

# Raising hot water standards

**Mark Foster of HWA member Gledhill Building Products examines new standards concerning thermal stores that will come into force this year**

Although widely used in Europe, thermal stores were originally developed for the UK market in the mid-1980s by British Gas.

However, as they were not covered by a British Standard, in 1999 the Waterheater Manufacturers Association (WMA) was authorised by British Gas to publish and be responsible for a Performance Specification for Thermal Stores.

which was published in 2006.

When WMA merged with MODUS to form the Hot Water Association (HWA), it was decided that the document should be reviewed.

As a result, it was decided that a complete rewrite was necessary to comply with the many changes that had been

supplies the heating system as well as the hot water. This is particularly useful in spring and autumn.

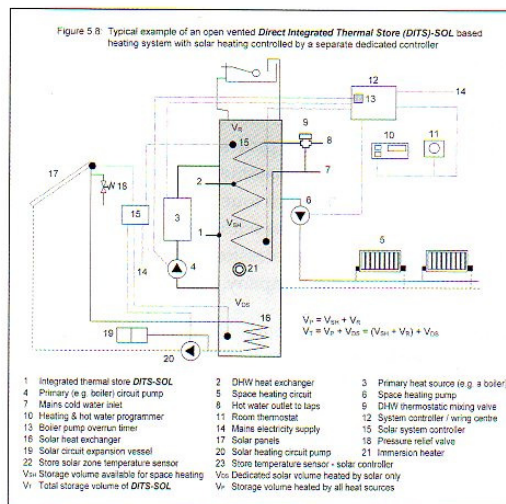
In fact, it has been calculated that this will save between 15 and 20% on the annual heating bill of a typical property, in addition

an open-vented system is required for it to operate safely.

Section 5.7 of the new specification explains how easy this is with an open-vented integrated thermal store.

Existing legislation will require a continual

reduction in carbon emissions and, in the near future, technologies like solar will not be enough to meet the requirements on their own. The way more than one renewable system can be connected easily to an integrated thermal store, and how further systems can be added in the future, is also covered in this section.



This set out in some detail the hydraulic design and thermal performance requirements for the thermal store, and included the test procedures needed to prove compliance.

It mainly covered thermal stores in individual properties with a single heat source, such as electricity or a gas boiler, but some information was also provided for group heating schemes.

The specification was quoted as the accepted standard for these products in the Building Regulations second-tier Domestic Heating Compliance Guide to Approved Document L1,

needed to cover all the new alternative and renewable technologies that were being introduced to meet these changes.

The 2010 HWA Performance Specification references all the current regulations and standards, and has been extended with new sections covering heat pumps, solar thermal and wood burning systems.

Figure 5.8 from the new specification is typical of the many diagrams provided, and shows how to make best use of an integrated thermal store with a solar system.

The same primary water that is heated by solar energy

made to Building Regulations and British/European standards. It also

to the savings already being made for producing hot water. Any increased use of renewable energy also cuts down on the use of carbon fuels.

Similarly, figure 5.10 from the new specification shows how a heat pump can replace a gas/oil boiler.

It is now accepted that the large volume of primary water and the stratification that occurs in a thermal store means it is ideally suited for use with heat pumps and avoids the costly addition of a separate buffer store.

To save even more energy, connections can be provided at different heights so that the correct temperature of water can be supplied directly to separate underfloor or low temperature heating circuits.

Because a wood burner is not fitted with a temperature control/overheat thermostat,

