



NSAI
Standards

Irish Standard
I.S. EN 13617-1:2012

Petrol filling stations - Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units

I.S. EN 13617-1:2012

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:
EN 13617-1:2004+A1:2009

<i>This document is based on:</i> EN 13617-1:2012	<i>Published:</i> 8 June, 2012
--	-----------------------------------

This document was published under the authority of the NSAI and comes into effect on:
8 June, 2012

ICS number:

75.200

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

**Petrol filling stations - Part 1: Safety requirements for
construction and performance of metering pumps, dispensers
and remote pumping units**

Stations-service - Partie 1: Exigences relatives à la
construction et aux performances de sécurité des
distributeurs à pompe immergée, distributeurs de
carburants et unités de pompage à distance

Tankstellen - Teil 1: Sicherheitstechnische Anforderungen
an Bau- und Arbeitsweise von Zapfsäulen, druckversorgten
Zapfsäulen und Fernpumpen

This European Standard was approved by CEN on 13 April 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.

CEN members are the national standards bodies of 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 United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 List of significant hazards	12
5 Safety requirements and/or protective measures	13
5.1 Explosion protection measures	13
5.2 Selection of equipment	13
5.2.1 General.....	13
5.2.2 Pipe and hose permeability	14
5.2.3 Nozzle area – vapour releases only	15
5.2.4 Nozzle boot area	17
5.3 Safety requirements, protective measures, construction and performance.....	20
5.3.1 General requirements.....	20
5.3.2 Electrical apparatus.....	22
5.3.3 Non-electrical apparatus.....	24
5.3.4 Hydraulic apparatus	24
5.3.5 Vapour recovery system	26
5.3.6 Housings.....	26
5.3.7 Ventilation.....	27
5.4 Safety requirements related to electromagnetic phenomena.....	28
6 Tests.....	28
6.1 Type tests	28
6.1.1 General.....	28
6.1.2 Sight glass test	28
6.1.3 Pressure test for fuel containment systems.....	28
6.1.4 Tests for electric cables.....	29
6.1.5 Stability test.....	33
6.1.6 Pressure test for vapour recovery systems.....	33
6.1.7 Material assessment.....	33
6.1.8 Seal and gasket assessment	34
6.1.9 Electrical tests.....	34
6.2 Routine tests	35
6.2.1 Electrical tests.....	35
6.2.2 Hydraulic tests	35
7 Information for use	36
7.1 General.....	36
7.2 Signals and warnings	36
7.3 Accompanying documents	36
7.4 Marking	37
Annex A (normative) Classification of vapour barriers.....	38
A.1 General.....	38
A.2 Vapour barrier Type 1.....	38
A.3 Vapour barrier Type 2.....	38
A.4 Typical vapour barrier arrangements	39
A.4.1 Horizontal vapour barrier Type 1	39
A.4.2 Vertical vapour barrier Type 1	40
A.4.3 Horizontal vapour barrier Type 2	41

A.4.4 Vertical vapour barrier Type 2	42
Annex B (informative) Information on explosion protected equipment	45
Annex C (informative) Environmental aspects	46
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC	48
Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	50
Bibliography	51

Foreword

This document (EN 13617-1:2012) has been prepared by Technical Committee CEN/TC 393 "Equipment for storage tanks and for filling stations", the secretariat of which is held by DIN.

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 November 2012, and conflicting national standards shall be withdrawn at the latest by November 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 supersedes EN 13617-1:2004+A1:2009.

In comparison with EN 13617-1:2004+A1:2009, the following fundamental changes have been made:

- the normative references have been updated;
- in 6.1.4.2, the test method for cables includes those required for use with biodiesel has been revised;
- in 6.1.8.2, the test method for seals and gaskets includes those required for use with biofuels;
- a new paragraph has been added in the scope: 'Fuels other than the ones of Explosion Group IIA are excluded from this European Standard';
- 7.2.1 has been added;
- the existing 7.2 has been made into 7.2.2;
- the informative Annex C concerning environmental aspects has been added.

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 Directives, see informative Annexes ZA and ZB, which are integral parts of this document.

This European Standard *Petrol filling stations* consists of four parts:

- *Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units;*
- *Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers;*
- *Part 3: Safety requirements for construction and performance of shear valves;*
- *Part 4: Safety requirements for construction and performance of swivels for use on metering pumps and dispensers.*

The key purpose for the review of the standards was to consider biofuels. In practice, only EN 13617-1 was changed.

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 document is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of the type C standard.

It has been assumed that the use of the equipment for dispensing of fuels will be by untrained persons (user/dispenser), while other aspects of the operation, maintenance, etc., will be by designated and trained personnel (station personnel or operator).

1 Scope

This European Standard applies to metering pumps, dispensers and remote pumping units to be installed at petrol filling stations, designed to dispense liquid fuels into the tanks of motor vehicles, boats and light aircraft and into portable containers at flow rates up to 200 l min⁻¹, and intended for use and storage at ambient temperatures between -20 °C and +40 °C. Measures in addition to those required by this European Standard may be required for use and storage at temperature outside this range. The need for and nature of additional requirements should be determined by the manufacturer, if necessary after consulting the client.

This European Standard deals with all significant hazards, hazardous situations and events relevant to metering pumps, dispensers and remote pumping units, when they are used as intended and under the conditions foreseeable by the manufacturer (see Clause 4).

This European Standard gives health and safety related requirements for the selection, construction and performance of the equipment.

This European Standard does not deal with noise and with hazards related to transportation and installation.

This European Standard does not include any requirements for metering performance.

Vapour recovery efficiency rates are not considered within this European Standard.

Fuels other than the ones of Explosion Group IIA are excluded from this European Standard.

This European Standard is not applicable to metering pumps, dispensers and remote pumping units which are manufactured before the date of publication of this document by CEN.

This European Standard does not apply to equipment for use with liquefied petroleum gas (LPG) or liquefied natural gas (LNG) or compressed natural gas (CNG).

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 228, *Automotive fuels — Unleaded petrol — Requirements and test methods*

EN 590, *Automotive fuels — Diesel — Requirements and test methods*

EN 1360, *Rubber and plastic hoses and hose assemblies for measured fuel dispensing systems — Specification*

EN 13012, *Petrol filling stations — Construction and performance of automatic nozzles for use on fuel dispensers*

EN 13463-1:2009, *Non-electrical equipment for use in potentially explosive atmospheres — Part 1: Basic method and requirements*

EN 13483, *Rubber and plastic hoses and hose assemblies with internal vapour recovery for measured fuel dispensing systems — Specification*

EN 13617-2, *Petrol filling stations — Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers*

EN 14125, *Thermoplastic and flexible metal pipework for underground installation at petrol filling stations*

EN 14214, *Automotive fuels — Fatty acid methyl esters (FAME) for diesel engines — Requirements and test methods*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-