

## **Wastewater treatment plants - Part 1: General construction principles**

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construction principles

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12255-1:2002 sisaldab Euroopa standardi EN 12255-1:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.07.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12255-1:2002 consists of the English text of the European standard EN 12255-1:2002.</p> <p>This document is endorsed on 12.07.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies general requirements for structures and equipment as they relate to wastewater treatment plants for a total population of more than 50 PT. The primary application is designed for wastewater treatment plants for the treatment of domestic and municipal wastewater.</p>	<p><b>Scope:</b></p> <p>This standard specifies general requirements for structures and equipment as they relate to wastewater treatment plants for a total population of more than 50 PT. The primary application is designed for wastewater treatment plants for the treatment of domestic and municipal wastewater.</p>
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**Võtmesõnad:** buildings, common areas, management, pumping installation, sewage, sewage clarification, sewage purification, sewage purification plant, sewage treatment, sewage treatment plants, sewage treatment works, specification (approval), specifications, water practice

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English version

## Wastewater treatment plants - Part 1: General construction principles

Stations d'épuration - Partie 1: Principes généraux de construction

Kläranlagen - Teil 1: Allgemeine Baugrundsätze

This European Standard was approved by CEN on 9 November 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard 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 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

It is the first part prepared by the Working Groups CEN/TC 165/WG 42 and 43 relating to the general requirements and processes for treatment plants for a total number of inhabitants and population equivalents (PT) over 50. The parts of the series are as follows:

- Part 1: General construction principles
- Part 3: Preliminary treatment
- Part 4: Primary settlement
- Part 5: Lagooning processes
- Part 6: Activated sludge processes
- Part 7: Biological fixed-film reactors
- Part 8: Sludge treatment and storage
- Part 9: Odour control and ventilation
- Part 10: Safety principles
- Part 11: General data required
- Part 12: Control and automation
- Part 13: Chemical treatment - Treatment of wastewater by precipitation/flocculation
- Part 14: Disinfection
- Part 15: Measurement of the oxygen transfer in clean water in aeration tanks of activated sludge plants
- Part 16: Physical (mechanical) filtration <sup>1)</sup>

NOTE For requirements on pumping installations at wastewater treatment plants, provided initially as part 2 "Pumping installations for wastewater treatment plants", see EN 752-6 "Drain and sewer systems outside buildings — Part 6: Pumping installations".

The parts EN 12255-1, EN 12255-3 to EN 12255-8 and EN 12255-10 and EN 12255-11 were implemented together as a European package (Resolution 232/2001 taken by CEN/TC 165).

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<sup>1)</sup> in preparation

This European standard is limited to general construction principles. Separate standards for special construction principles for elements of wastewater treatment plants are covered in other parts.

Safety principles and general data required are covered in EN 12255-10 and EN 12255-11.

Annex A is informative, annex B is normative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard specifies general requirements for structures and equipment as they relate to wastewater treatment plants for a total population of more than 50 PT.

The primary application is designed for wastewater treatment plants for the treatment of domestic and municipal wastewater.

Requirements for structures which are not specific for wastewater treatment plants are not within the scope of this European Standard. Other ENs can apply.

Equipment which is not solely used in wastewater treatment plants is subject to the applicable product standards. However, specific requirements for such equipment when used in wastewater treatment plants are included in this part.

General principles of building construction, mechanical and electrical engineering are not subject of this standard.

This European Standard does not cover the design of treatment processes.

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This standard gives fundamental information about the systems; this standard has not attempted to specify all available systems.

Detailed information additional to that contained in this standard may be obtained by referring to the Bibliography.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 752-6, *Drain and sewer systems outside buildings – Part 6: Pumping installations.*

EN 809, *Pumps and pump units for liquids – Common safety requirements.*

EN 1085, *Wastewater treatment – Vocabulary.*

EN 12255-9, *Wastewater treatment plants — Part 9: Odour control and ventilation.*

EN 12255-10, *Wastewater treatment plants – Part 10: Safety principles.*

prEN 12255-12, *Wastewater treatment plants — Part 12: Control and automation.*

EN 60034-1, *Rotating electrical machines – Part 1: Rating and performance (IEC 60034-1:1996, modified).*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529: 1989).*

ISO 3506-1, *Mechanical properties of corrosion-resistant stainless-steel fasteners – Part 1: Bolts, screws and studs.*

ISO 3506-2, *Mechanical properties of corrosion-resistant stainless-steel fasteners – Part 2: Nuts.*

ISO 3506-3, *Mechanical properties of corrosion-resistant stainless-steel fasteners – Part 3: Set screws and similar fasteners not under tensile stress.*

ISO 4200, *Plain end steel tubes, welded and seamless – General tables of dimensions and masses per unit length.*