

**Dreenide ja kanalisatsioonisüsteemid
väljaspool hooneid**

Drain and sewer systems outside buildings

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 752:2008 sisaldab Euroopa standardi EN 752:2008 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 752:2008 consists of the English text of the European standard EN 752:2008.</p>
<p>Standard on kinnitatud Eesti Standardikeskuse 25.03.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 25.03.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
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<p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>The standard is available from Estonian standardisation organisation.</p>

ICS 93.030

Võtmesõnad: hooned, kanalisatsioon, määratlused, vee äravool, välimine, üldreeglid

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ICS 93.030

Supersedes EN 752-1:1995, EN 752-2:1996, EN 752-3:1996, EN 752-4:1997, EN 752-5:1997, EN 752-6:1998, EN 752-7:1998

English Version

Drain and sewer systems outside buildings

Réseaux d'évacuation et d'assainissement à l'extérieur des bâtiments

Entwässerungssysteme außerhalb von Gebäuden

This European Standard was approved by CEN on 24 November 2007.

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Foreword

This document (EN 752:2008) has been prepared by Technical Committee CEN/TC 165 "Wastewater Engineering", 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of an identical text or by endorsement, at the latest by July 2008, and conflicting national standards shall be withdrawn at the latest by July 2008.

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 752-1:1995, EN 752-2:1996, EN 752-3:1996, EN 752-4:1997, EN 752-5:1997, EN 752-6:1998, EN 752-7:1998.

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, 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 and the United Kingdom.

Introduction

Drain and sewer systems are part of the overall wastewater system that provides a service to the community. This can be briefly described as:

- removal of wastewater from premises for public health and hygienic reasons;
- prevention of flooding in urbanised areas;
- protection of the environment.

The overall wastewater system has four successive functions:

- **Collection;**
- **Transport;**
- **Treatment;**
- **Discharge.**

Drain and sewer systems provide for the collection and transport of wastewater.

Historically, drain and sewer systems were installed because there was a need to remove the polluted water to prevent diseases.

Traditionally, drain and sewer systems were constructed to collect and transport all types of wastewater together irrespective of the initial source. This led to difficulties in handling the peak flows in times of heavy rainfall and to the introduction of combined sewer overflows, which discharged polluted water to surface receiving waters.

It was later recognised that separate systems, where foul wastewater was kept separate from runoff derived from surface water, would be an improvement over such combined systems.

Although many drain and sewer systems started out as combined systems there are strong arguments for considering the separation of foul wastewater and surface water. The pollutant effects are not the same and the separation of effluents allows for the different treatment for each element of wastewater, providing more environmentally friendly solutions.

This concept is included in the approach of integrated sewer management.

EN 752 provides a framework for the design, construction, rehabilitation, maintenance and operation of drain and sewer systems outside buildings. This is illustrated in the upper part of the diagram below. EN 752 is supported by more detailed standards for the investigation, design, construction, organisation and control of drain and sewer systems such as those listed in the lower part of the diagram. To support these detailed standards information will come from specifications produced by individual organisations for their own use. Product standards should also take into account the functional requirements in EN 752 through EN 476, EN 773, EN 1293, EN 13380 and EN 14457.

