15 UK factories to serve the merchant faster

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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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The Torrent 'RE' Solar comes complete with compression fittings, temperature gauge, blending valve, immersion cylinder thermostat, immersion heater and 3 sensor pockets, and will work in conjunction with most proprietary solar controllers.

Cold and hot water distribution design

Torrent 'RE' Solar models are designed to be fed directly from the mains. They fulfil the requirements of the Water Regulations and therefore do not require a check valve to be fitted to the supply pipe. The performance of the Torrent 'RE' Solar 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. Torrent 'RE' Solar 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.

Water treatment

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 Torrent 'RE' Solar units.

Long life

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

Thermally advanced

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. Torrent 'RE' Solar uses safe, non-toxic non-combustible Rockwool for continuous high performance during the life of the unit. Heat loss is inline with the requirements of Part L for Thermal Stores as outlined in the WMA Specification for Thermal Stores.

Environmental

We are committed to minimising the environmental impact of our operations and work hard to comply with all relevant environmental legislation. We are pro-active in the recycling of old copper cylinders and can offer incentives to customers in order to help reduce the impact of waste on the environment. All our products have an Ozone Depletion Potential (ODP) of zero and a Global Warming Potential (GWP) of either one or zero.

Gledhill Building Products offer solar storage vessels to the solar industry who then source essentials such as panels, controllers and pumping stations to suit the application.

IT IS IMPORTANT TO MATCH THE CHOSEN TORRENT 'RE' MODEL (DEDICATED VOLUME) WITH THE PROPERTY TYPE TO ACHIEVE COMPLIANCE WITH BUILDING REGULATIONS.

FM 2057
Torrent is 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.

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

WRAS APPROVED PRODUCT

"Only the best is acceptable"

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Gledhill
BUILDING PRODUCTS
FOR THE MERCHANT TRADE

Torrent 'RE' Solar

A total hot water and HEATING thermal store that makes the most of renewable energy

Mains pressure domestic hot water and central heating that is either open vented or sealed primary without the need for pressure & temperature relief valves, runaways to ground or annual safety checks

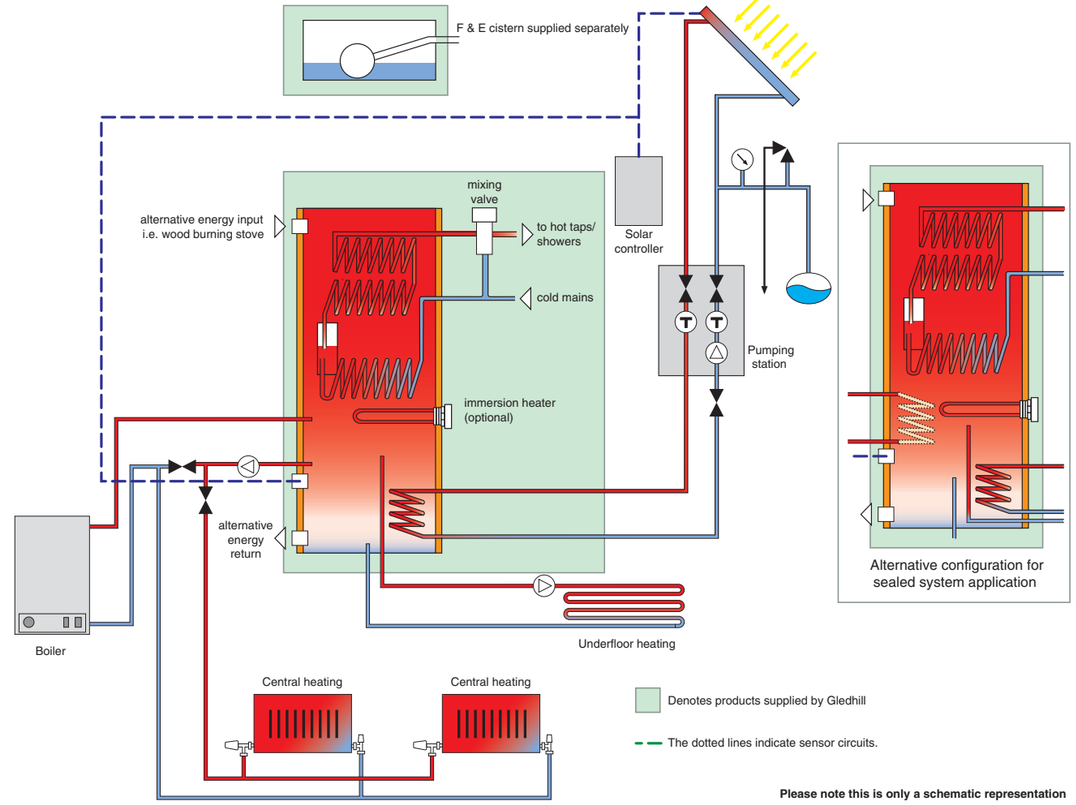
Gledhill
BUILDING PRODUCTS
FOR THE MERCHANT TRADE

