**A selection of European Standards related to LPG storage in tanks and bottles, filling, and testing of equipment.**

These standards are developed and published by the European Committee for Standardization (CEN) and can be found, together with other technical standards under: (<https://standards.cen.eu/index.html>)

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| **Reference** | **Title** | **Scope** |
| EN 12542:2010 | LPG equipment and accessories - Static welded steel cylindrical tanks, serially produced for the storage of Liquefied Petroleum Gas (LPG) having a volume not greater than 13 m³ - Design and manufacture | This European Standard specifies requirements for the design and manufacture of static welded steel cylindrical tanks, serially produced for the storage of liquefied petroleum gas (LPG) with a volume not greater than 13 m³ and for installation above or below ground. |
| EN 12817:2019 | LPG Equipment and accessories - Inspection and requalification of LPG pressure vessels up to and including 13 m³ | This document specifies requirements for: a) routine inspection, periodic inspection and requalification of fixed LPG pressure vessels of sizes from 150 l up to and including 13 m3, and associated fittings; b) marking pressure vessels and/or keeping records, as appropriate, as a result of routine inspection, periodic inspection and requalification. This document excludes refrigerated storage. |
| EN 12819:2019 | LPG equipment and accessories - Inspection and requalification of LPG pressure vessels greater than 13 m³ | This document specifies requirements for: a) routine inspection, periodic inspection and requalification of fixed LPG pressure vessels of sizes greater than 13 m3, and associated fittings; b) marking pressure vessels and/or keeping records, as appropriate, as a result of routine inspection, periodic inspection and requalification. This document excludes refrigerated storage. |
| EN 13110:2012+A1:2017 | LPG equipment and accessories - Transportable refillable welded aluminium cylinders for liquefied petroleum gas (LPG) - Design and construction | This European Standard specifies minimum requirements for material, design, construction and workmanship, testing and examination during the manufacture of transportable refillable welded aluminium liquefied petroleum gas (LPG) cylinders, having a water capacity from 0,5 litres up to and including 150 litres, exposed to ambient temperature. |
| EN 13175:2019 | LPG Equipment and accessories - Specification and testing for Liquefied Petroleum Gas (LPG) pressure vessel valves and fittings | This document specifies minimum requirements for the design, testing and production testing of valves, including appropriate fittings, which are connected to mobile or static LPG pressure vessels above 150 l water capacity. Pressure relief valves and their ancillary equipment, contents gauges and automotive LPG components are outside the scope of this document. This document does not apply to refineries or other process plants. |
| EN 13776:2013 | LPG equipment and accessories - Filling and discharge procedures for LPG road tankers | This European Standard specifies filling, discharge and emergency procedures for road tankers equipped in accordance with EN 12252 used for the transportation of liquefied petroleum gas (LPG). This European Standard does not apply to "batteries of receptacles". |
| EN 13799:2012 | LPG equipment and accessories - Contents gauges for Liquefied Petroleum Gas (LPG) pressure vessels | This European Standard specifies minimum requirements for design and testing of contents gauges, which are directly connected to transportable tanks, drums, cylinders and static LPG tanks above 0,5 l water capacity excluding those used for automotive containers. This European Standard does not apply to refineries or other process plants. |
| EN 13952:2017 | LPG equipment and accessories - Filling operations for LPG cylinders | This European Standard specifies the requirements for the operation of a cylinder filling plant to ensure that filling of transportable refillable LPG cylinders is carried out in a controlled and safe manner. This document is applicable to the filling of cylinders complying with RID/ADR [10][11] (including pi marked cylinders) and also to existing non RID/ADR cylinder populations. This document is applicable to the following: - welded and brazed steel LPG cylinders with a specified minimum wall thickness (see EN 1442 [1] and EN 12807 [2] or an equivalent standard); - welded steel LPG cylinders without specified minimum wall thickness (see EN 14140 [4] or an equivalent standard); - welded aluminium LPG cylinders (see EN 13110 [3] or an equivalent standard); - composite LPG cylinders (see EN 14427 [5] or an equivalent standard); and - over-moulded cylinders (OMC). This document does not cover the requirements for filling LPG cylinders that are designed and equipped for filling by the user. |
| EN 14129:2014 | LPG Equipment and accessories - Pressure relief valves for LPG pressure vessels | This European Standard specifies the requirements for the design and testing of spring loaded pressure relief valves and thermal expansion valves for use in: - static LPG pressure vessels, NOTE The pressure vessels can be situated above ground, underground or mounded. - LPG pressure vessels on road tankers, rail tankers, tank-containers or demountable tanks. This document does not address production testing. Normative Annex B prescribes testing with conditioning at - 40 °C for valves for use under extreme low temperature conditions. The requirements for pressure relief valve accessories such as isolating devices, changeover manifolds and vent pipes are specified in EN 14071. EN 14570 identifies the requirements for the pressure relief valve capacities for static pressure vessels. EN 12252 identifies the requirements for the pressure relief valve capacities for road tankers. Valves designed in accordance with this standard are specifically for use in LPG applications. Valves manufactured in accordance with EN ISO 4126 1 may also be used in certain LPG applications. Terms used with LPG pressure relief valves are described graphically in Annex A |
