

ISO 21364-22:2025-06 (E)

Domestic gas cooking appliances - Safety - Part 22: Particular requirements for ovens and compartment grills

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
4 Components in gas cooking appliances.....	2
4.1 General.....	2
4.2 Manual gas shut-off valves.....	2
4.3 Knobs.....	2
4.4 Multifunctional controls.....	2
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 Cooling fan.....	3
4.13 Forced convection fan.....	3
5 General conditions of test.....	3
5.1 Reference conditions.....	3
5.2 Reference and test gases.....	3
5.3 Test pressures.....	3
5.4 Temperature conditions.....	3
5.5 Adjustment of the burner.....	4
5.6 Test installation.....	4
5.7 Characteristics of the test pans.....	4
5.8 Ovens or compartment grills operated in the forced convection mode.....	4
5.9 Portable ovens and compartment grills.....	4
6 Heat input.....	4
6.1 General.....	4
6.2 Obtaining the nominal heat input.....	4
6.2.1 General.....	4
6.2.2 Test of oven and compartment grill with a thermostat.....	4
6.2.3 Test of oven and compartment grill without a thermostat.....	4
6.3 Measurements and calculations.....	5
6.4 Obtaining the reduced heat input.....	5
6.4.1 Requirement.....	5
6.4.2 Test.....	5
6.4.3 Test of oven and compartment grill burner.....	5
6.5 Total heat input.....	5
7 Heating.....	5
7.1 General.....	5
7.2 Operating conditions.....	5
7.3 Heating tests.....	5
7.3.1 Requirement.....	5
7.3.2 Test under normal operation.....	5

	7.3.3	Simultaneous operation of oven burner and compartment gas grill burner	6
	7.3.4	Temperatures of accidentally touchable surfaces	7
7.4		Abnormal operation	12
	7.4.1	General	12
	7.4.2	Blocking of the cooling fan	12
	7.4.3	Failure of the thermostat	13
	7.4.4	Temperature of components in abnormal forced convection mode	13
8		Combustion	13
	8.1	Measurement of all burners simultaneously	13
	8.2	Blocked combustion products outlet	13
	8.3	Analysis of the combustion products	14
	8.4	Ovens and compartment grills	14
	8.4.1	General	14
	8.4.2	Combustion with reference gas	14
	8.4.3	Combustion with limit gas	14
	8.4.4	Simultaneous operation of oven burner and a compartment gas grill burner	14
	8.4.5	Combustion with fluctuation of the electrical supply	15
	8.4.6	Combustion under abnormal operation	15
	8.5	Forced convection ovens or compartment grills	16
	8.5.1	General	16
	8.5.2	Abnormal forced convection mode of forced convection ovens or compartment grills	16
9		Ignition, cross-lighting and flame stability	16
	9.1	General	16
	9.2	Movement of oven/grill door or cabinet door	16
	9.3	Test for appliances having an automatic burner control system	16
	9.4	Oven and compartment grill burner	16
	9.4.1	General	16
	9.4.2	Cold conditions	16
	9.4.3	Hot conditions	17
	9.5	Forced convection ovens or compartment grills	18
	9.5.1	General	18
	9.5.2	Abnormal operation of forced convection ovens or compartment grills	18
	9.6	Simultaneous operation of the oven burner and a compartment gas grill burner	18
	9.6.1	General	18
	9.6.2	Cold conditions	18
	9.6.3	Hot conditions	20
	9.6.4	Movement of oven door or cabinet door during simultaneous operation	21
	9.7	Ignition test of pyrolytic-self-cleaning oven and compartment grills	21
	9.7.1	Requirement	21
	9.7.2	Test	21
10		Accumulation of unburnt gas and leak tightness	21
	10.1	Accumulation of unburnt gas	21
	10.2	Leakage	21
	10.3	Leak tightness of the appliance	21
	10.4	Spillage of unburnt gas inside the appliance	21
	10.4.1	General	21
	10.4.2	Requirement	21
	10.4.3	Test	21
	10.4.4	Accumulation of unburnt LPG	22
11		Construction	22
	11.1	General	22
	11.2	Materials	22
	11.3	Gas inlet connections	22
	11.4	Conversion to different gases	22
	11.5	Pull forces of knobs for manual gas shut-off valves	22
	11.6	Appliances that enable the user to program the start or the end of the cooking cycle	22
	11.7	Compartment for one gas cylinder	22
	11.8	Touch controls	22
	11.9	Door lock at high temperature	22
	11.9.1	Requirement	22

11.9.2	Test	22
11.10	Appliances having pyrolytic-self-cleaning ovens and compartment grills	23
11.10.1	Door locking means for pyrolytic-self-cleaning oven and compartment grills	23
11.10.2	Door lock mechanism that are temperature actuated	23
11.10.3	Door lock mechanism that are manually or electrically actuated	23
11.10.4	Sealing means for pyrolytic ovens and compartment grills	24
11.10.5	Temperature limiting means for pyrolytic ovens and compartment grills	24
11.10.6	Vapour combustion or flash-out during the pyrolytic-self-cleaning cycle	24
11.10.7	Flue gas temperatures of pyrolytic-self-cleaning ovens and compartment grills	25
11.11	Ignition with an external lighter	26
12	Mechanical strength	26
12.1	Parts made of glass and glass-ceramic	26
12.1.1	General	26
12.1.2	Spring hammer test	26
12.1.3	Punch test	26
12.1.4	Appliance door	26
12.2	Appliance body of freestanding appliances	27
12.2.1	Requirement	27
12.2.2	Test	27
12.3	Oven door strength	27
12.3.1	Requirement	27
12.3.2	Test	27
12.4	Tilting of freestanding ovens and compartment grills	27
12.4.1	Tilting	27
12.4.2	Tilting under special conditions	28
12.5	Strength and stability of oven and grill accessories	28
12.5.1	Requirement	28
12.5.2	Test	28
12.6	Portable ovens and compartment grills	29
12.6.1	General	29
12.6.2	Tilting of portable ovens and compartment grills	29
13	Electrical safety	29
14	Marking and instructions	29
14.1	Marking	29
14.1.1	Marking on the appliance	29
14.2	Instructions	30
Annex A	(normative) National deviations in various countries	31
Annex B	(informative) Additional tests for oven burners and compartment grill burners supplied with natural gas and hydrogen admixtures	33
Annex C	(informative) Additional combustion test for NO₂ measurement of oven burners and compartment grill burners	38
Bibliography		40