

ISO 21364-1:2025-06 (E)

Domestic gas cooking appliances - Safety - Part 1: General requirements

Contents

	Page
Foreword.....	vi
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	2
3.1 Definitions relating to appliances.....	2
3.2 Definitions relating to the tests.....	4
3.3 Definitions relating to components.....	7
3.4 Definitions relating to the function of the automatic burner control system (ABCS).....	10
4 Components in gas cooking appliances.....	11
4.1 General.....	11
4.2 Manual gas shut-off valves.....	11
4.3 Knobs.....	11
4.3.1 Design of knobs.....	11
4.3.2 Marking for knobs.....	11
4.4 Multifunctional controls.....	12
4.5 Thermoelectric flame supervision controls.....	12
4.5.1 General.....	12
4.5.2 Opening time.....	12
4.5.3 Extinction delay time.....	12
4.6 Thermostats.....	13
4.7 Pressure regulators.....	13
4.7.1 General.....	13
4.7.2 Regulation capacity.....	13
4.8 Automatic shut-off valves.....	13
4.9 Injectors and adjusters.....	14
4.9.1 General.....	14
4.9.2 Injectors.....	14
4.9.3 Air rate adjusters.....	14
4.9.4 Low rate adjusters.....	14
4.10 Ignition systems.....	14
4.11 Thermal cut-outs.....	15
4.12 Components for appliances with automatic burner control system (ABCS).....	15
4.12.1 General.....	15
4.12.2 Flame detection system.....	16
4.12.3 Direct flame establishment.....	17
4.12.4 Safety in the event of a failure to ignite.....	17
4.12.5 Safety in the event of a flame failure.....	18
4.13 Indirect manually operated burner control.....	18
4.13.1 General.....	18
4.13.2 Controls having a single closing direction.....	18
4.13.3 Controls having two closing directions.....	18
5 General conditions of test.....	19
5.1 Reference conditions.....	19
5.2 Reference and test gases.....	19
5.2.1 Characteristics of the test gases.....	19
5.2.2 Conditions for producing test gases.....	19
5.3 Test pressures.....	19
5.4 Temperature conditions.....	19
5.5 Adjustment of the burner.....	19

5.6	Test installation.....	20
5.6.1	General.....	20
5.6.2	Built-in appliances.....	20
5.6.3	Freestanding appliances.....	21
5.6.4	Table-top appliances.....	22
5.7	Characteristics of the test pans.....	22
5.7.1	Pans required for testing on gas burners.....	22
5.7.2	Pans required for testing on electric hob elements and induction hob elements.....	23
6	Heat input.....	24
6.1	General.....	24
6.2	Obtaining the nominal heat input.....	24
6.3	Measurements and calculations.....	24
6.3.1	General.....	24
6.3.2	Appliances with automatic burner control system (ABCS).....	26
6.4	Obtaining the reduced heat input.....	26
6.4.1	Requirement.....	26
6.4.2	Test.....	26
6.5	Total heat input.....	26
6.5.1	Requirement.....	26
6.5.2	Test.....	26
7	Heating.....	26
7.1	General.....	26
7.2	Operating conditions.....	26
7.3	Heating tests.....	27
7.3.1	Requirement.....	27
7.3.2	Test under normal operation.....	27
7.4	Abnormal operation.....	30
8	Combustion.....	30
8.1	Measurement of all burners simultaneously.....	30
8.1.1	Requirement.....	30
8.1.2	Test.....	30
8.2	Blocked combustion products outlet.....	32
8.2.1	Requirement.....	32
8.2.2	Test.....	33
8.3	Analysis of the combustion products.....	33
8.3.1	General.....	33
8.3.2	Calculation with CO ₂	33
8.3.3	Calculation with O ₂	34
9	Ignition, cross lighting and flame stability.....	34
9.1	General.....	34
9.2	Movement of oven door, grill door or cabinet door.....	34
9.2.1	Requirement.....	34
9.2.2	Test.....	34
9.3	Test for appliances having an automatic burner control system (ABCS).....	34
9.3.1	Requirement.....	34
9.3.2	Test.....	35
10	Accumulation of unburnt gas and leak tightness.....	36
10.1	Accumulation of unburnt gas.....	36
10.2	Leakage.....	36
10.2.1	Requirement.....	36
10.2.2	Tests.....	36
10.3	Leak tightness of the appliance.....	36
10.3.1	General.....	36
10.3.2	Requirement.....	37
10.3.3	Test.....	37
10.4	Spillage of unburnt gas inside the appliance.....	37
10.4.1	Requirement.....	37
10.4.2	Test.....	37
11	Construction.....	37

11.1	General.....	37
11.2	Materials.....	38
11.2.1	General.....	38
11.2.2	Burner material test.....	38
11.2.3	Sealings.....	38
11.3	Gas inlet connections.....	38
11.4	Conversion to different gases.....	38
11.5	Pull forces of knobs for manual gas shut-off valves.....	39
11.5.1	Requirement.....	39
11.5.2	Test.....	39
11.6	Appliances that enable the user to program the cooking cycle.....	39
11.6.1	General.....	39
11.6.2	Electronic timer.....	40
11.6.3	Electro-mechanical or motorized timer.....	40
11.7	Compartment for one gas cylinder.....	40
11.8	Touch controls.....	40
12	Mechanical strength.....	41
12.1	Parts made of glass and glass-ceramic.....	41
12.1.1	General.....	41
12.1.2	Spring hammer test.....	41
12.1.3	Punch test.....	41
13	Electrical safety.....	43
13.1	General.....	43
13.2	Battery powered appliances.....	43
14	Marking and instructions.....	43
14.1	Marking.....	43
14.1.1	Marking on the appliance.....	43
14.1.2	Marking on the packaging.....	44
14.2	Instructions.....	45
14.2.1	General.....	45
14.2.2	Instructions for use and maintenance.....	45
14.2.3	Instructions for use and maintenance of glass parts.....	47
14.2.4	Instructions for the installer.....	47
Annex A	(normative) Table of test gases.....	51
Annex B	(normative) Purity of gases.....	71
Annex C	(normative) Accuracy of test equipment.....	72
Annex D	(informative) Gas supply connections in force in various countries.....	73
Annex E	(normative) National deviations in various countries.....	79
Bibliography	83