BSI Standards Publication

Safety and control devices for gas burners and gas-burning appliances — Particular requirements

Part 8: Multifunctional controls

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National foreword

This British Standard is the UK implementation of ISO 23551-8:2023. It supersedes BS ISO 23551-8:2016+A1:2019, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GSE/22, Safety and control devices for gas and oil burners and gas burning appliances.

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

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Safety and control devices for gas burners and gas-burning appliances — Particular requirements —

Part 8: Multifunctional controls

Dispositifs de commande et de sécurité pour les brûleurs et les appareils à gaz — Exigences particulières —

Partie 8: Equipements multifonctionnels

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 161, *Controls and protective devices for gaseous and liquid fuels*.

This second edition cancels and replaces the first edition (ISO 23551-8:2016), which has been technically revised. It also incorporates the Amendment ISO 23551-8:2016/Amd. 1:2019.

The main changes are as follows:

— the document has been updated to align technically and with the revised format of ISO 23550:2018;

— the document has been updated to align technically and with the relevant latest editions of ISO 23551 series, referenced herein;

— specific regional requirements have been moved from annexes into the main body of the document.

A list of all parts in the ISO 23551 seriescan be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is designed to be used in combination with ISO 23550 and relevant parts of the ISO 23551 series. Together with both ISO 23550 and the ISO 23551 series, this document establishes the full requirements as they apply to the product covered by this document.

Where needed, this document adapts ISO 23550 by stating the corresponding clause number and adding:

— “with the following modification”;

— “with the following addition”;

— “is replaced by the following”; or

— “is not applicable”.

In order to identify specific requirements that are particular to this document, that are not already covered by ISO 23550, this document contains certain clauses or subclauses that are additional to the structure of ISO 23550. These subclauses are indicated by the introductory sentence: “Subclause (or Annex) specific to this document."

To ensure global relevance of this document, the differing requirements resulting from practical experience and installation practices in various regions of the world have been taken into account. The variations in basic infrastructure associated with gas controls and appliances have also been recognized, some of which are addressed in Annexes F, G and H. This document intends to provide a basic framework of requirements that recognize these differences.

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Safety and control devices for gas burners and gas-burning appliances — Particular requirements —

Part 8: Multifunctional controls

1 Scope

This document specifies safety, construction, performance and testing requirements of multifunctional controls (MFC) intended for use with gas burners, gas appliances and appliances of similar use.

This document applies to an MFC with declared maximum inlet pressures up to and including 50 kPa (500 mbar) of nominal connection sizes up to and including DN 150 for use on burners or in appliances using gases such as natural gas, manufactured gas or liquefied petroleum gas (LPG). It is not applicable to corrosive and waste gases.

An MFC consists of two or more functions, at least one of which is a mechanical control, as specified in the relevant control standards.

This document is also applicable to construction and performance requirements for components of burner ignition systems as specified in Annex K. The requirements and test methods in Annex K include optional type testing and evaluation of these components.

This document is applicable to:

— water-operated gas valves (see Annex I);

— overheating safety devices (OSDs) (see Annex J); and

— optional requirements for components of burner control systems (see Annex K).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 23550:2018, *Safety and control devices for gas and/or oil burners and appliances — General requirements*

ISO 23551-1, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 1: Automatic and semi-automatic shut-off valves*

ISO 23551-2, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 2: Pressure regulators*

ISO 23551-4, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 4: Valve-proving systems for automatic shut-off valves*

ISO 23551-5, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 5: Manual gas valves*

ISO 23551-6, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 6: Thermoelectric flame supervision controls*