



**NSAI**  
Standards

Irish Standard  
I.S. EN 50440:2015

# Efficiency of domestic electrical storage water heaters and testing methods

## I.S. EN 50440:2015

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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## National Foreword

I.S. EN 50440:2015 is the adopted Irish version of the European Document EN 50440:2015, Efficiency of domestic electrical storage water heaters and testing methods

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 50440**

November 2015

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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

This European Standard was approved by CENELEC on 2015-10-05. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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EN 50440:2015 (E)

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## **European foreword**

This document (EN 50440:2015) has been prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

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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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directives see informative Annexes ZZA and ZZB, which are integral parts of this document.

EN 50440:2015 (E)

## 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



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