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BS EN 50440:2015



BSI Standards Publication

Efficiency of domestic electrical storage water heaters and testing methods

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The UK participation in its preparation was entrusted to Technical Committee CPL/59, Performance of household electrical appliances.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Efficiency of domestic electrical storage water heaters and testing methods

Efficacité des chauffe-eau électriques à accumulation et méthodes associées

Effizienz von elektrischen Warmwasserspeichern für den Hausgebrauch

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-10-05
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-10-05

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1 Scope

This European Standard specifies methods for measuring the performance of electric storage water heaters for the production of sanitary hot water for household and similar use.

The object is to state and define the principal performance characteristics of electric storage water heaters and to describe the test methods for measuring these characteristics.

NOTE 1 This standard does not apply to;

- storage water heaters that use electricity as a secondary source of heating the water;
- storage water heaters that do not use a tank to store hot water;
- electric storage water heaters that do not meet the minimum (or maximum) output performance of the smallest (or biggest) load profile, as defined in Table 4.

NOTE 2 This standard does not specify performance or safety requirements. For safety requirements see EN 60335-1 in conjunction with EN 60335-2-21.

2 Normative references

Not applicable.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

storage water heater

water heater that uses electric heating elements as the means of heating water for long-term storage in a thermally insulated container and provided with a device to control the water temperature

3.2

primary function

to heat water for the production of hot water for household and similar needs

3.3

energized storage water heater

storage water heater that is designed to supply hot water and energised for 24 h per day

3.4

off-peak storage water heater

storage water heater that is designed to supply hot water whilst only being supplied with electrical energy at off-peak/low tariff periods

Note 1 to entry: The off-peak storage water heater is required to fulfil the requirements of the tapping pattern between 7:00h and 22:00h without external energy supply, e.g. to enable operation at off-peak/low-tariff periods and/or to operate in conditions of insecurity of energy supply. A product qualifies as "off-peak" if it is only energized for a maximum of 8 consecutive hours anywhere between 22:00h and 7:00h during the test with the 24h tapping pattern.

3.5

load profile

means the output performance (in terms of flow-rates, temperatures, tapping pattern, etc.) of a storage water heater when fulfilling its primary function under specific ambient conditions (see Tables 3 and 4), as declared by the manufacturer