Vedelgaasi (LPG) seadmed ja lisavarustus. LPG käitamissüsteemid paatidele, jahtidele ja muudele veesõidukitele

LPG equipment and accessories - LPG propulsion systems for boats, yachts and other craft

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15609:2012 sisaldab Euroopa standardi EN 15609:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 15609:2012 consists of the English text of the European standard EN 15609:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 25.04.2012.	Date of Availability of the European standard is 25.04.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 47.020.20, 47.080

EUROPEAN STANDARD

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EUROPÄISCHE NORM

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Supersedes EN 15609:2008

English Version

LPG equipment and accessories - LPG propulsion systems for boats, yachts and other craft

Equipements pour gaz de pétrole liquéfié et leurs accessoires - Systèmes de propulsion GPL des bateaux, yachts et autres navires

Flüssiggas-Geräte und Ausrüstungsteile - Flüssiggas-(LPG-) Antriebsanlagen für Boote, Jachten und andere Wasserfahrzeuge

This European Standard was approved by CEN on 16 March 2012.

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.

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Foreword

This document (EN 15609:2012) has been prepared by Technical Committee CEN/TC 286 “LPG equipment and accessories”, the secretariat of which is held by NSAI.

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 October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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 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 Directive(s).

For relationship with EU Directive(s), see informative Annex ZA which is an integral part of this document.

This document supersedes EN 15609:2008.

The main changes with respect to the previous edition include:

— the addition of Annexes E, G and H;

— expansion of requirements of the installer;

— removal of the specific requirements for the EN 13760 nozzle;

— components fitted to the cylinder;

— tightness test pressure increased to 10 bar;

— optional forced ventilation for the locker, 5.5.4; and

— gas detection requirements.

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, 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.

Introduction

This European Standard specifies requirements for the installation of equipment for the use of Liquefied Petroleum Gas (hereafter referred to as LPG) in the propulsion systems of small craft.

This European Standard calls for the use of substances and procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability: it does not absolve the user from their legal obligations relating to health and safety at any stage.

Protection of the environment is a key political issue in Europe and elsewhere. Protection of the environment in this document is understood in a very broad sense. The phrase is used, for example, in relation to the total life-cycle aspects of a product on the environment (including expenditure of energy) during all phases of its existence, from use, to scrapping, to recycling of materials, etc.

Annex I comprises an environmental checklist which highlights the clauses of this European Standard that address environmental aspects.

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This European Standard is based on EN 12979 [3].

1 Scope

This European Standard specifies the requirements for LPG propulsion systems on craft with hull lengths less than or equal to 24 m, including those defined by Directive 94/25/EC.

This European Standard does not cover appliances with directly attached gas cylinders, such as portable self-contained camping stoves and portable gas lamps.

2 Normative references

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.

EN 1442, *LPG equipment and accessories — Transportable refillable welded steel cylinders for LPG — Design and construction*

EN 12805, *Automotive LPG components — Containers*

EN 12806:2003, *Automotive liquefied petroleum gas components — Other than containers*

EN 12864, *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 13110, *Transportable refillable welded aluminium cylinders for liquefied petroleum gas (LPG) — Design and construction*

EN 14140, *LPG equipment and accessories — Transportable refillable welded steel cylinders for LPG — Alternative design and construction*

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

EN 14427, *Transportable refillable fully wrapped composite cylinders for Liquefied Petroleum Gases (LPG) — Design and Construction*

EN 28846, *Small craft — Electrical devices — Protection against ignition of surrounding flammable gases (ISO 8846)*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN ISO 898-1:2009, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (ISO 898-1:2009)*

EN ISO 9094-1, *Small craft — Fire protection — Part 1: Craft with a hull length of up to and including 15 m (ISO 9094-1)*

EN ISO 9094-2, *Small craft — Fire protection — Part 2: Craft with a hull length of over 15 m (ISO 9094-2)*

EN ISO 10133, *Small craft — Electrical systems — Extra-low-voltage d.c. installations (ISO 10133)*

EN ISO 10239, *Small craft — Liquefied petroleum gas (LPG) systems (ISO 10239)*

EN ISO 10240, *Small craft — Owner's manual (ISO 10240)*

EN ISO 11105, *Small craft — Ventilation of petrol engine and/or petrol tank compartments (ISO 11105)*

EN ISO 11591, *Small craft, engine-driven — Field of vision from helm position (ISO 11591)*

EN ISO 12217 (all parts), *Small craft — Stability and buoyancy assessment and categorization*

EN ISO 13297, *Small craft — Electrical systems — Alternating current installations (ISO 13297)*

ISO 630, *Structural steels — Plates, wide flats, bars, sections and profiles*

ISO 20826, *Automotive LPG components — Containers*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12806:2003 and the following apply.

3.1
liquefied petroleum gas
LPG
one or more light hydrocarbons which are assigned to either UN 1011, UN 1075, UN 1965, UN 1969 or UN 1978 only, and which consist mainly of propane, propene, butane, butane isomers and butene with traces of other hydrocarbon gases

Note 1 to entry: For automotive LPG specification, see EN 589 [1].

3.2
LPG system
installation consisting of an arrangement of container(s), safety device(s), pressure regulator(s), vaporiser(s), connection(s), valve(s), piping, tubing, hose, fitting(s) and devices intended to store, supply, monitor or control the flow of LPG up to and including the appliance and engine

Note 1 to entry: The cylinders are replaceable items and might not be supplied with the LPG system in the craft.

3.3
competent person
person who, due to a combination of appropriate qualifications, training, experience and resources, is able to make objective judgments on the subject

3.4
container
vessel used for the storage of LPG

3.5
cylinder
transportable, refillable container with a water capacity from 0,5 l up to and including 150 l

3.6
fixed container
LPG pressure vessel permanently installed to the structure of the craft

3.7
contents gauge
device to indicate the liquid level or contents in a pressure vessel