

Institut luxembourgeois de la normalisation de l'accréditation, de la sécurité et qualité des produits et services

ILNAS-EN 17476:2021

Specifications for dedicated liquefied petroleum gas appliances - LPG vapour pressure appliances incorporating a horizontal cartridge in the chassis

Festlegungen für Flüssiggasgeräte - Mit Dampfdruck betriebene Flüssiggasgeräte, die eine waagerechte Kartusche im Gehäuse enthalten

Spécifications pour les appareils fonctionnant exclusivement aux gaz de pétrole liquéfiés - Appareils GPL à pression de vapeur incorporant une

National Foreword

This European Standard EN 17476:2021 was adopted as Luxembourgish Standard ILNAS-EN 17476:2021.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

May 2021

ICS 23.020.35

English Version

Specifications for dedicated liquefied petroleum gas appliances - LPG vapour pressure appliances incorporating a horizontal cartridge in the chassis

Spécifications pour les appareils fonctionnant exclusivement aux gaz de pétrole liquéfiés - Appareils GPL à pression de vapeur incorporant une cartouche horizontale dans leur châssis Festlegungen für Flüssiggasgeräte - Mit Dampfdruck betriebene Flüssiggasgeräte, die eine waagerechte Kartusche im Gehäuse enthalten

This European Standard was approved by CEN on 12 March 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Cont	ents	Page
Europ	ean foreword	4
1	Scope	5
2	Normative references	
3	Terms and definitions	
4	Classification of appliances	
-	• •	
5 5.1	Safety requirementsGeneral	
5.1 5.2	Adjustment of the burner	
÷ 5.3	Materials	
5.4	Assembly, cleaning and maintenance	
5.5	Strength and stability	
5.6	Soundness of the gas circuit assembly	
5.7	Connections	
5.8	Transport, fixing and mobility devices	
5.9	Taps	
5.10	Pressure sensitive safety device	
~ 5.11	Control handles	
5.12	Injectors	13
5.13	Ignition devices	
5.14	Flame supervision devices	
5.15	Burners and radiant elements	13
5.16	Grids	
5.17	Fireguards for heating appliances	14
5.18	Compartment for gas cartridge	15
5.19	Heat input	15
5.20	Resistance to overheating	15
5.21	Temperature of various parts of the appliance and cartridge	15
5.22	Temperature of panels (floors, walls)	
5.23	Ignition, crosslighting and flame stability	
5.24	Resistance to draught	
5.25	Resistance to liquid spillage	
5.26	Combustion	
5.27	Accumulation of un-burnt gas	
5.28	Safety at high temperature	
5.29	Sooting - condensation	
5.30	Rational use of energy of stove burners	
5.31	Durability of markings	
5.32	Strength and endurance requirements	
5.33	Atmosphere sensing device	
6	Test methods	
6.1	General	
6.2	Adjustment of the burner	
6.3	Materials	
6.4 6.5	Assembly, cleaning and maintenance	19 20
n 5	N. C. (1911) 11 (1911) C. (1	711

6.6	Soundness of the gas circuit assembly	
6.7	Connections	
6.8	Transport, fixing and mobility devices	
6.9	Taps	
6.10	Pressure sensitive safety device design and test	
6.11	Control handles	
6.12	Injectors	
6.13	Ignition devices	
6.14	Flame supervision devices	
6.15	Burners and radiant elements	
6.16	Grids	
6.17 6.18	Fireguards for heating appliances Compartments for gas cartridge	
6.19	Verification of heat inputs	
6.20	Resistance to overheating	
6.21	Temperatures of the various parts of the appliance and cartridge	
6.22	Temperature of panels (floor, wall)	
6.23	Ignition, crosslighting and flame stability	
6.24	Resistance to draught	
6.25	Resistance to liquid spillage	
6.26	Combustion	
6.27	Accumulation of un-burnt gases	28
6.28	Safety at high temperature	28
6.29	Sooting - condensation	29
6.30	Rational use of energy of stove burners	29
6.31	Durability of the markings	
6.32	Strength and endurance test	
6.33	Atmosphere sensing devices	31
7	Markings	31
7.1	Appliance marking	
7.2	Packaging marking	
8	Instructions for use, maintenance and assembly	22
8.1	General	
8.2	Instruction contents	_
Ċ.		
Annex	A (normative) Characteristics of test vessels (see 6.5.2.3)	41
Annex	B (normative) Tests on taps	42
B.1	Resistance to temperature	42
B.2	Endurance	42
Annex	C (normative) Vitiation room	43
C.1	Dimension	43
C.2	Sealing requirement	43
C.3	Construction	43
Annex	ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Regulation (EU) 2016/426/EC	45
D.7.1.		
Riblio	graphy	48

European foreword

This document (EN 17476:2021) has been prepared by Technical Committee CEN/TC 181 "Appliances and leisure vehicle installations using liquefied petroleum gas and appliances using natural gas for outdoor use", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation (EU) 2016/426 of the European Parliament and of the Council of 9 March 2016 on appliances burning gaseous fuels and repealing Directive 2009/142/EC.

