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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.

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Model specifications

Torrent HP and HP Solar Technical Specification					
Description	150HP	180HP	210HP	180HP SOL	210HP SOL
Nominal volume (litres)	149	191	224	171	223
Dedicated solar volume	-	-	-	60	75
Overall height	1440	1440	1675	1650	1675
Overall diameter	555	555	555	555	555
Approx weight (empty)	51	54	58	61.5	63
Approx weight (full)	200	245	282	232.5	286
Heat loss (kWhr/24 hours)	1.56	1.82	2.08	1.82	2.08
Hot water draw off volume (store temp)	55°C	70	90	90	100
	60°C	100	130	130	140
	65°C	125	155	155	180
Total surface area of solar heat exchanger	-	-	-	1.31	1.31
** Maximum dwelling floor area (m ²)	-	-	-	50	60
** Maximum solar collector area (m ²) ³	-	-	-	2.4	3.0
Dwelling (Bedrooms)	1-2	2-3	2-3	1-2	2-3
Bathrooms	1	1	1	1	1
En-Suite shower	0	1	2	0	1

Stainless Lite HP (Solar Compatible) Technical Specification				
Description	HP180IND	HP210IND	HP250IND	HP300IND
Nominal volume (litres)	180	210	250	300
Dedicated Solar Volume (litres) ¹	60	70	84	100
Overall height	1295	1483	1733	2020
Overall diameter	550	550	550	550
Approx weight (empty)	33	38	43	49
Approx weight (full)	213	248	293	349
Heat loss (kWhr/24 hours)	1.40	1.60	1.75	1.93
Total surface area of primary heat exchanger ²	2.04	2.24	2.90	2.90
Total surface area of solar heat exchanger	0.68	0.68	0.97	0.97
Maximum dwelling floor area (m ²) ³	50	60	85	110
Maximum solar collector area (m ²) ⁴	2.4	2.8	3.4	4.0
Dwelling (Bedrooms)	1-3	1-3	2-4	3-4
Bathrooms	1	1	1	2
En-Suite shower	1	2	2	1

Please note 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 (see schematics).

- 1 Only applicable when used in conjunction with solar thermal systems
- 2 Where solar thermal system is not installed
- 3 For compliance with Building Regulations & SAP
- 4 For compliance with Building Regulations @ 25l/m² of the collector area



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



To protect our environment, we use copper a totally recyclable metal, which never becomes waste.



"Only the best is acceptable"

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Torrent HP / Stainless Lite HP



Most models can be supplied for use with solar thermal energy



making the most of air source heat pumps

Gledhill Building Products were the first manufacturer to offer a range of domestic thermal stores and unvented cylinders specifically designed to work with air source and ground source heat pumps.

Following extensive research and development, we have used decades of experience to optimise various aspects of the cylinder, most notably the heat exchanger and additional sensor pockets, to provide a solution suitable for a range of air source heat pumps.

Two solutions are offered that provide maximum flexibility for the installer. Both of these solutions are 'solar ready' i.e. even if solar panels are not fitted as part of the original installation, the cylinder is ready for them to be connected at a later stage.

