



BSI Standards Publication

Domestic gas cooking appliances — Safety

Part 22: Particular requirements for ovens and compartment grills

National foreword

This British Standard is the UK implementation of ISO 21364-22:2025. It supersedes PD ISO/TS 21364-22:2021, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GSE/35, Gas cooking appliances (domestic).

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

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**Domestic gas cooking appliances —
Safety —**

**Part 22:
Particular requirements for ovens
and compartment grills**

*Appareils de cuisson domestiques utilisant les combustibles
gazeux — Sécurité —*

*Partie 22: Exigences particulières pour les fours et
compartiments de grillage*

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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 291, *Domestic gas cooking appliances*.

This first edition of ISO 21364-22:2025 cancels and replaces ISO/TS 21364-22:2021.

A list of all parts in the ISO 21364 series can 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

Gas burning appliances using fuel gases must withstand the type of gas which is specified. Other International Standards cover the testing and properties of fuel gases.

Due to the differing properties of fuel gas depending on its source and region of origin, certain differences in regulations exist in different regions at present; some of these differences are presented in [Annex A](#).

This document is designed to be used in combination with ISO 21364-1. Together, they establish the requirements to the product covered by this document. Where needed, this document adapts certain requirements from ISO 21364-1 with amendments such as:

- “with the following modification”;
- “with the following addition”;
- “is replaced by the following”;
- “is not applicable”.

In order to identify specific requirements that are particular to this document, and not already covered by ISO 21364-1, this document contains clauses or subclauses that differ to the structure of ISO 21364-1.

To ensure the global relevance of this document, the differing requirements resulting from practical experience and installation practices in various regions of the world are taken into account. The variations in basic infrastructure associated with appliances are also taken into account, some of which are addressed ISO 21364-1:2025, Annex E and [Annex A](#) of this document. This document intends to provide a basic framework of requirements that recognize these differences.

Domestic gas cooking appliances — Safety —

Part 22: Particular requirements for ovens and compartment grills

1 Scope

This document specifies requirements for safety, construction and materials of domestic gas ovens and compartment grills.

NOTE 1 For general requirements regarding safety, construction and materials of gas ovens and compartment grills, see ISO 21364-1.

This document is applicable to the following:

- the following gas cooking appliances being built-in, table top or part of a cooking range:
 - ovens with natural or forced convection;
 - pyrolytic-self-cleaning ovens and pyrolytic-self-cleaning compartment grills;
 - compartment grills.
- oven accessories.

It is not applicable to gas ovens and compartment grills intended for either outdoor use or commercial use, or both, as well as electrical heated elements as part of the appliance.

NOTE 2 For requirements regarding electrical safety, refer to the IEC 60335 series.

NOTE 3 Attention is drawn to the fact that:

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can apply;
- in many countries, additional requirements are specified by the national health authorities, the national water supply authorities and similar authorities.

This document does not cover requirements relating to gas cylinders, their pressure regulators and their connections.

This document does not cover requirements for gas installation.

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 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 21364-1:2025, *Domestic gas cooking appliances — Safety — Part 1: General requirements*

ISO 21364-21:2025, *Domestic gas cooking appliances — Safety — Part 21: Particular requirements for gas hobs, gas grills and gas griddles*

IEC 60335-2-102, *Household and similar electrical appliances — Safety — Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections*

IEC 60584-1:2013, *Thermocouples - Part 1: EMF specifications and tolerances*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21364-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Definitions relating to appliances

3.1.1

pyrolytic self-cleaning oven

oven in which cooking deposits are removed by heating the oven to a temperature exceeding 350 °C

[SOURCE: IEC 60335-2-6:2014, 3.5.105]

3.1.2

cooking surface

horizontal surface of the hob section

3.1.3

forced convection mode

heating mode for appliances equipped with a fan intended to assist the transmission of heat by creating a forced circulation of air or products of combustion

Note 1 to entry: This fan is not intended to supply combustion air.

4 Components in gas cooking appliances

4.1 General

ISO 21364-1:2025, 4.1 shall apply.

4.2 Manual gas shut-off valves

ISO 21364-1:2025, 4.2 shall apply.

4.3 Knobs

ISO 21364-1:2025, 4.3 shall apply.

4.4 Multifunctional controls

ISO 21364-1:2025, 4.4 shall apply.

4.5 Thermoelectric flame supervision controls

ISO 21364-1:2025, 4.5 shall apply.

4.6 Thermostats

ISO 21364-1:2025, 4.6 shall apply.

4.7 Pressure regulators

ISO 21364-1:2025, 4.7 shall apply.

4.8 Automatic shut-off valves

ISO 21364-1:2025, 4.8 shall apply.

4.9 Injectors and adjusters

ISO 21364-1:2025, 4.9 shall apply.

4.10 Ignition systems

ISO 21364-1:2025, 4.10 shall apply.

4.11 Thermal cut-outs

ISO 21364-1:2025, 4.11 shall apply.

4.12 Cooling fan

A motor of a cooling fan shall conform with the requirements of IEC 60335-2-102.

If the appliance has a cooling fan, the fan shall operate automatically.

4.13 Forced convection fan

The motor of a forced convection fan shall conform with the requirements of IEC 60335-2-102.

5 General conditions of test

5.1 Reference conditions

ISO 21364-1:2025, 5.1 shall apply.

5.2 Reference and test gases

ISO 21364-1:2025, 5.2 shall apply.

5.3 Test pressures

ISO 21364-1:2025, 5.3 shall apply.

