

Methods for measuring the performance of electric storage water-heaters for household purposes

The European Standard EN 60379:2004 has the status of a
British Standard

ICS 91.140.65

National foreword

This British Standard is the official English language version of EN 60379:2004. It was derived by CENELEC from IEC 60379:1987. It supersedes BS 3999-2:1991 which will be withdrawn on 2006-11-01.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags [C] <C>.

The UK participation in its preparation was entrusted by Technical Committee CPL/59, Performance of household appliances, to Subcommittee CPL/59/3, Performance of water heaters, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 13 and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 19 March 2004

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English version

Methods for measuring the performance of electric storage water-heaters for household purposes

(IEC 60379:1987, modified)

Méthodes de mesure de l'aptitude à la fonction
des chauffe-eau électriques à accumulation pour
usages domestiques
(CEI 60379:1987, modifiée)

Verfahren zum Messen der
Gebrauchseigenschaften von elektrischen
Warmwasserspeichern für den Hausgebrauch
(IEC 60379:1987, modifiziert)

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CENELEC

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

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Foreword

The text of the International Standard IEC 60379:1987, prepared by SC 59C, Heating appliances, of IEC TC 59, Performance of household electrical appliances, together with the common modifications prepared by the Technical Committee CENELEC TC 59X, Consumer information related to household electrical appliances, was submitted to the formal vote and was approved by CENELEC as EN 60379 on 2003-11-01.

This European Standard supersedes HD 500 S1:1988. It only modifies some clauses for clarification, for better reproducibility and for better information to the consumer.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-11-01

This European Standard, based on HD 500 S1:1988, has been prepared by the Technical Committee CENELEC TC 59X due to the draft implementing Directive of the European Commission and the European Free Trade Association on the indication of the energy consumption of electric storage water heaters. According to this draft implementing Directive the energy consumption to be declared in kWh/year refers only to standing loss without water withdrawal and the classification of the energy efficiency is derived from this standing loss.

Clauses and subclauses which are additional to those in IEC 60379 are prefixed “Z”.

Technical differences to HD 500 S1:1988 are:

- a) definition of the rated capacity (in order to clarify the term “storage temperature” used in the draft implementing Directive);
- b) general conditions for measurement;
- c) verification of the rated capacity;
- d) standing loss at 24 h;
- e) tolerances and control procedures;
- f) no declaration to provide;
- g) accuracy of instrumentation;
- h) tolerances;
- i) mixed water quantity at 40 °C.

Endorsement notice

The text of the International Standard IEC 60379:1987 was approved by CENELEC as a European Standard with agreed common modifications.

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SECTION ONE — GENERAL

1 Scope

This standard applies to electric storage water-heaters for household purposes.

This standard does not apply to:

- water-heaters using other sources of energy (e.g. solar energy);
- water-heaters with more than one heated volume;
- water-heaters without thermal insulation.

☐ The common modifications supplement, as far as necessary, test methods which shall be applied in accordance with a Commission's Directive, which is based on standing loss only, implementing Council Directive 92/75/EEC with regard to energy labelling of household electric storage water heaters. Clauses defining permitted tolerances to values declared by the manufacturer and control procedures for checking these declared values are added. ☐

2 Object

The purpose of this standard is to state and define the principal performance characteristics of electric storage water-heaters which are of interest to the user and to describe the standard methods for measuring these characteristics.

This standard is concerned neither with safety nor with performance requirements.

SECTION TWO — DEFINITIONS AND LETTER SYMBOLS

For the purpose of this standard, the following definitions and letter symbols apply.

3 Terms used to designate appliances

3.1 Storage water-heater

An appliance intended for heating water in a thermally well-insulated container, for the long-term storage of the heated water, and provided with a device to control the water temperature

4 Terms used to classify appliances¹⁾

4.1

unvented water-heater

a water-heater designed to work under the pressure of the water supply mains, the flow of water being controlled by one or more valves in the outlet system

4.2

cistern-fed water-heater

a water-heater supplied from a cistern in which the flow of water is controlled by one or more valves in the outlet system and which is provided with a vent open to the atmosphere and so arranged that the expanded water can return to the feed cistern

4.3

open outlet water-heater

a water-heater in which the flow of water is controlled by a valve in the inlet pipe and so arranged that the expanded water can overflow through the outlet pipe

4.4

vented water-heater

a water-heater open to the atmosphere, so that under no condition of use can the pressure at the surface of the water be other than atmospheric

¹⁾ See Figure 1.