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Wastewater lifting plants for buildings and sites - Part 1: Lifting plants for wastewater containing faecal matter

EESTI STANDARDIKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12050-1:2015 sisaldab Euroopa standardi EN 12050-1:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 12050-1:2015 consists of the English text of the European standard EN 12050-1:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.03.2015.	Date of Availability of the European standard is 18.03.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Wastewater lifting plants for buildings and sites - Part 1: Lifting plants for wastewater containing faecal matter

Stations de relevage d'effluents pour les bâtiments et terrains - Partie 1 : Stations de relevage pour effluents contenant des matières fécales

Abwasserhebeanlagen für die Gebäude- und Grundstücksentwässerung - Teil 1: Fäkalienhebeanlagen

This European Standard was approved by CEN on 17 January 2015.

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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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Foreword

This document (EN 12050-1:2015) 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of an identical text or by endorsement, at the latest by September 2015 and conflicting national standards shall be withdrawn at the latest by December 2016.

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 12050-1:2001.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the Regulation (EU) No. 305/2011.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

The series of standards EN 12050 “*Wastewater lifting plants for buildings and sites*” consists of the following parts:

- Part 1: *Lifting plants for wastewater containing faecal matter;*
- Part 2: *Lifting plants for faecal-free wastewater;*
- Part 3: *Lifting plants for limited applications;*
- Part 4: *Non-return valves for faecal-free wastewater and wastewater containing faecal matter.*

The main changes with respect to the previous edition are listed below:

a) reaction to fire added;

b) hot water test added;

c) Clause 6 updated in accordance with “Implementation of the Construction Products Regulation (CPR) in harmonized standards”;

d) Annex ZA updated in accordance with “Implementation of the Construction Products Regulation (CPR) in harmonized standards” (adoption of the Regulation EU No. 305/2011);

e) editorially revised.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard applies to lifting plants for wastewater containing faecal matter (referred to as “faecal lifting plants” in this standard) for drainage of locations below flood level in buildings and sites to prevent any backflow of wastewater into the building. These lifting plants may be prefabricated or delivered as prefabricated kits and assembled on site. This standard specifies general requirements, basic construction and testing principles, together with information on materials and assessment and verification of constancy of performance.

Construction and testing requirements for non-return valves used in wastewater lifting plants are given in EN 12050-4.

This European Standard does not apply for pumping installations for drain and sewer systems outside buildings for pumping of municipal wastewater according to EN 752:2008, Annex F.

NOTE Lifting plants for wastewater containing faecal matter can also be used for wastewater that does not contain faecal matter and for surface water.

This European Standard applies also to lifting plants for wastewater containing faecal matter which are not prefabricated but composed of individual components purchased from different suppliers and put together on site.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 124, *Gully tops and manhole tops for vehicular and pedestrian areas — Design requirements, type testing, marking, quality control*

EN 12056-1:2000, *Gravity drainage systems inside buildings — Part 1: General and performance requirements*

EN 12056-4:2000, *Gravity drainage systems inside buildings — Part 4: Wastewater lifting plants - Layout and calculation*

EN 12566-1:2000/A1:2003, *Small wastewater treatment systems for up to 50 PT — Part 1: Prefabricated septic tanks*

EN 12566-4:2007, *Small wastewater treatment systems for up to 50 PT — Part 4: Septic tanks assembled in situ from prefabricated kits*

EN 13463-1, *Non-electrical equipment for use in potentially explosive atmospheres — Part 1: Basic method and requirements*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 13598-1, *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) — Part 1: Specifications for ancillary fittings including shallow inspection chambers*

EN 60079-0, *Explosive atmosphere — Part 0: Equipment — General requirements (IEC 60079-0)*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN ISO 9906:2012, *Rotodynamic pumps — Hydraulic performance acceptance tests — Grades 1, 2 and 3 (ISO 9906:2012)*

EN ISO 20361, *Liquid pumps and pump units — Noise test code — Grades 2 and 3 of accuracy (ISO 20361)*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

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

3.1.1
domestic wastewater
water which is contaminated by use and normally discharged from WC, showers, baths, bidets, wash basins, sinks and floor gullies

[SOURCE: EN 12056-1:2000, 3.1.2]

3.1.2
faecal lifting plant
device for the collection and automatic lifting of wastewater, which may or may not contain faecal matter, to a height above flood level

Note 1 to entry: A non-return valve according to EN 12050–4 is a component of the plant.

3.1.3
collection tank for wastewater containing faecal matter
unpressurized part of a faecal lifting plant in which the incoming wastewater is stored prior to lifting

3.1.4
site
area in the proximity of the building outside buildings

Note 1 to entry: For further explanation see EN 12056–1:2002, Figure 1.

3.1.5
useful volume
volume in the collection tank between switch-on level and switch-off level

3.1.6
flood level
maximum level to which wastewater can rise within a drainage system

[SOURCE: EN 12056-1:2000, 3.1.7]

3.1.7
pumping device for wastewater containing faecal matter
component of a faecal lifting plant which pumps the wastewater out of the collection tank to a height above flood level

3.1.8
maximum pump operating pressure
maximum hydrostatic pressure that the pumping device is capable to create