

**Safety and control devices for oil burners and oil-burning appliances - Particular requirements - Part 1:
Shut-off devices for oil burners**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 23553-1:2009 sisaldab Euroopa standardi EN ISO 23553-1:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This Estonian standard EVS-EN ISO 23553-1:2009 consists of the English text of the European standard EN ISO 23553-1:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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English Version

**Safety and control devices for oil burners and oil-burning
appliances - Particular requirements - Part 1: Shut-off devices
for oil burners (ISO 23553-1:2007, including Cor 1:2009)**

Dispositifs de commande et de sécurité pour brûleurs à
fioul et pour appareils à fioul - Exigences particulières -
Partie 1: Dispositifs de coupure pour brûleurs à fioul (ISO
23553-1:2007, Cor 1:2009 inclus)

Sicherheits-, Regel- und Steuereinrichtungen für Ölbrenner
und Öl verbrennende Geräte - Spezielle Anforderungen -
Teil 1: Absperreinrichtungen für Ölbrenner (ISO 23553-
1:2007, einschließlich Cor 1:2009)

This European Standard was approved by CEN on 28 May 2009.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of ISO 23553-1:2007, including Cor 1:2009 has been prepared by Technical Committee ISO/TC 161 "Control and safety devices for non-industrial gas-fired appliances and systems - STAND-BY" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 23553-1:2009 by Technical Committee CEN/TC 47 "Atomizing oil burners and their components - Function - Safety - Testing" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 264:1991.

According to edition EN 264:1991 the following fundamental changes are given:

- a) EN ISO 23553-1 is entirely revised and structured as a part 2 standard referring of the ISO 23550 which holds the general requirements;
- b) all normative references have been updated and reallocated to ISO and IEC standards;
- c) new requirements such as for electrical functions, for EMC as well as for materials added;
- d) additional tests have been added, e.g. EMC, electrical behaviour, endurance tests;
- e) marking, installation and operating instructions modified;

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Endorsement notice

The text of ISO 23553-1:2007, including Cor 1:2009 has been approved by CEN as a EN ISO 23553-1:2009 without any modification.

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

Part 1: Shut-off devices for oil burners

1 Scope

This part of ISO 23553 specifies safety, constructional and performance requirements, and testing of safety shut-off devices, for liquid fuels.

This part of ISO 23553 covers type testing only.

It applies to safety shut-off devices which:

- are designed as e.g. automatic valves or fast-closing devices;
- are used in combustion plants to interrupt the flow of liquid fuels with or without delay on closing and with or without delay on opening;
- are for use with fuel oils;

NOTE For other liquid fuels, additional test methods can be agreed between the manufacturer and the test authority.

- form part of a device having other function(s), such as oil pumps. In this case the test methods apply to those parts or components of the device forming the safety shut-off device, i.e. those parts which are necessary for the closing function;
- have declared maximum working pressures up to and including 5 000 kPa, for use on burners or in appliances using liquid fuels;
- are directly or indirectly operated electrically or by mechanical or hydraulic means;
- are fitted with or without closed-position indicator switches.

The methods of test given in this part of ISO 23553 are intended for product type testing.

2 Normative references

The following referenced documents are indispensable for the application 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 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 1817:2005, *Rubber, vulcanized — Determination of the effect of liquids*

ISO 7005-1, *Pipe flanges — Part 1: Steel flanges for industrial and general service piping systems*

ISO 7005-2, *Metallic flanges — Part 2: Cast iron flanges*

ISO 7005-3, *Metallic flanges — Part 3: Copper alloy and composite flanges*

ISO 23550:2004, *Safety and control devices for gas burners and gas-burning appliances — General requirements*

ISO 23551-1:2006, *Safety and control devices for gas burners and gas-burning appliances — Particular requirements — Part 1: Automatic valves*

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

IEC 60534-1, *Industrial-process control valves — Part 1: Control valve terminology and general considerations*

IEC 60534-2-3, *Industrial-process control valves — Part 2-3: Flow capacity — Test procedures*

IEC 60730-1:1999, *Automatic electrical controls for household and similar use — Part 1: General requirements*

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 3.1
safety shut-off device**
device for shutting off the fuel flow in order to avoid dangerous operating conditions in a plant
- 3.2
closure member**
movable part of the control which shuts off the oil flow
- 3.3
breather hole**
orifice which allows atmospheric pressure to be maintained within a compartment of variable volume
- 3.4
external leak-tightness**
leak-tightness of a oil-carrying compartment with respect to the atmosphere
- 3.5
internal leak-tightness**
leak-tightness of the closure member (in the closed position) sealing an oil-carrying compartment with respect to another compartment or to the outlet of the control
- 3.6
inlet pressure**
pressure at the inlet of the safety shut-off device