>595</td>
</tr>
<tr>
<td>Approx weight (empty) (kg)</td>
<td>53</td>
<td>55</td>
<td>61</td>
<td>67</td>
<td>75</td>
</tr>
<tr>
<td>Approx weight (full) (kg)</td>
<td>183</td>
<td>185</td>
<td>214</td>
<td>235</td>
<td>265</td>
</tr>
<tr>
<td>Total volume (nominal) (litres)</td>
<td>125</td>
<td>130</td>
<td>153</td>
<td>168</td>
<td>190</td>
</tr>
<tr>
<td>Heat loss (kWh/24hr)</td>
<td>1.48</td>
<td>1.57</td>
<td>1.65</td>
<td>1.72</td>
<td>1.85</td>
</tr>
<tr>
<td>Max. hot water flow rate (litres/minute)</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

### BoilerMate BP Model Selection

<table>
<thead>
<tr>
<th>Description</th>
<th>BMBP 125</th>
<th>BMBP 145</th>
<th>BMBP 185</th>
<th>BMBP 215</th>
<th>BMBP 225</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrooms</td>
<td>1-3</td>
<td>2-3</td>
<td>2-4</td>
<td>3-5</td>
<td>4-6</td>
</tr>
<tr>
<td>Bathrooms</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>En-Suite shower</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

**Notes:**
1. The appliance is supplied on a 100mm high installation base and comes complete with a separate top up cistern. This can be installed with or without an overflow/ warning pipe as required.
2. An allowance for the top up cistern and the 100mm installation base are both included in the minimum cupboard dimensions.
3. Where the mains water hardness exceeds 200ppm provision should be made to treat the feed water to reduce the rate of accumulation of lime scale. The optional factory fitted in-line scale inhibitor should be specified at the time of order for hardness levels between 200 and 300 ppm (mg/l). Where the water is very hard ie 300ppm (mg/l) and above the optional polyphosphate type scale inhibitor should be specified at the time of order.

BoilerMate BP is a mains pressure vented hot water thermal store suitable for open vented and sealed heating systems. The unit can be fitted with a conventional ‘S’ plan, ‘Y’ plan or a control system of your choice, and the controls can be plumbed inside the appliance giving a clean finish within the airing cupboard. The header tank can be sited on top of the unit or remotely for maximum installation flexibility.

The BoilerMate BP thermal storage system is supplied with primary water from the boiler which heats the store via a primary coil. Secondary water flows directly from the cold mains into a secondary coil where it is heated by the store before being delivered to the taps.

It is not widely appreciated that uncased foam insulated cylinders can lose up to 40% of their insulation value within weeks of manufacture and can emit dangerous smoke if involved in a fire and therefore the BoilerMate BP has been designed with an outer metal case. As with all Gledhill cylinders there is no release of ozone depleting substances or harmful emissions. Industry leading foam insulation is used to provide exceptionally low standing heat loss. BoilerMate BP models are designed to be fed directly from the mains. They fulfil the requirements of Water Regulations and therefore do not require a check valve to be fitted to the supply pipe. The performance of the BoilerMate BP is directly related to the adequacy of the cold supply to the dwelling. This must be capable of providing for those services which could be required simultaneously and the maximum demand should be calculated. BoilerMate BP will operate at dynamic pressures as low as 1.5 bar (at the appliance) which must be available when local demand is at its maximum, but the preferred range is between 2 and 3.5 bar. As a general guideline, although a 15mm external service may be sufficient for the smaller dwelling with one bathroom, a 22mm service is preferred (25mm MDPE) and should be the minimum for larger dwellings.

This appliance is suitable for use with plastic pipework as long as the material is recommended for the purpose by the manufacturer and is installed fully in accordance with their recommendations.

The Domestic Heating Compliance Guide published in May 2006 requires a water treatment device to be fitted where the hardness is greater than 200ppm. Full details are given in the Design & Installation manual supplied with all BoilerMate BP units.
Copper Specials
Copper rectangular tanks manufactured to bespoke specifications

Gledhill Building Products is well known in the industry for our capability to produce copper rectangular tanks to a custom specification, ie tapping heights, connection sizes and positions etc.

The versatility of copper makes it the only choice of material to produce bespoke, tailor-made tanks that can be manufactured in a fast turnaround time which has led to high demand, particularly for bespoke orders and one-off specials that can be custom-made in just a matter of hours.

Gledhill maintains a coppersmith team at each of its 12 Super Depots nationwide and, thanks to a dedicated training department, Gledhill’s coppersmiths are experts in all aspects of copper brazing, copper forming and the technical theory behind copper rectangular tanks manufacture.

The buoyant demand for copper specials comes from a wide range of installations; from matching the exact spec of an old rectangular tank that needs replacing to creating a copper tank to fit into the confined spaces. Sizes can range from 114 litres up to 210 litres.

Simply complete the specials form on the opposite page and ask your local plumbers merchant send to your local Gledhill depot.

Once you have received your quote within one hour, the cylinder is then locally produced in one of our nationwide Super Depots.

The finished cylinder can either be delivered to the merchant or direct to site.
Special Order ...

Installer Name: ____________________________
Company: ____________________________
Phone No: ____________________________
Merchant: ____________________________
Phone No: ____________________________

Size: ____________________________

Tapping Positions
Please show size and position of bosses and floor to centre measurements if critical.

Don’t forget Shower Take-Offs, Drain Connections and Secondary Returns can be factory fitted!

15, 22, 28 compression with nut & olive or ½” up to 2” screwed connections

Additional Details ____________________________

__________________________
__________________________
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<table>
<thead>
<tr>
<th>TYPE</th>
<th>TYPE</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Gravity Fed</td>
<td>Copper</td>
</tr>
<tr>
<td>Indirect</td>
<td>Electric Thermal Store</td>
<td>Steelace</td>
</tr>
<tr>
<td>Pre-Plumbed</td>
<td>Automatic</td>
<td></td>
</tr>
<tr>
<td>Central Plant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fax to your local depot for immediate attention, full contact details available from www.gledhill.net
UK Super Depot Infrastructure

Blackpool
Head Office and
Stainless Steel Manufacturing Site

Blackburn
Telephone: 01254 693844
Fax: 01254 673615

Bristol
Telephone: 01179 820814
Fax: 01179 820821

Inverkeithing
Telephone: 01383 414133
Fax: 01383 413123

Luton
Telephone: 01582 728253
Fax: 01582 318976

Maidstone
Telephone: 01622 714770
Fax: 01622 882286

Nottingham
Telephone: 01773 580684
Fax: 01773 581129

Oldbury
Telephone: 01384 636245
Fax: 01384 413700

Paignton
Telephone: 01803 557470
Fax: 01803 559213

Southampton
Telephone: 01329 846801
Fax: 01329 845881

For technical advice please 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

Due to a programme of continuous improvement Gledhill Building Products reserve the right to modify products without prior notice.
It is advisable to check the product technical detail by using the latest design and installation manuals available from our technical support team or on our website.
It is an offence to copy or adapt this document without consent of the owner.