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## Wastewater treatment plants – Part 3: Preliminary treatment

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**EN 12255-3**

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English version

## Wastewater treatment plants - Part 3: Preliminary treatment

Stations d'épuration - Partie 3: Prétraitements

Kläranlagen - Teil 3: Abwasservorreinigung

This European Standard was approved by CEN on 17 August 2000.

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 Central Secretariat 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 Central Secretariat 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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165 "Waste water 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of an identical text or by endorsement, at the latest by March 2001, and conflicting national standards shall be withdrawn at the latest by March 2001.

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

It is the third part prepared by the Working Groups CEN/TC 165/WG 42 and 43 relating to the general requirements and processes for treatment plants for over 50 PT. 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
- Part 12: Control and automation
- Part 13: Chemical treatment
- Part 14: Disinfection
- Part 15: Measurement of the oxygen transfer in clean water in activated sludge aeration tanks
- Part 16: Physical (mechanical) filtration

NOTE For requirements on pumping installations at wastewater treatment plants and in their water feed field, 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 became implemented together as a European package (Resolution BT 152/1998). The date of withdrawal (dow) of all conflicting national standards is 2001-12-31. Until the date of withdrawal is reached the National and the already published European standards both coexist.

## 1 Scope

This part of this European Standard specifies the requirements for preliminary treatment of wastewater at wastewater treatment plants for over 50 PT.

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

Preliminary treatment may include one or more of the following options:

- screening;
- grit removal,
- grease separation;

- flow balancing and flow separation.

NOTE Flow measurement and/or sampling provision may be included with any of the chosen options.

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This standard gives fundamental informations 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 references, provision 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.

EN 1085

Wastewater treatment — Vocabulary

prEN 12255-1:1996

Wastewater treatment plants — Part 1: General construction principles

prEN 12255-10:2000

Wastewater treatment plants — Part 10: Safety principles

prEN 12255-11:1998

Wastewater treatment plants — Part 11: General data

## 3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in EN 1085 apply.

## 4 Requirements

### 4.1 General

Preliminary treatment units are an important part of the overall wastewater treatment process, since they serve to ensure that the subsequent main treatment stages operate effectively. The preliminary process requires the removal of large floating and suspended solids, grit, grease and oil. Unless preliminary units are correctly designed, variations in flow may cause operational problems in the subsequent processes. This is particularly true of smaller plants.

The type and size of units are influenced by the overall system and the nature of the wastewater to be treated. Combined sewerage systems usually have greater variations in flow than separate systems so that storm water separation arrangements and/or flow balancing may be necessary. Grit removal may be required to prevent damage to following treatment units and pumps. Where treatment plants receive significant amounts of organic industrial wastes, e. g. from food processing, the provision of grease and oil removal units is essential.

### 4.2 Planning

The design considerations for a preliminary treatment system shall include a combination of the acceptable options to fulfil the process. Selection shall be based on an assessment of the characteristics of the wastewater to be treated, the size of the installation and its technical and economic consequences on subsequent processes.