Information on the full range of Gledhill products can be found on the internet at www.gledhill.net

Torrent 'RE' Solar - maximising the efficiency of solar technology

A Low Carbon Buildings Accredited Product

Whatever the type of alternative energy chosen, the key to its success is the primary storage vessel and the control system. This is because all the inputs (whatever the source) and the outputs to both heating and hot water flow through a primary store.



Please note this is only a schematic representation

Making the most of solar technology

Built on the expertise gained with our popular range of Torrent thermal stores, with models suitable for gas, electricity or oil, Torrent 'RE' Solar incorporates a highly effective heat exchanger to maximise the energy collected by the solar panels. These can be either flat panel or evacuated tube. The solar dedicated section of the Torrent 'RE' Solar then extracts this energy to provide hot water for domestic use but also, importantly, for heating.

Solar heated water flows through the boiler thus reducing the amount of fuel used for HEATING and hot water. This is particularly useful in Autumn and Spring when sufficient energy is still being produced through the collectors to provide background heating.

The ideal way to do this is illustrated in the hydraulic schematic. A typical two zone valve circuit is shown, but a mid position valve will work equally well. At the same time, because of the design philosophy inherent in the Torrent 'RE' Solar, energy is also being provided to the domestic hot water coil and flow rates of up to 25 litres per minute can be achieved.

These flow rates are capable of providing a 'power shower' or filling a bath in 3-4 minutes.

System design

Torrent 'RE' Solar is an open vented system and is therefore inherently safe. It is not subject to Building Control Regulation G3 – thus simplifying system maintenance enormously for landlords or homeowners. There is no requirement for expensive controls such as pressure and temperature (P&T) relief valves or expansion vessels – nor for annual servicing, saving approx £100 per annum.

Without the need for a runaway to ground, Torrent 'RE' Solar is a particularly popular choice in apartments.

Being a primary store, it is also possible to incorporate energy inputs from sources such as a range boiler, wood burning or pellet stove – again reducing the reliance on fossil fuels. The energy produced can then be used in the heating system in addition to providing domestic hot water.

The standard open vented store relies on an F&E (feed & expansion) tank suitably sited above the highest radiator point to provide sufficient head for the system.
As the domestic hot water is at mains pressure, the Torrent 'RE' Solar itself can be sited anywhere in the property.

Provision is also made within the design for a sealed heating/boiler circuit with the heat exchanger provided which would then operate as a conventional cylinder. Although this would reduce the potential for utilising the solar energy in the HEATING CIRCUIT, it would mean that both the Torrent and the F&E tank can then be sited anywhere in the property, as the F&E is only being used to fill the store with water.

The sizes available are as detailed in the following table:

Model	Store capacity (nominal) Litres	Dedicated solar volume	Hot water flow rate* Litres/min	Dimensions (mm) (including F & E cistern) Height x Diameter	Minimum cupboard size if F&E tank is sited on top of unit Width x Depth x Height	Dwelling Type	Typical boiler size for property Based on 30min recovery
T170 RE	176	65	18	1880 x 520	700 x 600 x 2150	1 bathroom & 1 or 2 en suite shower rooms	20kW
T200 RE	206	76	18	2135 x 520	700 x 600 x 2400	1 bathroom & 2 en suite shower rooms OR 2 bathrooms	20kW
T280 RE	286	95	25	2265 x 570	700 x 600 x 2500	1 bathroom & up to 3 en suite shower rooms OR 2 bathrooms & 2 en suite shower rooms	25kW
T350 RE	381	125	25	2265 x 680	700 x 700 x 2500	3 bathrooms & 2 en suite shower rooms	30kW
T450 RE	482	153	35	2265 x 680	700 x 700 x 2500	5 bathrooms	40kW

*At minimum inlet pressure 2 bar dynamic.