SLOVENSKI STANDARD
oSIST prEN 1949:2018

01-april-2018

Specifikacija za vgradnjo sistemov na utekočinjeni naftni plin (UNP) v bivalna vozila za prosti čas in druga vozila

Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and accommodation purposes in other vehicles

Festlegungen für die Installation von Flüssiggasanlagen in bewohnbaren Freizeitfahrzeugen und zu Wohnzwecken in anderen Fahrzeugen

Spécifications relatives aux installations des systèmes GPL pour les besoins domestiques dans les véhicules habitables de loisirs et dans les autres véhicules

Ta slovenski standard je istoveten z: **prEN 1949**

ICS:

43.100	Osebni avtomobili. Bivalne prikolice in lahke prikolice	Passenger cars. Caravans and light trailers
75.160.30	Plinska goriva	Gaseous fuels

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EUROPEAN STANDARD

NORME EUROPÉENNE

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ICS 43.100; 97.200.30

Will supersede EN 1949:2011+A1:2013

English Version

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 181.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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

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European foreword

This document (prEN 1949:2018) has been prepared by Technical Committee CEN/TC 181 “Dedicated liquefied petroleum gas appliances”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

The following main technical changes have been made compared to EN 1949:2011+A1:2013:

a) definition for tank compartment has been added;

b) requirements for tank compartment have been added;

c) several clauses have been separated to clearly state the requirements for road vehicles and caravan holiday homes

d) requirements for slide outs have been added;

e) requirements for electric installations inside gas compartments have been extended;

f) requirements for tanks and tank installations have been extended;

g) Annex A for national regulation concerning the maximum flow rate of pressure regulating devices for caravan holiday homes has been added;

h) Annex B (old) has been deleted;

i) former Annex A became Annex B;

j) Annex C has been updated;

k) requirements for cylinder compartment with internal excess has been amended;

l) declaration of conformity is now mandatory;

m) calculation method for the leak test has been added.

1 Scope

This European Standard specifies the requirements for the installation of liquefied petroleum gas systems for habitation purposes in leisure accommodation vehicles and for accommodation purposes in other vehicles. It details:

— health and safety requirements on the selection of materials;

— components and appliances;

— on design considerations;

— tightness testing of installations;

— the contents of the user's handbook.

This European Standard does not cover installations supplied from other than 3rd family gases (LPG), water connections or electrical power supplies to the appliance(s). Portable appliances, incorporating their own gas supply, are not considered part of the installation and are outside the scope of this standard. It does not include the installation of LPG appliances to be used for commercial purposes or for boats. Gas supply equipment and gas appliances separate from and external to the body of the vehicle are also not considered by this standard.

This standard covers tanks which fulfil the requirements of the Pressure Equipment Directive (2014/68/EU).

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 331, *Manually operated ball valves and closed bottom taper plug valves for gas installations for buildings*

EN 624, *Specification for dedicated LPG appliances - Room sealed LPG space heating equipment for installation in vehicles and boats*

EN 732, *Specifications for dedicated liquefied petroleum gas appliances - Absorption refrigerators*

EN 751-2, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 2: Non-hardening jointing compounds*

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1254-1, *Copper and copper alloys - Plumbing fittings - Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes*

EN 1254-2, *Copper and copper alloys - Plumbing fittings - Part 2: Fittings with compression ends for use with copper tubes*

EN 1254-4, *Copper and copper alloys - Plumbing fittings - Part 4: Fittings combining other end connections with capillary or compression ends*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10305-1, *Steel tubes for precision applications - Technical delivery conditions - Part 1: Seamless cold drawn tubes*

EN 10305-2, *Steel tubes for precision applications - Technical delivery conditions - Part 2: Welded cold drawn tubes*

EN 10305-3, *Steel tubes for precision applications - Technical delivery conditions - Part 3: Welded cold sized tubes*

EN 12979:2002, *Automotive LPG-systems — Installation requirements*

EN 14291, *Foam producing solutions for leak detection on gas installations*

EN 15033, *Room sealed storage water heaters for the production of sanitary hot water using LPG for vehicles and boats*

prEN 16436-2, *Rubber and plastics hoses, tubing and assemblies for use with propane and butane and their mixtures in the vapour phase — Part 2: Assemblies*

EN ISO 1127, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127:1992)*

EN ISO 8434-1, *Metallic tube connections for fluid power and general use - Part 1: 24 degree cone connectors (ISO 8434-1)*

ISO 8434-2, *Metallic tube connections for fluid power and general use — Part 2: 37 degree flared connectors*

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:

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

3.1
leisure accommodation vehicle
unit of living accommodation for temporary or seasonal occupation that may meet requirements for construction and use of road vehicles

[SOURCE: EN 13878:2003, definition 3.21]

3.2
caravan
trailer leisure accommodation vehicle that meets requirements for construction and use of road vehicles

[SOURCE: EN 13878:2003, definition 3.5]

3.3
motor caravan
self-propelled leisure accommodation vehicle that meets requirements for construction and use of road vehicles. It contains at least seats and table, sleeping accommodation which may be converted from the seats, cooking facilities and storage facilities

[SOURCE: EN 13878:2003, definition 3.26]

3.4
caravan holiday home
transportable leisure accommodation vehicle that does not meet requirements for construction and use of road vehicles, that retains means for mobility and is for temporary or seasonal occupation

[SOURCE: EN 13878:2003, definition 3.6]

3.5
liquefied petroleum gas (LPG)
mixture of light hydrocarbons composed mainly of propane, butane and their isomers, gaseous under conditions of normal temperature and pressure

Note 1 to entry: LPG is maintained in its liquid state by increased pressure or lowered temperature.

