

MOOTORIKÜTUSE TANKLAD. NÕUDED TANKURI  
ISESULGUVATE PÜSTOLITE KOOSTULE JA KÄITUSELE

Petrol filling stations - Construction and performance  
of automatic nozzles for use on fuel dispensers

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13012:2021 sisaldab Euroopa standardi EN 13012:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 13012:2021 consists of the English text of the European standard EN 13012:2021.
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English Version

## Petrol filling stations - Construction and performance of automatic nozzles for use on fuel dispensers

Stations-service - Construction et performances des pistolets automatiques de remplissage utilisés sur les distributeurs de carburant

Tankstellen - Anforderungen an Bau und Arbeitsweise von automatischen Zapfventilen für die Benutzung an Zapfsäulen

This European Standard was approved by CEN on 14 June 2021.

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## European foreword

This document (EN 13012:2021) 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of an identical text or by endorsement, at the latest by March 2022, and conflicting national standards shall be withdrawn at the latest by March 2024.

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 13012:2012.

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.

In comparison with the 2012 edition, the following significant changes were made:

- nozzles for aqueous urea solution added;
- Table 2 corrected to ensure compatibility between components according to EN 13012:2021, EN 13617-2:2021, EN 13617-4:2021 and EN 1360:2013.
- the liquid compatibility preconditioning fluid for fuel nozzles is defined in EN 13617-1:2021.

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 safety and environmental requirements for the construction and performance of nozzles to be fitted to metering pumps and dispensers installed at filling stations and which are used to dispense liquid fuels and aqueous urea solution into the tanks of motor vehicles, boats and light aircraft and into portable containers, at flow rates up to  $200 \text{ l} \cdot \text{min}^{-1}$ .

This document applies to fuels of subdivision Group IIA according to EN ISO/IEC 80079-20-1 and also aqueous urea solution according to ISO 22241-1. The requirements apply to automatic nozzles dispensing liquid at ambient temperatures from  $-20^\circ\text{C}$  to  $+40^\circ\text{C}$  with the possibility for an extended temperature range.

This document does not apply to equipment dispensing compressed or liquefied gases.

This document does not include any requirements for metering performance. Vapour recovery efficiency rates are not covered in this document.

## 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 1360:2013, *Rubber and plastic hoses and hose assemblies for measured fuel dispensing systems - Specification*

EN 13617-1:2021, *Petrol filling stations - Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units*

EN 13617-2:2021, *Petrol filling stations - Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers*

EN 60204-1:2018, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2016, modified)*

EN IEC 60079-0:2018, *Explosive atmospheres - Part 0: Equipment - General requirements (IEC 60079-0:2017)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

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

ISO 261:1998, *ISO general purpose metric screw threads — General plan*

ISO 965-2:1998, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

ISO 9158:1988, *Road vehicles — Nozzle spouts for unleaded gasoline*

ISO 9159:1988, *Road vehicles — Nozzle spouts for leaded gasoline and diesel fuel*

ISO 11925-3:1997, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 3: Multi-source test*

ISO 22241-1:2019, *Diesel engines — NO<sub>x</sub> reduction agent AUS 32 — Part 1: Quality requirements*

### 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:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1

##### **nozzle**

manually operated device that controls the flow of liquid medium during a dispensing operation and includes a spout and an automatic shut-off mechanism

#### 3.2

##### **vapour recovery nozzle**

nozzle that additionally includes a path through which vapour can be recovered

#### 3.3

##### **automatic shut-off**

function that automatically stops the fluid flow to prevent overfilling

#### 3.4

##### **attitude device**

means to prevent delivery unless the spout is pointing down

#### 3.5

##### **automatic de-activating mechanism**

means to prevent flow if the system is re-energized while the operating lever is in an open position

#### 3.6

##### **operating device**

mechanism by which the main valve is controlled by the user

#### 3.7

##### **main valve**

device controlling the fluid flow

#### 3.8

##### **latch**

mechanism to hold the operating lever in an open position

#### 3.9

##### **guard**

structure to protect the operating lever

#### 3.10

##### **spout**

device to guide the flow of fluid into a tank of a motor vehicle, boat and light aircraft or portable container