

# DIN EN 521:2020-05 (E)

## Specifications for dedicated liquefied petroleum gas appliances - Portable vapour pressure liquefied petroleum gas appliances (includes Amendment :2019)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		5
1	Scope .....	6
2	Normative references .....	7
3	Terms and definitions .....	7
4	Classification .....	11
4.1	Classification of gases .....	11
4.2	Categories of appliances .....	12
5	Safety requirements .....	12
5.1	General .....	12
5.2	Adjustment of the burner .....	12
5.3	Materials .....	12
5.4	Assembly, cleaning and maintenance .....	12
5.4.1	Assembly .....	12
5.4.2	Cleaning, maintenance .....	13
5.5	Strength and stability .....	13
5.5.1	Strength .....	13
5.5.2	Stability .....	13
5.6	Soundness of the gas circuit assembly .....	14
5.7	Connections .....	14
5.7.1	General .....	14
5.7.2	Appliances intended to be directly fitted to the gas cartridge or gas cylinder .....	14
5.8	Transport, fixing and mobility devices .....	16
5.9	Taps .....	16
5.9.1	General .....	16
5.9.2	Needle valves .....	16
5.10	Control handles .....	17
5.10.1	Construction .....	17
5.10.2	Marking .....	17
5.11	Injectors .....	18
5.12	Ignition devices .....	18
5.13	Flame supervision devices .....	18
5.14	Burners and radiant elements .....	19
5.15	Grids .....	19
5.15.1	General .....	19
5.15.2	Grid with a rigid useful area .....	19
5.16	Turnspit .....	19
5.17	Fireguards for heating appliances .....	20
5.18	Locations and compartments for gas cartridge or gas cylinder .....	20
5.18.1	Compartments for gas cylinder .....	20
5.18.2	Compartment for gas cartridge .....	21
5.19	Heat input .....	21
5.20	Resistance to overheating .....	21
5.21	Temperature of various parts of the appliance .....	21
5.21.1	Floor standing or table standing appliances .....	21
5.21.2	Appliances designed to be held during use .....	22
5.22	Temperature of panels (floors, walls or ceilings) .....	22

5.22.1	Floor and table standing appliances .....	22
5.22.2	Appliances intended for suspension .....	22
5.23	Ignition, crosslighting and flame stability .....	22
5.24	Resistance to draught .....	23
5.25	Resistance to liquid spillage .....	23
5.26	Combustion .....	23
5.27	Accumulation of un-burnt gas .....	23
5.28	Safety at high temperature .....	23
5.29	Sooting - condensation .....	23
5.30	Rational use of energy .....	23
5.30.1	Efficiency of stove burners .....	23
5.31	Durability of markings .....	24
5.32	Strength and endurance requirements .....	24
6	Test methods .....	24
6.1	General .....	24
6.1.1	Test gases .....	24
6.1.2	Test conditions .....	25
6.1.3	Test gases and pressures .....	25
6.1.4	Test vessel .....	26
6.2	Adjustment of the burner .....	26
6.3	Materials .....	26
6.4	Assembly, cleaning and maintenance .....	26
6.5	Strength and stability .....	26
6.5.1	Strength .....	26
6.5.2	Stability .....	27
6.6	Soundness of the gas circuit assembly .....	28
6.6.1	Soundness of the appliance .....	28
6.6.2	Soundness of flexible tube connections .....	29
6.6.3	Soundness of burner assemblies .....	29
6.7	Connections .....	29
6.7.1	General .....	29
6.7.2	Appliances directly connected to gas cartridge or gas cylinder .....	29
6.8	Transport, fixing and mobility devices .....	30
6.9	Taps .....	30
6.10	Control handles .....	30
6.11	Injectors .....	31
6.12	Ignition devices .....	31
6.13	Flame supervision devices .....	31
6.13.1	General .....	31
6.13.2	Ignition delay time .....	31
6.13.3	Extinction delay time .....	31
6.14	Burners and radiant elements .....	31
6.15	Grids .....	31
6.16	Turnspit .....	31
6.17	Fireguards for heating appliances .....	32
6.17.1	Strength of fireguards .....	32
6.17.2	Dimensions .....	32
6.18	Locations and compartments for gas cartridge or gas cylinder .....	32
6.19	Verification of heat inputs .....	32
6.19.1	Test .....	32
6.19.2	Calculation of heat inputs .....	33
6.20	Resistance to overheating .....	33
6.21	Temperatures of the various parts of the appliance .....	34
6.21.1	Test installation .....	34
6.21.2	Test method .....	34
6.22	Temperature of panels (floor, wall or ceiling) .....	35
6.22.1	Floor standing appliances .....	35
6.22.2	Fixed appliances .....	35
6.23	Ignition, crosslighting and flame stability .....	35
6.23.1	Test conditions .....	35
6.23.2	Test on individual burners, others being extinguished .....	36

6.23.3	Test on individual burners, others being lit .....	36
6.24	Resistance to draught .....	37
6.25	Resistance to liquid spillage .....	37
6.26	Combustion .....	38
6.26.1	General conditions .....	38
6.26.2	Stove burners .....	38
6.26.3	Analysis of the products of combustion .....	38
6.27	Accumulation of un-burnt gases .....	39
6.28	Safety at high temperature .....	39
6.29	Sooting - condensation .....	39
6.30	Rational use of energy .....	40
6.30.1	Uncovered stove burners .....	40
6.30.2	Covered burners .....	41
6.31	Durability of the marking .....	41
6.32	Strength and endurance test .....	42
7	Markings .....	42
7.1	Appliance marking .....	42
7.2	Packaging marking .....	43
8	Instructions for use, maintenance and assembly .....	43
8.1	General .....	43
8.2	Instruction contents .....	43
Annex A(normative)Characteristicsoftestvessels(see 6.5.2.3) .....		58
Annex B(normative)Testsonneedlevalves(see 6.9) .....		60
B.1	Resistance to temperature .....	60
B.2	Endurance .....	60
Annex C(informative)Examplesofauthorizedsolutions .....		61
Bibliography .....		68