Note 2 to entry: In some countries, UN numbers 1011 and 1978 may also be designated LPG.

3.6
LPG appliance
appliance that is designed for heating, cooking, lighting, refrigeration, hot water production or electricity production (fuel cell or generator), using LPG as its energy source

3.7
LPG system
assembly of an installation and its appliances

3.8
liquefied petroleum gas installation
installation usually consisting of fuel container(s), pressure regulator(s), piping, hose assemblies and shut-off devices, providing liquefied petroleum gas to appliances

3.9
pressure regulation system
system incorporating one or more regulators with or without change-over device to reduce the supply pressure of the system to the required working pressure for the appliance(s)

3.10
regulator
device which maintains a regulated pressure within preset limits, whatever the upstream pressure, rate and temperature

3.11
changeover device
device which maintains the gas supply continuity by using gas from a “cylinder”, a “tank” or an external supply manually chosen by the user or automatically

[SOURCE: EN 16129:2013, definition 3.1.2]

3.12
room sealed appliance
appliance that has the combustion system, including the air inlet and products outlet, isolated from any internal area

3.13
open-flue appliance
appliance designed to be connected to a flue via a draught diverter, its combustion air being drawn from the room or internal space in which it is installed

3.14
closed-flue appliance
appliance where the flue is closed from a room or internal space due to the absence of a draught diverter, flue break and any draught break within the flue

3.15
flueless appliance
appliance that discharges its products of combustion into the compartment in which it is installed

3.16
flue
duct designed to convey the products of combustion to the exterior of a vehicle

3.17
flue terminal
part of the flue system through which the products of combustion are discharged to the outside (cowl)

3.18
shut-off valve
device to interrupt the flow of gas, having one inlet and one or more individually controlled outlets

3.19
liquefied petroleum gas cylinder
portable container for liquefied petroleum gas

Note 1 to entry: portable containers which are refilled outside the vehicle are considered as cylinders (see ADR 4.1.4, P200).

[SOURCE: EN 13878:2003, definition 3.23]

3.20
LPG cylinder compartment
space specially constructed to accommodate liquefied petroleum gas cylinder(s)

3.21
flame supervision device
device that has a sensing element, activated by the presence or absence of a flame, that causes the inlet of the LPG supply to a burner to be opened or closed

3.22
pilot
small burner that provides a continuously burning flame to ignite a main burner when required

3.23
tightness
absence of leakage greater than the specified limit

3.24
hard soldering
soldering for which the lowest temperature of the melting range, after application, is not less than 450 °C

3.25
fixed ventilation
permanent measures that ensure the minimum provision of fresh air

3.26
free area of ventilation
total area of the apertures in a ventilator or grill

3.27
ventilator
device that allows the passage of air for the ventilation of a compartment

3.28
hose assembly
length of hose with suitably attached end fittings

[SOURCE EN ISO 14113:2014, definition 3.5]

3.29
low pressure hose assembly
hose assembly, LPG resistant, for use at working pressure

3.30
high pressure hose assembly
hose assembly, LPG resistant, for use at high pressure, normally supply pressure

3.31
users handbook
document that provides information to the user of a leisure accommodation vehicle on its operation, maintenance, repair etc

3.32
working pressure
pressure at the inlet of a LPG appliance while it is in operation

3.33
readily accessible
item capable of being reached quickly and safely for effective use under emergency conditions without the use of tools

Note 1 to entry: The key of a lock is not regarded as a tool.

3.34
accessible
item capable of being reached for inspection, removal or maintenance with or without the use of tools

3.35
safety closing device
device which automatically interrupts the flow of gas due to an accidental disconnection of a hose assembly or pipe

3.36
LPG tank
fixed container which can be refilled whilst in position on a vehicle and suitable for the storage of LPG

Note 1 to entry: This may supply LPG for gas appliances only.

3.37
underfloor flue
flue which discharges all or parts of the products of combustion into the space lying beneath and within the plan view of the vehicle

3.38
consumer leak detection device
device capable of indicating any downstream leakage

3.39
LPG tank compartment
space specially constructed to accommodate tank(s)

Note 1 to entry: The requirements of chapter 12 shall be taken into account.

4 General Requirements

4.1 General

The manufacturer or installer of an LPG system shall issue a declaration for each leisure accommodation vehicle or other vehicle stating the compliance with EN 1949, including the volume of the LPG system and the test result of 4.3.2, it should include the information shown in Annex C.

For road vehicles a warning label according to Figure 1, stating that all LPG appliances shall be turned off before refilling (LPG, petrol or diesel), shall be affixed at all fuel filling points.