REOVEEPUHASTID. OSA 9: LÕHNATÕRJE JA VENTILATSIOON

Wastewater treatment plants - Part 9: Odour control and ventilation

FFSTI STANDARDI FFSSÕNA

NATIONAL FORFWORD

See Eesti standard EVS-EN 12255-9:2023 sisaldab Euroopa standardi EN 12255-9:2023 ingliskeelset teksti.

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This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.

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EUROPEAN STANDARD

EN 12255-9

NORME EUROPÉENNE EUROPÄISCHE NORM

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English Version

Wastewater treatment plants - Part 9: Odour control and ventilation

Stations d'épuration - Partie 9 : Maîtrise des odeurs et ventilation

Kläranlagen - Teil 9: Geruchsminderung und Belüftung

This European Standard was approved by CEN on 29 October 2023.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 12255-9:2023) 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of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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 12255-9:2002.

The main changes compared to the previous edition EN 12255-9:2002 are listed below:

- comprehensive revision and additions in all sections;
- adaptation to the current state of the art;
- updating of the Normative references;
- updated bibliography;
- editorial revision.

It is the ninth part 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 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

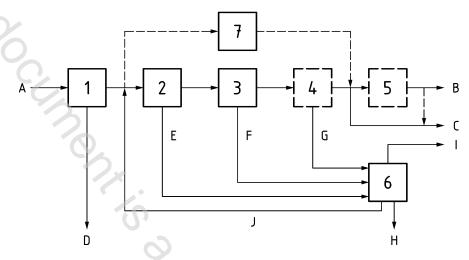
NOTE For requirements on pumping installations at wastewater treatment plants see EN 752, *Drain and sewer systems outside buildings* — *Sewer system management* and EN 16932 (all parts), *Drain and sewer systems outside buildings* — *Pumping systems*.

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.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of A.
a, Slo North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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 in Figure 1:



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

Figure 1 — Schematic diagram of wastewater treatment plants

Detailed information additional to that contained in this document can be obtained by referring to the bibliography.

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

Scope 1

This document specifies design principles and performance requirements for odour control and associated ventilation for wastewater treatment plants serving more than 50PT.

2 **Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12255-14, Wastewater treatment plants — Part 14: Disinfection

EN 13725:2022, Stationary source emissions — Determination of odour concentration by dynamic olfactometry and odour emission rate

EN 16323:2014, Glossary of wastewater engineering terms

EN 16841-1, Ambient air — Determination of odour in ambient air by using field inspection — Part 1: Grid method

EN 16841-2:2016, Ambient air — Determination of odour in ambient air by using field inspection — Part 2: Plume method

ISO 1629, Rubber and latices — Nomenclature

Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16323 and the following apply. ISO and IEC maintain terminology databases for use in standardization at the following addresses:

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

3.1

olfactometry

measurement of the response of assessors to olfactory stimuli

[SOURCE: EN 16323:2014, 2.1.3.2]

Note 1 to entry: See EN 13725 for details.