
**Domestic gas cooking appliances —
Safety —**

**Part 21:
Particular requirements for gas hobs,
gas grills and gas griddles**

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

*Partie 21: Exigences particulières pour les tables de cuisson à gaz,
grils à gaz et grils par contact à gaz*





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

Page

Foreword	vi
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
3.1 Definitions relating to components	2
4 Components in gas cooking appliances	2
4.1 General	2
4.2 Manual gas shut-off valves (Taps)	2
4.2.1 Taps for multi-ring burners	3
4.3 Knobs	3
4.3.1 Design of knobs	3
4.4 Multifunctional controls	3
4.5 Thermoelectric flame supervision controls	3
4.6 Thermostats	3
4.7 Pressure regulators	3
4.8 Automatic shut-off valves	3
4.9 Injectors and adjusters	3
4.10 Ignition systems	3
4.11 Thermal cut-outs	3
4.12 Multi-ring burners	3
4.13 Overheating safety devices	4
4.13.1 Requirement	4
4.13.2 Test	5
5 General conditions of test	5
6 Heat input	5
6.1 General	5
6.2 Obtaining the nominal heat input	5
6.2.1 Test of hob burner	5
6.2.2 Test of multi-ring hob burner	6
6.2.3 Test of surface grill and griddle without a thermostat	6
6.2.4 Test of surface grill and griddle with a thermostat	6
6.3 Measurements and calculations	6
6.4 Obtaining the reduced heat input	6
6.4.1 Requirement	6
6.4.2 Test	6
6.4.3 Test of hob burner, surface grill and griddle burner	6
6.5 Total heat input	7
7 Heating	7
7.1 General	7
7.2 Operating conditions	7
7.3 Heating tests	7
7.4 Abnormal operation	7
7.4.1 Hob burner	7
7.4.2 Gas griddles	7
8 Combustion	8
8.1 Measurement of all burners simultaneously	8
8.2 Blocked combustion products outlet	8
8.3 Analysis of the combustion products	8
8.4 Single burner	8
8.4.1 General requirement	8

8.4.2	Hob burner, surface grill burner and griddle burner	8
8.4.3	Tests of multi-ring burner	10
8.4.4	Additional test of Type II and Type V multi-ring burners	10
8.4.5	Sampling the combustion products	10
8.5	Sooting	13
8.5.1	Requirement	13
8.5.2	Test	13
9	Ignition, cross-lighting and flame stability	14
9.1	General	14
9.2	Movement of oven/grill door or cabinet door	14
9.3	Hob burner, surface grill burner and griddle burner	14
9.3.1	General	14
9.3.2	Cold conditions	14
9.3.3	Hot conditions	15
9.4	Multi-ring hob burner	16
9.4.1	Requirement	16
9.4.2	Additional test for Type I multi-ring burners	16
9.4.3	Additional test for Type II and Type V multi-ring burners	16
9.4.4	Resistance to draught	16
10	Accumulation of unburnt gas and leak tightness	17
11	Construction	17
11.1	General	18
11.2	Materials	18
11.2.1	General	18
11.2.2	Burner material test	18
11.2.3	Sealings	18
11.2.4	Resistance for non-metallic feet of pan supports	18
11.3	Gas inlet connections	18
11.4	Conversion to different gases	18
11.5	Pull forces of knobs for manual gas shut-off valves (taps)	18
11.6	Appliances that enable the user to program the start or the end of the cooking cycle	18
11.7	Compartment for one gas cylinder	18
11.8	Touch controls	18
11.8.1	Requirement	19
11.8.2	Test	19
11.9	Resistance to spillage	19
11.9.1	Requirement	19
11.9.2	Test	19
11.10	Specific hob parts and hob accessories	19
11.10.1	Pan supports	19
11.10.2	Removable devices for small pans	20
11.10.3	Special supports for convex-based pans	20
11.10.4	Covered burners	20
11.11	Shut down lids	21
11.11.1	Requirement	21
11.11.2	Test	21
11.11.3	Glass shut down lids	21
11.11.4	Shut-off device	21
12	Mechanical strength	21
12.1	Parts made of glass and glass-ceramic	21
12.1.1	General	22
12.1.2	Spring hammer test	22
12.1.3	Punch test	22
12.1.4	Thermal stress resistance for glass and glass-ceramic hob surfaces	22
12.2	Pan support	22
12.2.1	Requirement	22