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Small wastewater treatment systems for up to 50 PT – Part 1: Prefabricated septic tanks

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The European Standard EN 12566-1:2000/A1:2003 has the status of a Swedish Standard. This document contains the official English version of EN 12566-1:2000/A1:2003.

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EUROPEAN STANDARD
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EN 12566-1:2000/A1

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ICS 13.060.30

English version

Small wastewater treatment systems for up to 50 PT - Part 1: Prefabricated septic tanks

Petites installations de traitements des eaux usées jusqu'à
50 PTE - Partie 1: Fosses septiques préfabriquées

Kleinkläranlagen für bis zu 50 EW - Teil 1: Werkmäßig
hergestellte Faulgruben

This amendment A1 modifies the European Standard EN 12566-1:2000; it was approved by CEN on 16 October 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 amendment 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document EN 12566-1:2000/A1:2003 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of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by September 2005.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

For reasons of conformity with Mandate M 118 for harmonised European Standards on waste waster engineering products, EN 12566-1:2000 has been amended as follows:

EN 12566-1:2000/A1:2003 (E)

Contents

Delete "**Classification**" and insert "**Nominal sizes**".

Insert 5.2.4 "**Determination of structural behaviour**".

Delete "**Initial type tests and quality control test**" and insert "**Initial type tests**".

Delete "**Finished product testing**" and insert "**Finished product tests**".

Insert "**Annex D (normative) Test methods for structural behaviour**".

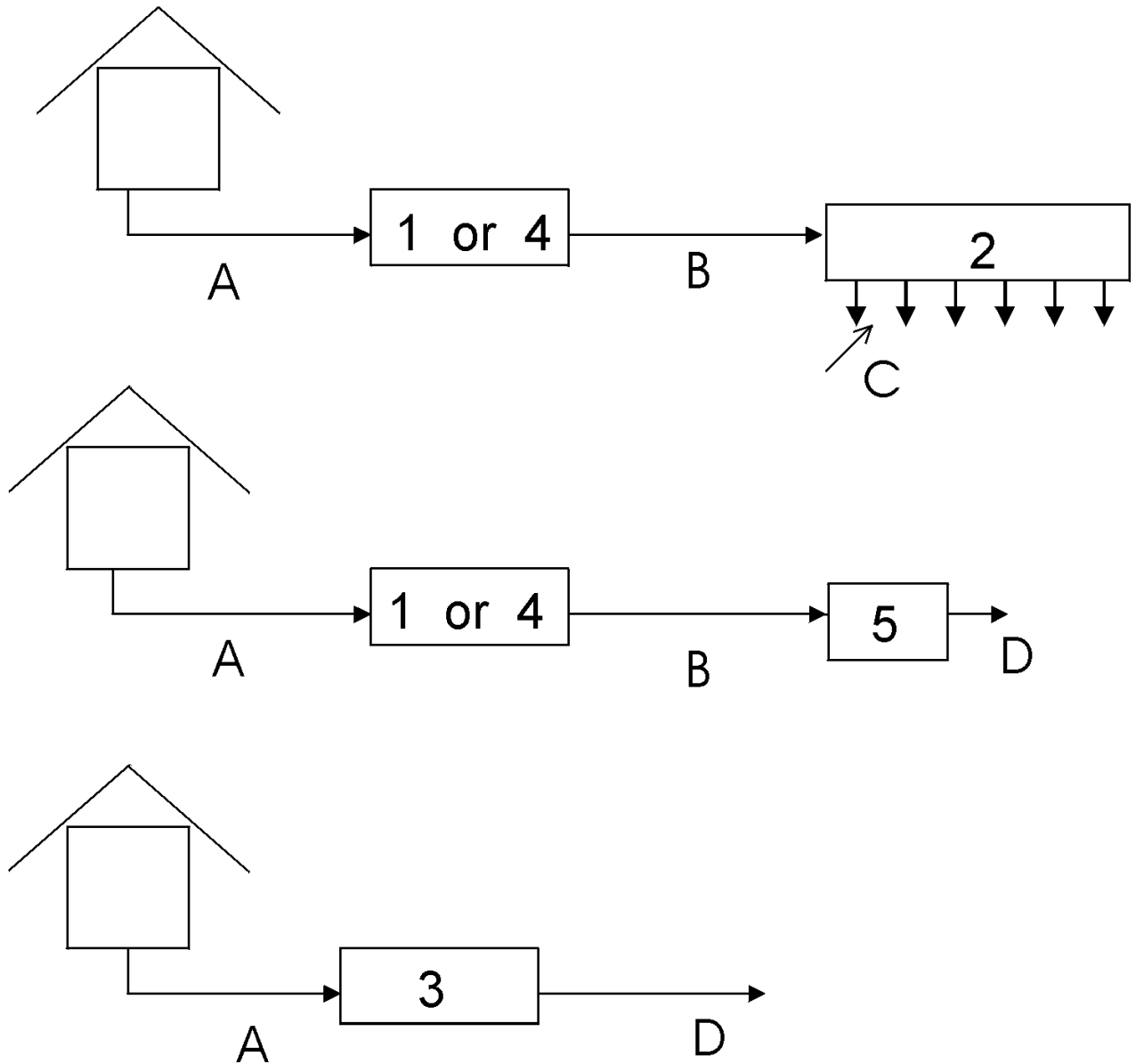
Insert "**Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive**".

Foreword

Delete "No treatment or structural requirements are specified" at the end of the Note related to part 1.

Add the following sentence and the scheme to the foreword.

