

ISO 21364-21:2025-06 (E)

Domestic gas cooking appliances - Safety - Part 21: Particular requirements for gas hobs, gas grills and gas griddles

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.....	2
4.3 Knobs.....	3
4.3.1 Design of knobs.....	3
4.3.2 Marking for 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 (OSD).....	4
4.13.1 Requirement.....	4
4.13.2 Test procedure.....	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 General.....	5
6.2.2 Test of hob burner.....	5
6.2.3 Test of multi-ring hob burner.....	6
6.2.4 Test of surface grill and griddle without a thermostat.....	6
6.2.5 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 General.....	6
6.4.2 Test of hob burner, surface grill and griddle burner.....	6
6.5 Total heat input.....	6
7 Heating.....	6
7.1 General.....	6
7.2 Operating conditions.....	6
7.3 Heating tests.....	7
7.4 Abnormal operation.....	7
7.4.1 General.....	7
7.4.2 Hob burner.....	7
7.4.3 Gas griddles.....	7

8	Combustion	7
8.1	Measurement of all burners simultaneously	7
8.2	Blocked combustion products outlet	7
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	9
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 test	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	Test for appliances having an automatic burner control system	14
9.4	Hob burner, surface grill burner and griddle burner	14
9.4.1	General	14
9.4.2	Cold conditions	14
9.4.3	Hot conditions	15
9.5	Multi-ring hob burner	16
9.5.1	Requirement	16
9.5.2	Additional test for Type I multi-ring burners	16
9.5.3	Additional test for Type II and Type V multi-ring burners	16
9.5.4	Resistance to draught	17
10	Accumulation of unburnt gas and leak tightness	18
11	Construction	18
11.1	General	18
11.2	Materials	19
11.2.1	General	19
11.2.2	Burner material test	19
11.2.3	Sealings	19
11.2.4	Resistance for non-metallic feet of pan supports	19
11.3	Gas inlet connections	19
11.4	Conversion to different gases	19
11.5	Pull forces of knobs for manual gas shut-off valves	19
11.6	Appliances that enable the user to program the start or the end of the cooking cycle	19
11.7	Compartment for one gas cylinder	19
11.8	Touch controls	19
11.8.1	General	19
11.8.2	Requirement	20
11.8.3	Test	20
11.9	Resistance to spillage	20
11.9.1	Requirement	20
11.9.2	Test	20
11.10	Specific hob parts and hob accessories	20
11.10.1	Pan supports	20
11.10.2	Removable devices for small pans	21
11.10.3	Special supports for convex-based pans	21
11.10.4	Covered burners	21
11.11	Shut down lids	21
11.11.1	Requirement	21
11.11.2	Test	22
11.11.3	Glass shut down lids	22
11.11.4	Shut-off device	22

12	Mechanical strength	23
12.1	Parts made of glass and glass-ceramic	23
12.1.1	General	23
12.1.2	Spring hammer test	23
12.1.3	Punch test.....	23
12.1.4	Thermal stress resistance for glass and glass-ceramic hob surfaces.....	23
12.2	Pan support.....	23
12.2.1	Requirement.....	23
12.2.2	Test.....	23
12.3	Pan support in contact with the glass or glass ceramic of the hob.....	23
13	Electrical safety	24
14	Marking and instructions	24
Annex A	(normative) National deviations in various countries	25
Annex B	(informative) Additional tests for hobs, surface grills and griddles supplied with natural gas and hydrogen admixtures	28
Annex C	(informative) Additional combustion test for NO₂ measurement of gas hobs burners	33
Bibliography	35