

**Plastics piping systems for drainage and sewerage -  
Glassreinforced thermosetting plastics (GRP) based on  
polyester resin (UP) - Manholes and inspection  
chambers**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 15383:2012 sisaldab Euroopa standardi EN 15383:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 15383:2012 consists of the English text of the European standard EN 15383:2012.
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 19.12.2012.	Date of Availability of the European standard is 19.12.2012.
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](mailto:standardiosakond@evs.ee).

ICS 93.030

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ICS 93.030

English Version

**Plastics piping systems for drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP) - Manholes and inspection chambers**

Systèmes de canalisations en plastique pour les branchements et collecteurs d'assainissement - Plastiques thermodurcissables renforcés de verre (PRV) à base de résine de polyester (UP) - Regards et boîtes de branchement et d'inspection

Kunststoff Rohrleitungssysteme für Abwasserleitungen und -kanäle - Glasfaserverstärkte duroplastische Kunststoffe (GFK) auf der Basis von Polyesterharz (UP) - Einsteig- und Kontrollschächte

This European Standard was approved by CEN on 27 October 2012.

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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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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 15383:2012) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

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 June 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.

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 European Standard is a System Standard for manholes and inspection chambers made for plastics piping systems using glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP), for drainage and sewerage.

For manholes and inspection chambers, which have conformed to the relevant national standard before the date of availability (2012-12-05), as shown by the manufacturer or by a certification body, the national standard may continue to be applied until the (2014-12-19).

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, Former Yugoslav Republic of Macedonia, 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.

## 1 Scope

This European Standard applies to

- a) manholes, when made from glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP);
- b) inspection chambers, when made from glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP) which are intended to be used with inverts which are at a depth not exceeding 2 m.

These products are intended to be used within a drain or sewer system operating without pressure or occasionally at a head of pressure up to 1 bar.

It applies to products, and their joints, intended for use in buried installations and to be installed by open-trench techniques.

The units have a circular shape with nominal sizes not exceeding the maximum nominal size specified in EN 14364.

The intended use of these products is to provide access to, buried drain or sewer systems for the conveyance of waste water at temperatures up to 50 °C, without pressure or occasionally at a head of pressure up to 1 bar, outside buildings and installed in areas subjected to vehicle and/or pedestrian traffic.

It specifies definitions including symbols, requirements and characteristics of manholes, inspection chambers, joints, materials, test methods and marking.

**NOTE** It is the responsibility of the purchaser or specifier to make the appropriate selections, taking into account their particular requirements and any relevant national regulations and installation practices or codes.

## 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 124, *Gully tops and manhole tops for vehicular and pedestrian areas — Design requirements, type testing, marking, quality control*

EN 476, *General requirements for components used in drains and sewers*

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 1119, *Plastics piping systems — Joints for glass-reinforced thermosetting plastics (GRP) pipes and fittings — Test methods for leaktightness and resistance to damage of non-thrust resistant flexible joints with elastomeric sealing elements*

EN 1917, *Concrete manholes and inspection chambers, unreinforced, steel fibre and reinforced*

EN 13101, *Steps for underground man entry chambers — Requirements, marking, testing and evaluation of conformity*

EN 14364:2006+A1:2008, *Plastics piping systems for drainage and sewerage with or without pressure — Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) — Specifications for pipes, fittings and joints*

EN 14396, *Fixed ladders for manholes*

CEN/TS 14632, *Plastics piping systems for drainage, sewerage and water supply, pressure and non-pressure — Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) — Guidance for the assessment of conformity*

EN ISO 604:2003, *Plastics — Determination of compressive properties (ISO 604:2002)*

EN ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions (ISO 3126)*

ISO 2602, *Statistical interpretation of test results — Estimation of the mean — Confidence interval*

ISO 8533, *Plastics piping systems for pressure and non-pressure drainage and sewerage — Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin — Test methods to prove the design of cemented or wrapped joints*

### 3 Terms, definitions and symbols

For the purposes of this document, the following terms, definitions and symbols and those in EN 14364:2006+A1:2008 apply.

#### 3.1

##### **adjusting unit**

component of a manhole used above the cover slab to adjust the height of the structure and accommodate a cover and frame (see Figure 2)

#### 3.2

##### **base unit**

vertical component with integral base, with or without benching (see Figure 2), incorporating appropriate flexible joints to provide watertight connections to pipelines with or without integral connecting pipe(s) or adaptors

#### 3.3

##### **chamber unit**

vertical component of uniform cross-section (see Figure 2)

Note 1 to entry: It is classified by its nominal size and its internal height. Chamber units may incorporate flexible joints providing watertight connections to a pipeline.

#### 3.4

##### **connecting pipe**

short pipe having plain, socket or spigot ends which provides a connection between a pipeline and a manhole

#### 3.5

##### **cover slab**

horizontal unit, forming the roof of a chamber or shaft, which incorporates an opening for access and above which adjusting unit(s) and/or a cover and frame are intended to fit (see Figure 2)

Note 1 to entry: Normally a cover slab is made of reinforced precast concrete.

#### 3.6

##### **external diameter**

$d_e$

mean external diameter of the shaft or chamber unit at any cross section except the joint

Note 1 to entry: External diameter is expressed in millimetres (mm).