Irish Standard
I.S. EN 13760:2021

LPG equipment and accessories - Automotive LPG filling system for light and heavy duty vehicles - Nozzle, test requirements and dimensions

I.S. EN 13760:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 13760:2021 is the adopted Irish version of the European Document EN 13760:2021, LPG equipment and accessories - Automotive LPG filling system for light and heavy duty vehicles - Nozzle, test requirements and dimensions

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13760

November 2021

ICS 43.060.40; 75.200

Supersedes EN 13760:2003

English Version

LPG equipment and accessories - Automotive LPG filling system for light and heavy duty vehicles - Nozzle, test requirements and dimensions

Équipements pour GPL et leurs accessoires - Dispositif de remplissage GPL pour véhicules légers et poids lourds - Pistolet : conditions d'essais et dimensions

Flüssiggas-Geräte und Ausrüstungsteile - Füllsysteme an Autogasanlagen für leichte und schwere Fahrzeuge - Anschlussstutzen, Prüfanforderungen und Abmessungen

This European Standard was approved by CEN on 23 May 2021.

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

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European foreword

This document (EN 13760:2021) has been prepared by Technical Committee CEN/TC 286 “Liquefied petroleum gas 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of an identical text or by endorsement, at the latest by May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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 supersedes EN 13760:2003.

This document includes the following significant technical changes with respect to EN 13760:2003:

— Updated normative references;

— Revised definitions;

— Revised test procedures;

— Removal of re-testing step from each test procedure;

— Addition of oxygen ageing test;

— Revised critical dimensions of Figure B.2;

— Revised Annex ZA.

This document has been prepared under a standardization request 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 does not deal with the essential safety requirements of the DIRECTIVE 2014/68/EU *of the European Parliament and of the Council of 15 May 2014 on the harmonization of the laws of the Member States relating to the making available on the market of pressure equipment.*

This document addresses the essential health and safety requirements of DIRECTIVE 2014/34/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL *of 26 February 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres.*

In the Pressure Equipment Directive (PED) the nozzle is classified as a “pressure accessory”. It is intended to be connected to a hose, which is classified as “piping”.

— The category 1 limit is defined in Annex 2 Table 6 of the PED and is a function of the product of nominal size (DN) and maximum allowable pressure (PS) with a limit of 1 000.

— Because PS in this document is 2 500 kPa and the DN of the intended hose is less than 40, the figure of 1 000 in Table 6 is not reached.

Protection of the environment is a key political issue in Europe and elsewhere. For CEN/TC 286 this is covered in CEN/TS 16765 and this Technical Specification should be read in conjunction with this document. This Technical Specification provides guidance on the environmental aspects to be considered regarding equipment and accessories produced for the LPG industry and the following is addressed:

a) design;

b) manufacture;

c) packaging;

d) use and operation;

e) disposal.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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 minimum design, construction, test requirements and the critical dimensions for filling nozzles for the dispensing of automotive Liquefied Petroleum Gas (LPG) to vehicles of categories M and N, as defined in Regulation (EU) 2018/858 [2], that are fitted with the Euro filling unit (light duty or heavy duty).

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

EN 589:2018, *Automotive fuels — LPG — Requirements and test methods*

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

EN 1762:2018, *Rubber hoses and hose assemblies for liquefied petroleum gas, LPG (liquid or gaseous phase), and natural gas up to 25 bar (2,5 MPa) — Specification*

EN ISO 9227:2017, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2017)*

EN ISO 11114-2:2013, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials (ISO 11114-2:2013)*

EN ISO 80079-36:2016, *Explosive atmospheres — Part 36: Non-electrical equipment for explosive atmospheres — Basic method and requirements (ISO 80079-36:2016)*

EN IEC 60068-2-52:2018, *Environmental testing — Part 2-52: Tests — Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52:2017)*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1431-1:2012, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 6957:1988, *Copper alloys — Ammonia test for stress corrosion resistance*

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 https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
pressure
gauge pressure, unless otherwise stated