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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 47770.1-2026

**Household electric instantaneous water heaters - Methods
for measuring the performance - Part 1: General aspects**

家用快热式电热水器 性能测试方法 第1部分：总则

(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 47770 "Performance Test Methods for Household Instantaneous Electric Water Heaters". GB/T 47770 has been issued.

The following parts were laid out.

This document adopts IEC 63159-1:2021 "Performance test methods for domestic instantaneous electric water heaters - Part 1: General rules".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Household Appliances (SAC/TC46).

Introduction

Currently, my country's domestic instant electric water heater industry is developing rapidly, and its technological level is constantly improving. With the improvement of people's living standards...

The pursuit of a higher quality of life by consumers has led to higher demands on product performance. In recent years, the International Electrotechnical Commission (IEC) has issued the IEC 63159 series of standards, "Performance testing methods for domestic instantaneous electric water heaters," has been published. This series of standards specifies globally recognized standards for domestic instantaneous electric water heaters.

Energy efficiency testing methods and performance testing procedures for instant electric water heaters.

To promote the sustainable and healthy development of my country's instant electric water heater industry, improve product performance, and meet consumer needs...

This is also to guide my country's instant electric water heater industry towards internationalization and circumvent trade barriers. Therefore, adopting international standards is the preferred approach.

The latest version of the IEC standard has established GB/T 47770 "Performance Test Methods for Household Instantaneous Electric Water Heaters".

GB/T 47770, referencing the structural form of IEC 63159, is proposed to consist of three parts.

---Part 1: General Principles. This section aims to provide general test conditions and energy efficiency for instantaneous electric water heaters used in domestic and similar applications.

Test method.

---Part 2-1. Multifunctional Instantaneous Electric Water Heaters. The purpose is to provide performance testing for multifunctional instantaneous electric water heaters.

method.

---Part 2-2.Efficiency of Single-Point Instantaneous Electric Water Heaters. The aim is to address the characteristics of single-point instantaneous electric water heaters.

Due to its unique characteristics, an energy efficiency testing method is provided.

Performance testing methods for household instant electric water heaters Part 1: General Provisions

1 Scope

This document applies to instantaneous electric water heaters for domestic and similar uses and includes the following two characteristics.

---At least one of the load patterns in Appendix A must be satisfied;

---Heat to a temperature below the boiling point.

This document specifies the terminology, definitions, and measurement methods for energy efficiency assessment.

This document does not specify safety requirements for the equipment.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 2768-1 General tolerances - Part 1: Tolerances for linear and angular dimensions not specifically specified (Note. GB/T 1804-2000 General tolerances. Tolerances for linear and angular dimensions without specified tolerances (eqv ISO 2768-1;1989) IEC 63159-2-1 Test methods for performance of domestic instantaneous electric water heaters - Part 2-1.Multifunctional instantaneous electric water heaters IEC 63159-2-2 Test methods for performance of domestic instantaneous electric water heaters - Part 2-2.Instantaneous electric water heaters for single-point use

3 Terms and Definitions

The following terms and definitions apply to this document.

A appliance that heats water as it flows through it.

3.1.1

Instantaneous water heaters that use electricity as their energy source.