5.4 Temperature conditions

ISO 21364-1:2025, 5.4 shall apply.

5.5 Adjustment of the burner

ISO 21364-1:2025, 5.5 shall apply.

5.6 Test installation

ISO 21364-1:2025, 5.6 shall apply.

5.7 Characteristics of the test pans

ISO 21364-1:2025, 5.7 shall apply.

5.8 Ovens or compartment grills operated in the forced convection mode

Ovens and compartment grills that can be operated in the forced convection mode shall be tested in the same way as ovens or grills operated with natural convection but operated in the forced convection mode.

5.9 Portable ovens and compartment grills

Portable ovens and compartment grills shall be tested according to all the applicable clauses for ovens and compartment grills with the exception of [7.3.4.2](#), [12.2](#), [12.3](#), [12.4](#) and [12.5](#).

6 Heat input

6.1 General

ISO 21364-1:2025, 6.1 shall apply.

6.2 Obtaining the nominal heat input

6.2.1 General

ISO 21364-1:2025, 6.2 shall apply, with the following additions.

6.2.2 Test of oven and compartment grill with a thermostat

The burner of an appliance with thermostat shall be tested under the following conditions:

- the burner is ignited and operated with the thermostat at full rate at normal pressure and with the door closed or open to avoid cycling of the thermostat;
- measuring begins from ignition. For analogue meters, measuring terminates when the highest number of complete revolutions have been made before the end of the fifth minute. The test shall be finished before the thermostat starts cycling.

Then the heat input is calculated under reference conditions according to ISO 21364-1:2025, 6.3.

6.2.3 Test of oven and compartment grill without a thermostat

The burner of an appliance without a thermostat shall be tested under the following conditions:

- with the appliance at ambient temperature, the burner is ignited and operated at full rate at normal pressure for 10 min;
- measurement starts at the end of the tenth minute and finishes at the latest at the end of the thirteenth minute, with a minimum measurement time of one minute or when the highest number of complete revolutions of the meter have been made before the end of the thirteenth minute. For analogue meters, the measurement shall be taken over at least one complete revolution.

Then the heat input shall be calculated under reference conditions according to ISO 21364-1:2025, 6.3.

6.3 Measurements and calculations

ISO 21364-1:2025, 6.3 shall apply.

6.4 Obtaining the reduced heat input

6.4.1 Requirement

ISO 21364-1:2025, 6.4.1 shall apply.

6.4.2 Test

ISO 21364-1:2025, 6.4.2 shall apply.

6.4.3 Test of oven and compartment grill burner

The reduced heat input shall be measured after the nominal heat input at the same conditions with the oven door closed and the gas control is changed to reduced rate. For appliances with thermostatic regulation, the measurement shall be done after 30 minutes, with a minimum measurement time of one minute. If using analogue meters, measurements shall be taken over at least one complete revolution of the analogue meter.

6.5 Total heat input

ISO 21364-1:2025, 6.5 shall apply.

7 Heating

7.1 General

ISO 21364-1:2025, 7.1 shall apply.

7.2 Operating conditions

ISO 21364-1:2025, 7.2 shall apply.

7.3 Heating tests

7.3.1 Requirement

ISO 21364-1:2025, 7.3.1 shall apply.

7.3.2 Test under normal operation

7.3.2.1 General

ISO 21364-1:2025, 7.3.2.1 shall apply.

7.3.2.2 Hob burner

ISO 21364-1:2025, 7.3.2.2 shall apply.

7.3.2.3 Electric hob elements

ISO 21364-1:2025, 7.3.2.3 shall apply.

7.3.2.4 Oven burner

ISO 21364-1:2025, 7.3.2.4 shall apply.

7.3.2.5 Electric oven

ISO 21364-1:2025, 7.3.2.5 shall apply.

7.3.2.6 Gas compartment grill

ISO 21364-1:2025, 7.3.2.6 shall apply.

7.3.2.7 Electric compartment grill

ISO 21364-1:2025, 7.3.2.7 shall apply.

7.3.2.8 Gas griddle

ISO 21364-1:2025, 7.3.2.8 shall apply.

7.3.2.9 Electric griddle

ISO 21364-1:2025, 7.3.2.9 shall apply.

7.3.2.10 Gas surface grill

ISO 21364-1:2025, 7.3.2.10 shall apply.

7.3.2.11 Electric surface grill

ISO 21364-1:2025, 7.3.2.11 shall apply.

7.3.2.12 Gas warming drawer

ISO 21364-1:2025, 7.3.2.12 shall apply.

7.3.2.13 Electric warming drawer

ISO 21364-1:2025, 7.3.2.13 shall apply.

7.3.2.14 Ovens or compartment grills operated in the forced convection mode

Ovens and compartment grills that can be operated in the forced convection mode shall be tested in the same way as ovens or grills with natural convection (see ISO 21364-1:2025, 7.3.2.4 and 7.3.2.6), but with an average temperature of 210 °C instead of 230 °C at the centre of the compartment.

7.3.3 Simultaneous operation of oven burner and compartment gas grill burner

7.3.3.1 Requirement 1

At the end of Test 1 specified in [7.3.3.2](#), the temperature rise of accessible touchable surfaces shall meet the values indicated in [7.3.4.2.1](#), [Table 1](#).

7.3.3.2 Test 1

The oven burner is operated at an average temperature of 200 °C in the centre of the oven. This temperature is maintained. The grill burner is operated at full rate.