

Wastewater lifting plants for buildings and sites — Principles of construction and testing —

Part 3: Lifting plants for wastewater containing faecal matter for limited applications

The European Standard EN 12050-3:2000 has the status of a
British Standard

ICS 13.060.30; 91.140.80

National foreword

This British Standard is the official English language version of EN 12050-3:2000.

The UK participation in its preparation was entrusted to Technical Committee B/505, Wastewater engineering, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 17 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard, having been prepared under the direction of the Sector Committee for Building and Civil Engineering, was published under the authority of the Standards Committee and comes into effect on 15 February 2001

© BSI 02-2001

ISBN 0 580 36907 2

Amendments issued since publication

Amd. No.	Date	Comments

English version

Wastewater lifting plants for buildings and sites — Principles of construction and testing — Part 3: Lifting plants for wastewater containing faecal matter for limited applications

Stations de relevage d'effluents pour les bâtiments et terrains — Principes de construction et d'essai —
Partie 3: Stations de relevage à application limitée pour effluents contenant des matières fécales

Abwasserhebeanlagen für die Gebäude- und Grundstücksentwässerung — Bau- und Prüfgrundsätze —
Teil 3: Fäkalienhebeanlagen zur begrenzten Verwendung

This European Standard was approved by CEN on 1 December 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 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, 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

Contents

	Page
Foreword	3
1 Scope	3
2 Normative references	3
3 Terms and definitions	4
4 Requirements	4
4.1 Control equipment	4
4.2 Electrical equipment	4
4.3 Container	4
4.4 Manufacturer's statement	4
5 Construction principles	5
5.1 Pumping of solids	5
5.2 Pipe connections	5
5.3 Ventilation	5
5.4 Minimum flow velocity	5
5.5 Minimum passage of the plant	6
5.6 Minimum size of discharge pipework	6
5.7 Fixing devices	6
6 Materials	6
7 Testing documentation and samples to be tested	6
8 Testing	6
8.1 General	6
8.2 Test conditions	6
8.3 Testing for leaks	6
8.4 Lifting effectiveness of the faecal lifting plant for limited applications	7
9 Conformity evaluation	8
9.1 General requirements	8
9.2 Initial testing of the products (type testing)	8
9.3 Factory production control (FPC) carried out by the manufacturer (internal conformity evaluation)	8
9.4 Non-conforming products	9
10 Marking	10
11 Installation, operation and maintenance	10
Annex A (normative) Noise level	11
Annex B (informative) Recommended materials	12
Annex C (informative) Conformity evaluation by an independent third party (third party evaluation)	13
Annex Z (informative) Links with the EU Construction Products Directive (89/106)	14
Bibliography	17

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165, Wastewater engineering, the Secretariat of which is held by DIN.

This is the third of a total of four parts of the standard series EN 12050 with the following titles:

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

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 June 2001, and conflicting national standards shall be withdrawn at the latest by September 2002.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex Z, which is an integral part of this standard.

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.

Annex A is normative. The annexes B, C and Z are informative.

1 Scope

This part of this European Standard applies to lifting plants for wastewater containing faecal matter for limited applications used for draining a single WC according to EN 33 or EN 37 to which it is directly connected and located below flood level. Plants for limited applications are those where the number of users is small, where there is another WC available above flood level, and the plants serve no more than one wash-hand basin, one shower and one bidet provided they pass the tests described in clause 8 and they are installed in accordance with EN 12056-1 and no other sanitary appliance is directly or indirectly connected. In addition, limited application means that the plant is located in the same room as the WC and any other appliance served by it¹⁾. This part of this standard contains general requirements, basic construction and testing principles, together with information on materials and conformity evaluation. Construction and testing requirements for non-return valves used in faecal lifting plants for limited applications are given in EN 12050-4.

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 apply (including amendments).

EN 33, *Pedestal W.C. pan with close coupled cistern — Connecting dimensions*.

EN 37, *Pedestal W.C. pan with independent water supply — Connecting dimensions*.

EN 1085:1997, *Wastewater treatment — Vocabulary*.

EN 12050-4, *Wastewater lifting plants for buildings and sites — Principles of construction and testing — Part 4: Non-return valves for faecal-free wastewater and wastewater containing faecal matter*.

¹⁾ The installation of a faecal lifting plant for limited applications above flood level is normally not allowed but limited to exceptional cases described in EN 12056-1; lifting plants above flood level are not subject to this standard.

- EN 12056-1 *Gravity drainage systems inside buildings — Part 1: General and performance requirements.*
- EN 12056-4 *Gravity drainage systems inside buildings — Part 4: Wastewater lifting plants, layout and calculation.*
- EN 12639:2000 *Liquid pumps and pump units — Noise test code — Grade 2 and grade 3 of accuracy.*
- EN 60529 *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989).*
- ISO 9906 *Rotodynamic pumps — Hydraulic performance acceptance tests — Grades 1 and 2.*

3 Terms and definitions

For the purposes of this standard, the definitions given in EN 1085:1997 and the following apply.

3.1

faecal lifting plant for limited applications

device for the collection and automatic lifting of wastewater which may or may not contain faecal matter from sanitary appliances connected to it, to a height above flood level

NOTE A non-return valve according to EN 12050-4 is a component of the plant.

3.2

container of faecal lifting plant for limited applications

integral part of a faecal lifting plant for limited applications and contains the pump, its controls and the priming volume of wastewater

NOTE The container of a faecal lifting plant for limited applications is not considered to be a collection tank according to EN 12050-1:2001.

3.3

pumping device of faecal lifting plant for limited applications

component of a faecal lifting plant for limited applications which pumps wastewater to a height above flood level

3.4

initial testing (type testing)

testing to demonstrate that a plant conforms to all requirements of this standard

3.5

priming volume

volume of liquid required for proper operation of the pumping device

4 Requirements

4.1 Control equipment

Faecal lifting plants for limited applications shall be fitted with control equipment for automatic operation.

4.2 Electrical equipment

The electrical equipment of the plant shall comply with the appropriate valid IEC Standard. Even where the electrical equipment of the plant is located in a well ventilated space and not liable to flooding it shall comply with at least Protection Type IP 44 according to EN 60529.

4.3 Container

The container shall be closed, watertight and odour tight.

4.4 Manufacturer's statement

The manufacturer shall state the hydraulic performance characteristics (head and flow) according to grade 2 of ISO 9906 together with the maximum power consumption and maximum current consumption.