

BSI Standards Publication

Domestic gas cooking appliances — Safety

Part 1: General requirements



National foreword

This British Standard is the UK implementation of ISO/TS 21364-1:2021.

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.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication is not to be regarded as a British Standard.

© The British Standards Institution 2021 Published by BSI Standards Limited 2021

ISBN 978 0 539 17204 1

ICS 97.040.20

Compliance with a Published Document cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2021.

Amendments/corrigenda issued since publication

Date Text affected

PD ISO/TS 21364-1:2021

TECHNICAL SPECIFICATION

ISO/TS 21364-1

First edition 2021-05

Domestic gas cooking appliances — Safety —

Part 1:

General requirements

Appareils de cuisson domestiques utilisant les combustibles gazeux — Sécurité —

Partie 1: Exigences générales



Reference number ISO/TS 21364-1:2021(E)

PD ISO/TS 21364-1:2021 **ISO/TS 21364-1:2021(E)**



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents					
Fore	eword		vi		
Intr	oductio	n	vii		
1	Scop	e	1		
2	-	native references			
3					
3	3.1	ns and definitions			
	3.2	Definitions relating to gas			
	3.3	Definitions relating to components			
4	Components in gas cooking appliances				
-	4.1	General			
	4.2	Manual gas shut-off valves (Taps)			
	4.3	Knobs			
		4.3.1 Design of knobs			
		4.3.2 Marking for knobs			
	4.4	Multifunctional controls			
	4.5	Thermoelectric flame supervision controls4.5.1 General			
		4.5.1 General 4.5.2 Opening time			
		4.5.3 Extinction delay time			
	4.6	Thermostats			
	4.7	Pressure regulators			
		4.7.1 General			
		4.7.2 Regulation capacity	11		
	4.8	Automatic shut-off valves			
	4.9	Injectors and adjusters			
		4.9.1 General			
		4.9.2 Injectors			
		4.9.3 Air rate adjusters			
	4.10	4.9.4 Low rate adjusters			
	4.10 4.11	Ignition systems			
_					
5		eral conditions of test			
	5.1	Reference conditions			
	5.2	Reference and test gases			
		5.2.2 Conditions for producing test gases			
	5.3	Test pressures			
	5.4	Temperature conditions			
	5.5	Adjustment of the burner			
	5.6	Test installation	14		
		5.6.1 General			
		5.6.2 Built-in appliances			
		5.6.3 Freestanding appliances			
		5.6.4 Table-top appliances			
	5.7	Characteristics of the test pans			
		5.7.1 Pans required for testing on gas burners5.7.2 Pans required for testing on electric hob elements and induction hob			
	** -	8			
6		input			
	6.1 6.2	General Obtaining the nominal heat input			
	6.3	Measurements and calculations			
	6.4	Obtaining the reduced heat input	2.0		

		6.4.1 Requirement	
		6.4.2 Test	
	6.5	Total heat input	
		6.5.1 Requirement	
		6.5.2 Test	20
7	Heati	ng	20
	7.1	General	
	7.2	Operating conditions	
	7.3	Heating tests	
		7.3.1 Requirement	
		7.3.2 Test under normal operation	
	7.4	Abnormal operation	
8	Comb	oustion	
O	8.1	Measurement of all burners simultaneously	
	0.1	8.1.1 Requirement	
		8.1.2 Test	
	8.2	Blocked combustion products outlet	
	0.2	8.2.1 Requirement	
		8.2.2 Test	
	8.3	Analysis of the combustion products	
	0.5	8.3.1 General	
		8.3.2 Calculation with CO ₂	
		8.3.3 Calculation with O ₂	
		2	
9	_	on, cross lighting and flame stability	
	9.1	General	
	9.2	Movement of oven/grill door or cabinet door	
		9.2.1 Requirement	
		9.2.2 Test	28
10	Accui	nulation of unburnt gas and leak tightness	28
	10.1	Accumulation of unburnt gas	
	10.2	Leakage	29
		10.2.1 Requirement	
		10.2.2 Tests	
	10.3	Leak tightness of the appliance	29
		10.3.1 General	29
		10.3.2 Requirement	
		10.3.3 Test	29
	10.4	Spillage of unburnt gas inside the appliance	30
		10.4.1 Requirement	
		10.4.2 Test	30
11	Const	ruction	30
11	11.1	General	
	11.2	Materials	
	11.2	11.2.1 General	
		11.2.2 Burner material test	
		11.2.3 Sealings	
	11.3	Gas inlet connections.	
	11.4	Conversion to different gases	
	11.5	Pull forces of knobs for manual gas shut-off valves (taps)	
	11.0	11.5.1 Requirement	
		11.5.2 Test	
	11.6	Appliances that enable the user to program the start or the end of the cooking cycle	
	11.0	11.6.1 General	
		11.6.2 Electronic timer	
		11.6.3 Electro-mechanical or motorized timer	
	11.7	Compartment for one gas cylinder	
	44.7	COLLEGE VILLOITE TOT OTTO MUC CALLED TOTAL COLLEGE COL	U L

	11.8	Touch controls	
12	Mechanical strength		
	12.1	Parts made of glass and glass-ceramic	33
		12.1.1 General	
		12.1.2 Spring hammer test	
		12.1.3 Punch test	34
13	Elect	rical safety	35
	13.1	General	35
	13.2	Battery powered appliances	35
14	Marking and instructions		36
	14.1		36
		14.1.1 Marking on the appliance	36
		14.1.2 Marking on the packaging	
	14.2	Instructions	
		14.2.1 General	
		14.2.2 Instructions for use and maintenance	
		14.2.3 Instructions for use and maintenance of glass parts	
		14.2.4 Instructions for the installer	
Annex	x A (no	rmative) Table of test gases	44
Annex	x B (no	rmative) Purity of gases	67
Annex C (normative) Accuracy of test equipment			
Annex	x D (inf	ormative) Gas supply connections in force in various countries	69
Annex	E (no	rmative) National deviations in various countries	75
Biblio	graph	Y	79

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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 291, *Domestic gas cooking appliances*.

Introduction

This document provides general requirements for safety of domestic gas cooking appliances.

This document can also be applied, so far as is reasonable, to appliances not mentioned in this specific standard and to appliances designed on the basis of new principles, in which case additional requirements may be necessary.

Where no specific International Standard for an appliance exists, the appliance can be tested according to this document and further tests which take into account the intended use.

Gas burning appliances using fuel gases need to withstand the type of gas which is specified. Other ISO technical committees, e.g. ISO/TC 193, Natural gas, deal with the testing and properties of fuel gases.

Note that, due to the differing properties of fuel gas depending on its source/region of origin, certain differences in regulations exist at present in different regions; some of these differences are presented in Annexes A and E.

This document covers type testing.

This document series ISO 21364 "Domestic gas cooking appliances – Safety" is structured as follows:

- Part 1: General requirements
- Part 21: Particular requirements for hobs, surface grills and griddles
- Part 22: Particular requirements for ovens and compartment grills

This document can be supplemented by the corresponding clauses of ISO/TS 21364-21:2021 and ISO/TS 21364-22:2021.