

TECHNICAL UPDATE

HOT WATER SAFETY AND WATER EFFICIENCY



Hot water safety and water efficiency

Introduction

This update provides additional guidance covering hot water safety and efficiency. It is important that all workmanship carried out during construction is completed in accordance with the relevant tolerances.

Hot water safety

Section G3 of Approved Document G, supporting the England and Wales Building Regulations, is concerned with hot water supply and systems. Compliance with the requirement of the Building Regulation is considered a Functional Requirement of the Technical Manual. This includes a secondary document mentioned in the Approved Document such as BS 6700-2009 Specification for design, installation, testing and maintenance of services supplying water for domestic use in buildings.

Unvented hot water systems have become very popular in recent years and it is imperative that all unvented hot water systems have a minimum of two independent safety devices in addition to a thermostat to control the desired temperature of the stored water.

It is important to take account of the location that these safety devices have access to suitable external areas to allow them to vent to the outside. This is sometimes a problem in flats where the boiler or storage vessel is positioned internally within the accommodation space and there is a fairly tortuous route to direct discharge pipes to the outside area.

Suitable approaches to this requirement include:

- Non-self-resetting emergency cut out to disconnect the supply of heat to the storage vessel in the event of overheating
- A temperature relief valve or a combined temperature and pressure relief valve to safely discharge water in the event of serious overheating

Temperature and pressure relief valve must discharge into a tundish which must be visible. The discharge pipe from the tundish should be made of metal or another material that has been demonstrated to be capable of withstanding temperatures of the water discharged. The discharge pipe should vent externally and should not be connected to a soils discharge stack unless it can be demonstrated that the soils stack is capable of withstanding the temperature of the water discharges.

Note: there have been a number of warranty claims for temperature and pressure relief valves discharging into S&V pipes. The discharge pipe must discharge where there is no risk to persons in the vicinity of the discharge such as a back inlet gully.

All unvented pressurised systems with hot water storage capacity must have some form of third party accreditation such as a BBA, BRE product approval certificate or a European

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Technical Approval (ETA). All unvented boiled and hot water storage systems must be installed and commissioned by a person registered with a competent person scheme.

Warranty claims for hot water safety have been dealt with for inappropriately routed discharge pipes from temperature and pressure relief valves.

Water Efficiency

Since 2010 the efficiency of the cold water service has become a requirement of Approved Document G of the England and Wales Building Regulations in order to prevent the undue consumption of water. The requirement is that persons occupying a dwelling must not use more than 125 litres/person/day.

The developer must supply to the Local Authority or Approved Inspector with a notice that specifies the potential consumption of wholesome water calculated in accordance with the methodology set out in Water Efficiency Calculator for New Dwellings within five days of completion of the units. This document can be downloaded free of charge from the internet.

Note: Manufacturer's declared values for sanitary appliances and relevant white goods should be used in the calculations.

Every care was taken to ensure information in this article was correct at the time of writing (March 2022). Guidance provided does not replace the reader's professional judgement and any construction project should comply with the relevant building regulations or applicable technical standards. For the most up to date LABC Warranty technical guidance please refer to your risk management surveyor and the latest version of the [LABC Warranty Technical Manual](#).

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