| EN 1439:2017 | LPG equipment and accessories - Procedure for checking transportable refillable LPG cylinders before, during and after filling | This document specifies the procedures to be adopted when checking transportable refillable LPG cylinders before, during and after filling. This document applies to transportable refillable LPG cylinders of water capacity not exceeding 150 l and deemed to be fitted with valves designed according to EN ISO 14245 [4] and EN ISO 15995 [5]. This document does not cover the requirements for filling LPG cylinders that are designed and equipped for filling by the user. This document does not cover the requirements for filling LPG containers on vehicles. This document is applicable to the following: - welded and brazed steel LPG cylinders with a specified minimum wall thickness (see EN 1442 and EN 12807 [1] or an equivalent standard); - welded steel LPG cylinders without specified minimum wall thickness (see EN 14140 or an equivalent standard); - welded aluminium LPG cylinders (see EN 13110 [2] or an equivalent standard); - composite LPG cylinders (see EN 14427 or an equivalent standard); and - over-moulded cylinders (OMC). Specific requirements for the different types of cylinders are detailed in Annex A, Annex B, Annex C, Annex D and Annex G. This draft standard is intended to be applied to cylinders complying with RID/ADR [6] [7] (including pi marked cylinders) and also to existing non RID/ADR cylinder populations. |
| EN 14422:2013 | Clamp type coupling assemblies for liquefied petroleum gas (LPG) transfer hoses | This European Standard specifies the dimensions, designation, materials, marking and testing requirements for a range of hose fittings which may be used with rubber/plastic hoses for the transfer of liquefied petroleum gas, LPG, in liquid or vapour phase and natural gas. The maximum working pressure is 25 bar ). For normal operation the working temperature range is from -30 °C up to 70 °C and for low temperature operation (LT) it is from -50 °C up to 70 °C. The nominal size for hose fittings with internal and external threads is from DN 15 to DN 75 and for hose fittings with flanges DN 15 to DN 200. In addition to the fittings described in this European Standard, threaded connections according to EN 14420-5 as well as hose fittings with screwed ferrules according to EN 14424 up to DN 25 for LPG could be used. |
| EN 14570:2014 | LPG equipment and accessories - Equipping of overground and underground LPG vessels | This European Standard specifies requirements for the equipping of LPG pressure vessels, overground and underground, with a volume not greater than 13 m3 manufactured in accordance with EN 12542 or equivalent and have been hydraulically tested. The equipment covered by this European Standard is directly mounted onto the pressure vessel connections. This European Standard excludes the equipping of depot storage vessels and refrigerated storage vessels. |
| EN 14841:2013 | LPG equipment and accessories - Discharge procedures for LPG rail tankers | This European Standard specifies discharge, handling operations and emergency procedures for rail tankers used for the transport of liquefied petroleum gas (LPG). This European Standard applies to operations where LPG is off-loaded from rail tankers into LPG fixed storage facilities. This European Standard does not apply to "tank containers" and "batteries of receptacles". |
| EN ISO 14245:2019 | Gas cylinders - Specifications and testing of LPG cylinder valves - Self-closing (ISO 14245:2019) | This document specifies the requirements for design, specification, type testing and production testing and inspection for dedicated LPG self-closing cylinder valves for use with and directly connected to transportable refillable LPG cylinders. It also includes requirements for associated equipment for vapour and liquid service. Bursting discs and/or fusible plugs are not covered in this document. Annex A identifies requirements for production testing and inspection. This document excludes other LPG cylinder devices which are not an integral part of the dedicated self-closing cylinder valve. This document does not apply to cylinder valves for fixed automotive installations and ball valves. NOTE For manually operated LPG cylinder valves see ISO 15995. For cylinder valves for compressed, dissolved and other liquefied gases see ISO 10297, ISO 17871 or ISO 17879. |
| EN ISO 15995:2019 | Gas cylinders - Specifications and testing of LPG cylinder valves - Manually operated (ISO 15995:2019) | This document specifies the requirements for design, specification, type testing and production testing and inspection of dedicated LPG manually operated cylinder valves for use with and directly connected to transportable refillable LPG cylinders. It also includes requirements for associated equipment for vapour and liquid service. Bursting discs and/or fusible plugs are not covered in this document. Annex B identifies requirements for production testing and inspection. This document excludes other LPG cylinder devices which are not an integral part of the dedicated manually operated cylinder valve. This document does not apply to cylinder valves for fixed automotive installations and ball valves. NOTE For self-closing LPG cylinder valves see ISO 14245. For cylinder valves for compressed, dissolved and other liquefied gases see ISO 10297[2], ISO 17871[6] or ISO 17879[7]. |
| CEN/TS 16769:2019 | LPG equipment and accessories - Terminology | This document lists the terms and definitions for use in European Standards produced by CEN/TC 286. |

This is an important EU Directive for the workplace too:

DIRECTIVE 2009/104/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009concerning the minimum safety and health requirements for the use of work equipment by workers at work (second individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)