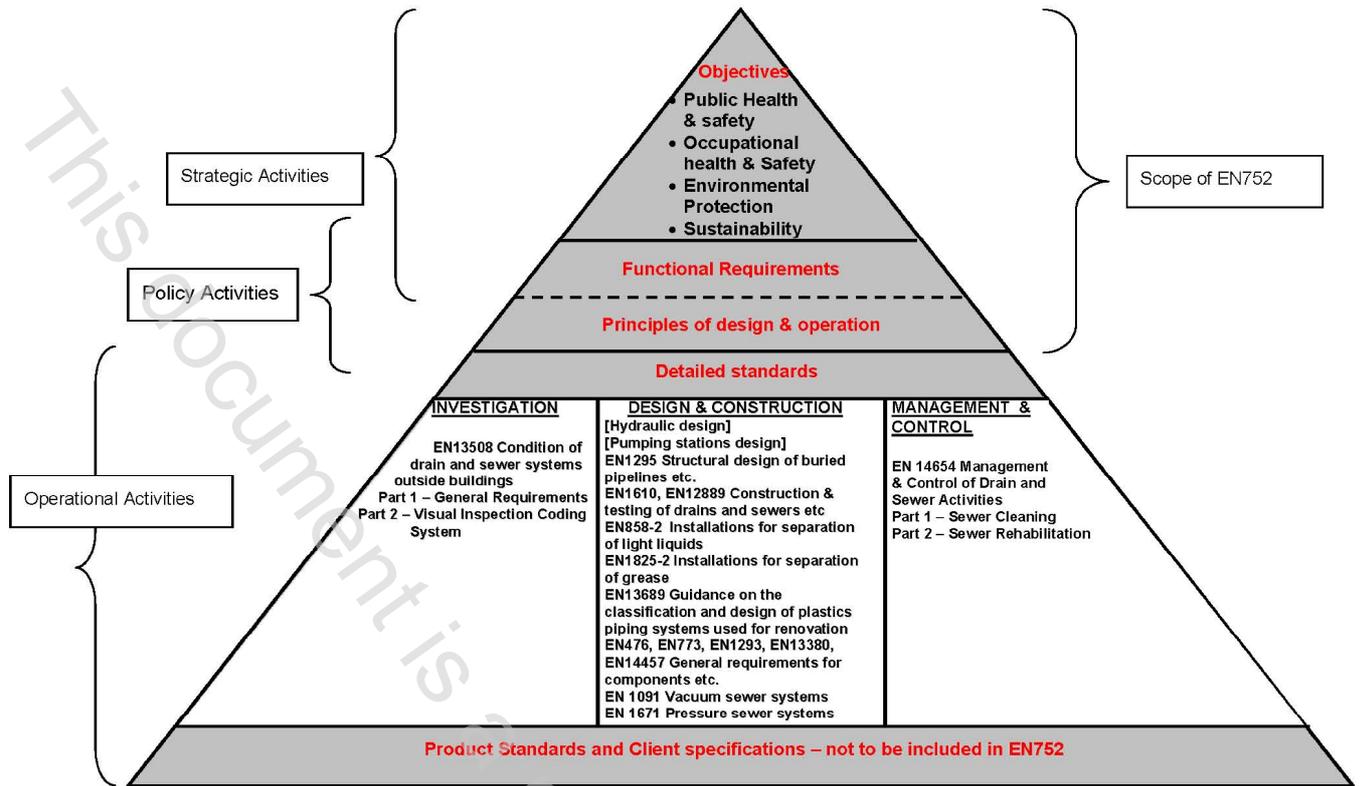


Figure 1 — Pyramid Diagram

1 Scope

This European Standard sets out the objectives for drain and sewer systems outside buildings. It specifies the functional requirements for achieving these objectives and the principles for strategic and policy activities relating to planning, design, installation, operation, maintenance and rehabilitation.

It is applicable to drain and sewer systems, which operate essentially under gravity, from the point where wastewater leaves a building, roof drainage system, or paved area, to the point where it is discharged into a wastewater treatment plant or receiving water.

Drains and sewers below buildings are included provided that they do not form part of the drainage system for the building.

2 Normative references

The following referenced documents are indispensable for the application 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 476:1997, *General requirements for components used in discharge pipes, drains and sewers for gravity systems*

EN 858-1, *Separator systems for light liquids (e.g. oil and petrol) — Part 1: Principles of product design, performance and testing, marking and quality control*

EN 858-2, *Separator systems for light liquids (e.g. oil and petrol) — Part 2: Selection of nominal size, installation, operation and maintenance*

EN 1295-1, *Structural design of buried pipelines under various conditions of loading — Part 1: General requirements*

EN 1610, *Construction and testing of drains and sewers*

EN 1825-1, *Grease separators — Part 1: Principles of design, performance and testing, marking and quality control*

EN 1825-2, *Grease separators — Part 2: Selection of nominal size, installation, operation and maintenance*

EN 1990, *Eurocode — Basis of structural design*

EN 1991-1-1, *Eurocode 1 — Actions on structures — Part 1-1: General actions Densities — self-weight, imposed loads for buildings*

EN 1991-1-2, *Eurocode 1 — Actions on structures — Part 1-2: General actions — Actions on structures exposed to fire*

EN 1991-1-3, *Eurocode 1 — Actions on structures — Part 1-3: General actions — Snow loads*

EN 1991-1-5, *Eurocode 1 — Actions on structures — Part 1-5: General actions — Thermal actions*

EN 1991-2, *Eurocode 1 — Actions on structures — Part 2: Traffic loads on bridges*

EN 1991-4, *Eurocode 1 — Actions on structures — Part 4: Silos and tanks*

- EN 1992-1-1, *Eurocode 2 — Design of concrete structures — Part 1-1: General rules and rules for buildings*
- EN 1992-1-2, *Eurocode 2 — Design of concrete structures — Part 1-2: General rules - Structural fire design*
- EN 1992-3, *Eurocode 2 — Design of concrete structures — Part 3: Liquid retaining and containment structures*
- ENV 1993-1-1, *Eurocode 3 — Design of steel structures — Part 1-1: General rules and rules for buildings*
- EN 1994-1-1, *Eurocode 4 — Design of composite steel and concrete structures — Part 1-1: General rules and rules for buildings*
- EN 1996-1-1, *Eurocode 6: Design of masonry structures — Part 1-1: General rules for reinforced and unreinforced masonry structures*
- EN 1997-1, *Eurocode 7: Geotechnical design — Part 1: General rules* EN 1998-1, *Eurocode 8: Design of structures for earthquake resistance — Part 1: General rules, seismic actions and rules for buildings*
- EN 1998-3, *Eurocode 8: Design of structures for earthquake resistance — Part 3: Assessment and retrofitting of buildings*
- EN 1998-1, *Eurocode 8: Design of structures for earthquake resistance — Part 1: General rules, seismic actions and rules for buildings*
- EN 1999-1-1, *Eurocode 9: Design of aluminium structures — Part 1-1: General structural rules*
- EN 12889, *Trenchless construction and testing of drains and sewers*
- EN 13508-2, *Condition of drain and sewer systems outside buildings — Part 2: Visual inspection coding system*
- EN 14654-1, *Management and control of cleaning operations in drains and sewers — Part 1: Sewer cleaning*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

aerobic

dissolved oxygen is present

[EN 1085:2007, definition 4100]

3.2

aesthetic

<of pollution> aspects sensed by sight or smell, e.g. floating solids, oil films or bank-side litter

3.3

air valve

valve used to allow air to escape from or enter into a rising main

3.4

anaerobic

dissolved oxygen, nitrate, nitrite and sulfate is absent

[EN 1085:2007, definition 4120]