For relationship with EU Regulation (EU) 2016/426, see informative Annex ZA, which is an integral part of this document.

Appliances covered by this document differ from the ones covered by EN 521:2019+AC:2019 by the fact that the gas cartridge is incorporated inside the appliance body in a position which can create particular situations which need different approach than these used in EN 521:2019+AC:2019.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies the construction characteristics, performances and marking related to safety and the rational use of energy of portable, flat gas appliances directly supplied at the LPG vapour pressure, incorporating a gas cartridge complying with EN 417:2012, inserted horizontally in the chassis.

NOTE 1 These appliances are referred to in the body of the text as "appliances".

This document covers appliances for outdoor or in well ventilated areas uses only.

This document does not cover appliances supplied by an external gas source.

For example, the following types of appliances are covered:

- a) cooking appliances (stoves, barbecues);
- b) heating appliances.

This document specifies the requirements applicable to these appliances or their functional sections whether or not the latter are independent or incorporated into an assembly.

Appliances covered by this document are not connected to a flue for the discharge of products of combustion and are not connected to the mains electricity supply.

This document covers neither appliances supplied with LPG in the liquid phase nor appliance with fixed integral container which could be refilled by the user.

This document does not cover appliances of direct pressure propane category.

Requirements for rational use of energy have been considered for stove burners.

NOTE 2 However, such requirements have not been considered for the other types of appliances because:

- for barbecues, this type of cooking varies according to the type of food and region where the appliance is used;
- for heating appliances, all the heat produced is discharged into the environment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 30-1-1:2008+A3:2013, Domestic cooking appliances burning gas — Part 1-1: Safety — General

EN 125:2010+A1:2015, Flame supervision devices for gas burning appliances — Thermoelectric flame supervision devices

EN 437:2018, Test gases — Test pressures — Appliance categories

EN 549:2019, Rubber materials for seals and diaphragms for gas appliances and gas equipment

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at https://www.electropedia.org/

3.1

stove

cooking appliance incorporating one or several burners and a pan support(s) designed in such a way that it(they) can support the vessels containing the food

3.2

flat portable gas appliance

flat appliance operating with a gas cartridge horizontally placed in the chassis

3.2.1

flat portable gas stove

flat portable gas appliance for which the length and/or width is bigger than its height

Note 1 to entry: Figure 1 gives an example of flat portable gas stoves (single and double burners).

3.2.2

flat portable gas heater

flat portable gas appliance intended to heat environment

Note 1 to entry: Figure 2 gives an example of flat portable gas heater.

3.2.3

barbecue

flat portable gas appliance the main function of which is to roast and/or grill food

Note 1 to entry: Cooking is carried out by radiant heat and, possibly, by convection and conduction.

Note 2 to entry: Figure 4 gives an example of barbecue covered by this document.

3.3

vapour pressure appliance

appliance for which the pressure at the gas inlet is equal to the pressure in the gas cartridge

Note 1 to entry: A pressure reducing device may be incorporated in the gas circuit, between the gas inlet and the injector.

3.4

gas cartridge

non-refillable container with a maximum capacity of 1 000 ml filled with gas or a gas mixture

Note 1 to entry: An example of gas cartridges to be horizontally inserted in appliances is given in Figure 3.

Note 2 to entry: Gas cartridges are not fittings.

3.5

cooking device

device supplied with the appliance designed to hold or receive the food to be cooked

3.6

useful part of a cooking device

part of the device in contact with food during cooking

3.7

grid

cooking device part of a barbecue holding the food to be cooked designed in such a way that most part of the food is directly heated by the flames

3.8

griddle

part of a barbecue consisting of the plate placed above a burner, that allows the cooking of food by direct contact with the surface of the plate which is brought to a high temperature

3.9

pan support

support placed above an open stove burner and designed to support the pan to be heated

3.10 safety device

3.10.1

flame supervision device

device which, due to the presence of a flame on the sensing element, keeps open the gas flow to the burner and any pilot and which cuts off the gas supply to the burner and possibly a pilot in the event of extinction of the supervised flame

3.10.2

pressure sensitive safety device

device which automatically shuts off the gas supply to the burner in the event of overpressure in the cartridge

3.11

ignition delay time

time between the ignition of the supervised flame and the moment when the effect of this flame is sufficient to keep the closing device open

3.12

extinction delay time

time between the extinction of the supervised flame and the closure of the gas supply to the burner and possibly a pilot

3.13

tap

controlling device, part of the appliance, designed to isolate a burner from the internal gas pipework and possibly to adjust its rate during use

3.14

control handle

component designed to be operated manually so as to operate a control of the burner

3.15

gripping area

outside part of the appliance designed to be handled during use