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ELEKTRISALVESTUS-VEEKUUMUTITE TÕHUSUS JA  
KATSETUSVIISID

Efficiency of domestic electrical storage water heaters  
and testing methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|   |  |
|---|--|
| See Eesti standard EVS-EN 50440:2015 sisaldab Euroopa standardi EN 50440:2015 ingliskeelset teksti.                 | This Estonian standard EVS-EN 50440:2015 consists of the English text of the European standard EN 50440:2015.                      |
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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

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## Content

|   |           |
|---|-----------|
| <b>European foreword</b> .....  | <b>3</b>  |
| <b>1 Scope</b> .....  | <b>4</b>  |
| <b>2 Normative references</b> .....   | <b>4</b>  |
| <b>3 Terms and definitions</b> .....  | <b>4</b>  |
| <b>4 Symbols and Units</b> .....  | <b>5</b>  |
| <b>5 Calculation of the electrical energy efficiency (<math>\eta_{\text{elecwh}}</math>)</b> .....                              | <b>6</b>  |
| <b>6 Measured parameters</b> .....  | <b>6</b>  |
| <b>7 General conditions for measurements</b> .....  | <b>6</b>  |
| <b>8 Reference conditions</b> .....   | <b>7</b>  |
| <b>9 Test procedures</b> .....  | <b>9</b>  |
| <b>10 Data Report</b> .....   | <b>18</b> |
| <b>Annex A (normative) Calculation of the specific energy efficiency and of the Annual Consumption of electric energy</b> ..... | <b>19</b> |
| <b>Annex ZZA (informative)</b> .....  | <b>21</b> |
| <b>Annex ZZB (informative)</b> .....  | <b>22</b> |
| <b>Bibliography</b> .....   | <b>23</b> |

## 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- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-10-05

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

## 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