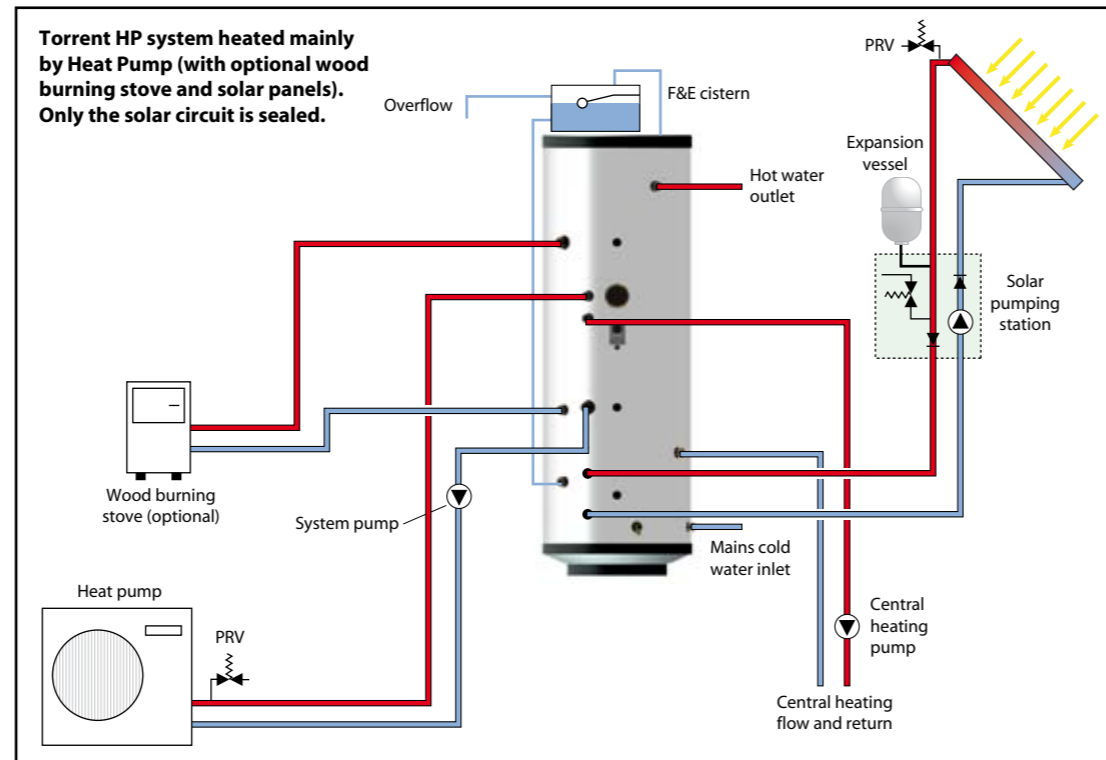


Torrent HP

Gledhill have led the way in developing the concept of thermal stores since 1980. The latest version has been designed to get the best possible performance from a heat pump in a unit capable of being linked to other alternative energy sources such as wood burning stoves or solar thermal panels. There are numerous other possible installation options (e.g. heating taken directly from the heat pump. These are shown in detail in the installation manual).

The true significance of a thermal store in these circumstances should not be underestimated;

- The store is safe to use with a wood burning stove.
- Energy put into the store from whatever source can be used for both



heating and hot water.

- There is no requirement for a pressure and temperature relief valve, there is therefore no need to design safe discharge facilities into the property.
- A thermal store can operate with less "on-peak" top up than an unvented cylinder when heat pumps are used as the main energy input.

Utilising different energy sources

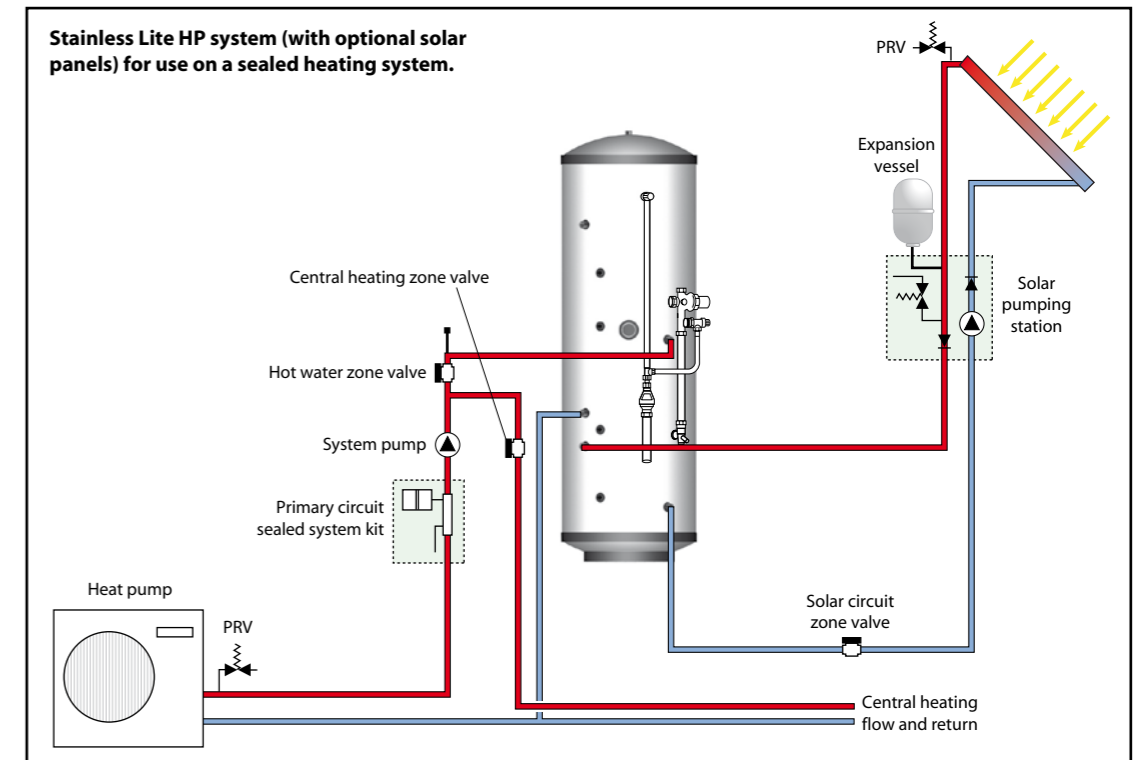
The Torrent HP is a copper **primary water thermal store** that can accept input from a number of energy sources because it is the neutral point of the whole system. When an **alternative unvented cylinder** is used with a heat pump, it is necessary to raise the temperature (often by electric immersion heaters) to thermally disinfect the storage vessel and this effectively lowers the efficiency of the heat pump.

If a wood burning stove is used with a thermal store there is often no need to boost the temperature for hot water production. If however, the heat pump will not raise the temperature sufficiently to give an adequate supply of hot water, the Torrent HP is supplied with an immersion heater and a thermostatic pocket.

Tappings

The Torrent HP comes complete with all the necessary connections for the various heat sources together with connections directly off the store for central heating.

The heat pump connections are 22mm compression fittings and those for the solar heat exchanger are 15mm. Also included are two 10mm dry pockets for the heat pump sensors together with a 15mm internal threaded connection to allow a dry pocket to be fitted for the cylinder thermostat.



Stainless Lite HP

Gledhill have produced an unvented stainless steel unit specifically for heat pump applications. 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 two 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.

Tappings

The Stainless Lite HP is supplied with all the necessary connections including two 10mm dry thermostat pockets.