The application of the parts of EN 12566 is shown in the following scheme:



Key

- | | | | |
|---|--|---|--|
| A | Domestic waste water (influent) | 1 | Prefabricated septic tank (see part 1) |
| B | Pre-treated waste water | 2 | Infiltration system (into the ground) (see part 2; in preparation) |
| C | Infiltration into the ground | 3 | Waste water treatment plant (see part 3) |
| D | Outlet of treated waste water (effluent) | 4 | Septic tank built in situ (see part 4; in preparation) |
| | | 5 | Filtration systems (see part 5; in preparation) |

NOTE National regulations may specify different arrangements between the products described in the standards series EN 12566.

2 Normative references

Add a new reference: "EN 1085, *Waste water treatment – Vocabulary*".

EN 12566-1:2000/A1:2003 (E)

3 Definitions

Insert in the first line after "For the purposes of this standard", "the terms and definitions given in EN 1085 and"

Add a new definition:

3.5 range

group of products in which, for the purpose of evaluation, the selected property(s) is/are similar for all products within the group.

The definition of range takes into account at least similar shape, equipment, materials and conditions of end use and ensures the minimum hydraulic efficiency and minimum structural behaviour for all the products in the range.

The minimum level of performance (hydraulic efficiency and structural behaviour) are given by the test carried out on one model of the range."

4 Classification

Change the title to "**Nominal sizes**". In line 1, delete "classified" and insert "designated".

5 Specifications

5.2.1 Backfill load

Change the three last lines to:

"For sand: $K=0,33$

For gravel: $K=0,27$

For other backfill materials: $K=0,5$ "

Insert **5.2.4 Determination of structural behaviour**

The structural behaviour of the septic tank shall be determined by the crushing resistance/maximum load deformation, using the calculation method valid in the country of use or the test methods described in annex D."

5.3 Watertightness

- a) In line 2 insert "steel" after "polyethylene".
- b) In line 2 and 3, modify the text to: "The septic tank shall be deemed watertight when the pressure at the end of the test does not deviate by more than 10% from the pressure at the start of the test (Table A.2)."

5.8 Durability

Insert the following sentence as a new paragraph: "Carbon steel septic tanks shall have a suitable coating to prevent corrosion".

6 Marking

Revise the content of the marking as follows:

- a) manufacturer and product identification,
- b) the number of this EN,

- c) type of material,
- d) nominal size,
- e) date of manufacture.

Add a new sentence at the end of the paragraph: "Where ZA.3 covers the same requirements as this clause, the requirements of this clause are met."

7 Quality control

Change the heading of clause 7 to "Evaluation of conformity"

Delete the heading 7.1 "Evaluation of conformity". Change the numbering of the following clauses and their references accordingly.

7.1.1 General

Modify the sub-clause as follows:

"The conformity of the products with the requirements of this standard shall be demonstrated by:

- a) initial type tests (see 7.1.2),
- b) factory production control (see 7.2),
- c) finished product test (see 7.2.3).

In addition, compliance with this EN may be assessed by third party certification of the products or by customer acceptance testing."

7.1.2 Initial type tests and quality control test

Revise the sub-clause as follows:

"Initial type tests shall be performed on first application of this standard. Tests previously performed in accordance with provision of this standard (same product, same characteristics, test methods, sampling procedure and system of attestation of conformity) may be taken into account.

In addition, when a new product (outside an existing range) or product range is developed, appropriate initial type tests shall be carried out in accordance with Table 1 to confirm that the final properties conform to the requirements of this standard. If a major modification, likely to alter the functional properties of the finished product, takes place, the initial type tests shall be repeated.

The results of the initial type tests shall be recorded and made available for inspection.

EN 12566-1:2000/A1:2003 (E)

Table 1 – Requirements for initial type tests

Requirements	Models to be tested	
	Each model in a range	A representative model from a range
1. • Overall dimensions • Inlets, outlets, and connections • Accessibility	X X X	
2. Watertightness	X	
3. Volume	X	
4. Structural behaviour		X (1)
5. Hydraulic efficiency		X (2)

For the purposes of the evaluation, products may be grouped into ranges.

NOTE 1 The biggest size will normally be selected to test.

NOTE 2 The smallest size will normally be selected to test.”

7.2.3 Finished product testing

Modify the sub-clause as follows:

“A sampling plan shall be prepared for the watertightness test of finished products and the results of tests shall be recorded and made available. All test equipment shall be verified and the procedure, frequency and criteria documented.”

Annex A (normative) Watertightness and nominal capacity tests

Modify the first line as follows:

“The watertightness test and nominal capacity test shall be carried out on a complete septic tank.”

A.1.1 Sample

Modify the line as follows: “The test is carried out on an empty septic tank according to Table A.1.”

A.1.2 Procedure

Modify the first line as follows: “The septic tank shall be placed on an elevated device and secure ...”

Table A.1 Add a fourth column for "Steel" with a cross in each line.

Add a fifth column for "Other material" with a cross in each line.

A.2.1.2 Procedure

Modify the second paragraph as follows:

“For septic tanks made of concrete or GRP, the volume of water required to refill the septic tank shall then be measured. For septic tanks made with other materials, they shall be inspected for leaks and the observation shall be recorded.”

A.2.1.3 Expression of results

In the first line, replace "with rigid behaviour" by “made of concrete or GRP.”

Table A.2 In the first column, add on each line “ $\pm 2\%$ ”

In the second column, add on each line “ $\pm 1\text{ s}$ ”

A.2.3.2.1 Modify the second paragraph as follows:

“The chosen pneumatic pressure shall be gradually imposed on the septic tank and held for 3 minutes to allow the septic tank to absorb the deformation.”

Annex B (normative) Hydraulic efficiency test

B.3 Preparation of test

Modify the second sentence of the first paragraph as follows: “The inlet pipe shall be similar to the type of pipes used for normal operating conditions.”

Annex D

Insert the following new annex: