

Wastewater treatment plants - Part 11: General data required

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 13.060.30

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English Version

Wastewater treatment plants - Part 11: General data required

Stations d'épuration - Partie 11 : Informations
générales exigées

Kläranlagen - Teil 11: Erforderliche allgemeine
Angaben

This European Standard was approved by CEN on 2 January 2023.

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European foreword

This document (EN 12255-11:2023) 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of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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 12255-11:2001.

This is the eleventh part of the EN 12255 series prepared by Working Group CEN/TC 165/WG 40, relating to the general requirements and processes for treatment plants for a total number of inhabitants and population equivalents (PT) over 50.

The EN 12255 series with the generic title “Wastewater treatment plants” consists of the following parts:

- *Part 1: General construction principles*
- *Part 2: Storm management systems*
- *Part 3: Preliminary treatment*
- *Part 4: Primary settlement*
- *Part 5: Lagooning processes*
- *Part 6: Activated sludge process*
- *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*

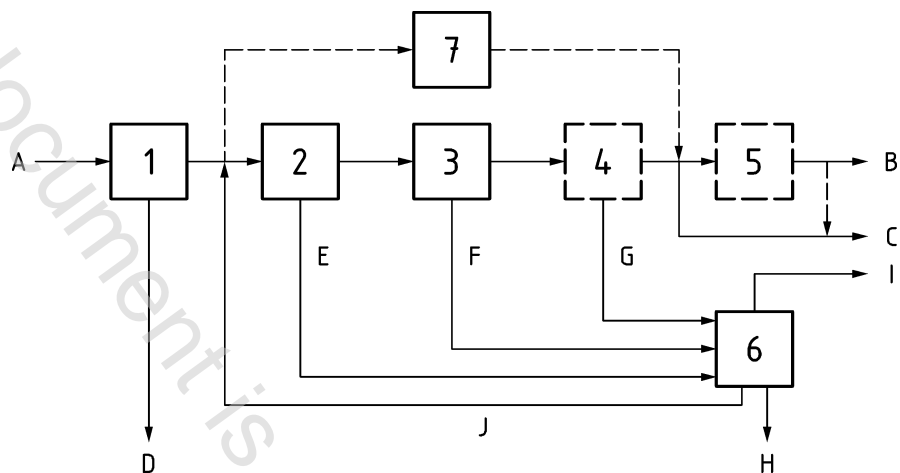
NOTE Part 2 is under preparation.

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.

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Introduction

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This document gives fundamental information about the systems; this document has not attempted to specify all available systems. A generic arrangement of wastewater treatment plants is illustrated below in Figure 1.



- Key**
- 1 preliminary treatment
 - 2 primary treatment
 - 3 secondary treatment
 - 4 tertiary treatment
 - 5 additional treatment (e.g. disinfection or removal of micropollutants)
 - 6 sludge treatment
 - 7 lagoons (as an alternative)
 - A raw wastewater
 - B effluent for re-use (e.g. irrigation)
 - C discharged effluent
 - D screenings and grit
 - E primary sludge
 - F secondary sludge
 - G tertiary sludge
 - H stabilised sludge
 - I digester gas
 - J returned water from dewatering

Figure 1 — Schematic diagram of wastewater treatment plants

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

NOTE For requirements on pumping installations at wastewater treatment plants, see EN 752, *Drain and sewer systems outside buildings — Sewer system management* and the EN 16932 series, *Drain and sewer systems outside buildings — Pumping systems*:

- *Part 1: General requirements;*
- *Part 2: Positive pressure systems;*
- *Part 3: Vacuum systems.*

1 Scope

This document specifies data which is necessary for the planning, design, bidding, performance guarantees, construction, start-up and compliance testing of a wastewater treatment plant or parts of it. This document gives fundamental information about the practices; this document has not attempted to specify all available practices.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

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

3.1 relevant plant

new wastewater treatment plant; rebuild, upgrade or extension of an existing wastewater treatment plant or a part of a new or extended wastewater treatment plant (e.g. sludge handling facilities)

3.2 client

municipality, city or other organization which intends to build a wastewater treatment plant or parts thereof, or its representative

[SOURCE: EN 12255-1:2002, 3.6]

3.3 functional tender

tender document that contains the design flows and loads, a description of the site where the relevant plant is to be erected, the relevant discharge limits and any additional requirements

3.4 sectional tender

separate tender documents prepared for different sections of work that may be constructed by different entities

Note 1 to entry: Examples of sections of work can include: earth work, concrete work, mechanical equipment, electrical installations, buildings, etc.

3.5 consulting engineer

independent engineer or engineering company commissioned by the client designing a wastewater treatment plant or parts of it and/or supervising the construction

Note 1 to entry: The consulting engineer may assist the client with any work preparing all or part of the tender documents. The consulting engineer supervises the construction and checks the time schedule and costs. The consulting engineer has knowledge and experience in planning, design and operational aspects of wastewater treatment plants. In some countries, a special certification may be required.