

**Vedelgaasisüsteemide paigaldusnõuded
majapidamiseks eluruumiga vabaajasõidukites ja
majapidamise tarbeks teistes sõidukites**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1949:2011+A1:2013 sisaldab Euroopa standardi EN 1949:2011+A1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 1949:2011+A1:2013 consists of the English text of the European standard EN 1949:2011+A1:2013.
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English Version

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

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

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

This European Standard was approved by CEN on 1 January 2011 and includes Amendment 1 approved by CEN on 24 December 2012.

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Foreword

This document (EN 1949:2011+A1:2013) has been prepared by Technical Committee CEN/TC 181 "Dedicated liquefied petroleum gas appliances", 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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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

This document includes Amendment 1 approved by CEN on 24 December 2012.

This document supersedes A_1 EN 1949:2011 A_1 .

The start and finish of text introduced or altered by amendment is indicated in the text by tags A_1 A_1 .

Principal changes made to EN 1949:2002 and EN 1949:2002/A1:2005:

- a) more than one gas supply is permitted in a vehicle;
- b) hard soldering redefined;
- c) the provision of a certificate of tightness testing is no longer mandated;
- d) tightness criteria for high pressure parts of the gas system not verified in the standard tightness test are specified;
- e) requirements for electric cables in gas cylinder compartments have been revised;
- f) lengths of hoses and hoses assemblies have been clarified;
- g) basic requirements for installation of fuel cells added;
- h) basic requirements for installation of power generators added (including second supply line);
- i) requirements for plug in connector gas supplies added;
- j) options for new member states added;
- k) requirements for LPG tank installation added.

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

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 safety and health requirements on the selection of materials, components and appliances, on design considerations and tightness testing of installations and on 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.

2 Normative references

A1) The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. **A1)**

- 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 12864:2001, *Low pressure, non adjustable regulators having a maximum outlet pressure of less than or equal to 200 mbar with a capacity of less than or equal to 4 kg/h, and their associated safety devices for butane, propane or their mixtures*
- EN 12979:2002, *Automotive LPG-systems — Installation requirements*

EN 13785, *Regulators with a capacity of up to and including 100 kg/h, having a maximum nominal outlet pressure of up to and including 4 bar, other than those covered by EN 12864 and their associated safety devices for butane, propane or their mixtures*

EN 13786:2004+A1:2009, *Automatic change-over valves having a maximum outlet pressure of up to and including 4 bar with a capacity of up to and including 100 kg/h, and their associated safety devices for butane, propane or their mixtures*

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*

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

EN ISO 8434-1, *Metallic tube connection for fluid power and general use — Part 1: 24 degree cone connectors (ISO 8434-1:2007)*

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

UNECE Regulation No. 67-01: *Uniform provisions concerning the approval of motor vehicles using LPG in their propulsion system*

3 Terms and definitions

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

**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

[EN 13878]

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

[EN 13878]

**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

[EN 13878]

**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

[EN 13878]