

ICS 13.060.30

English Version

Small wastewater treatment systems up to 50 PT - Part 5: Pre-treated Effluent Filtration systems

Petites installations de traitement des eaux usées jusqu'à
50 EH - Partie 5 : Systèmes de filtration d'effluent prétraité

Kleinkläranlagen für bis zu 50 EW - Teil 5:
Filtrationsanlagen für vorbehandeltes häusliches
Schmutzwasser

This Technical Report was approved by CEN on 7 April 2008. It has been drawn up by the Technical Committee CEN/TC 165.

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Foreword

This document (CEN/TR 12566-5:2008) has been prepared by Technical Committee CEN/TC 165 "Wastewater engineering", the secretariat of which is held by DIN.

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.

The standard series EN 12566 "Small wastewater treatment systems for up to 50 PT" contains the following parts:

- Part 1: Prefabricated septic tanks;

NOTE 1 This part specifies the requirements and test methods for prefabricated septic tank units.

- Part 2: Soil infiltration systems;

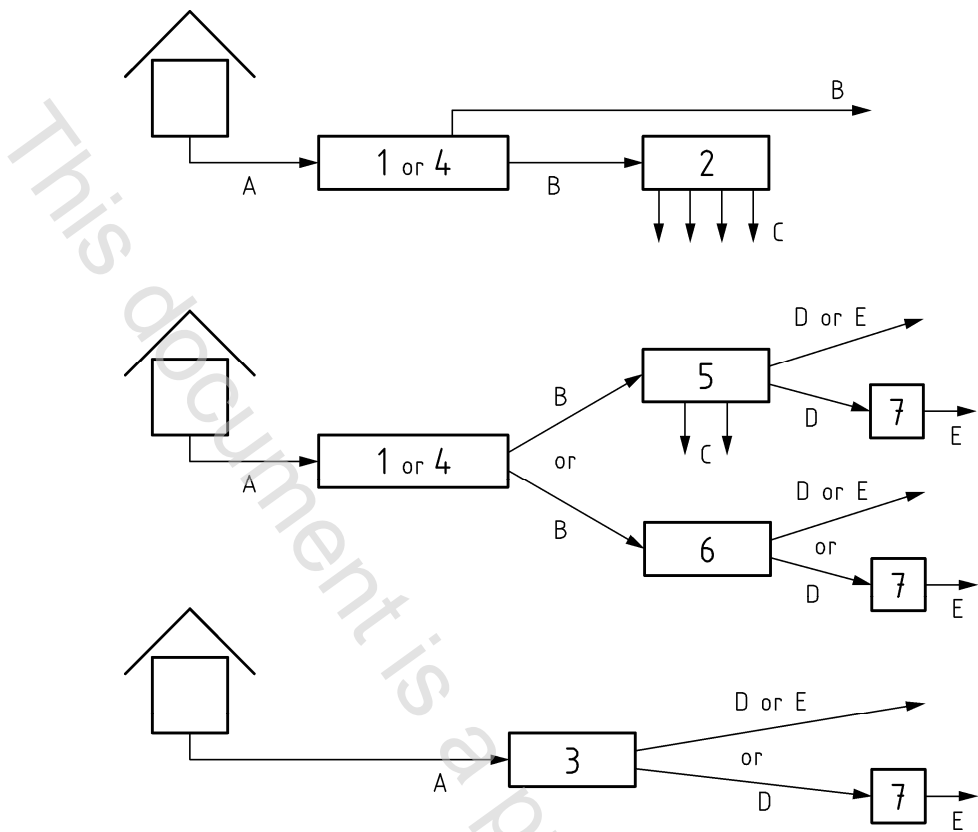
NOTE 2 Code of Practice for in-situ constructed soil infiltration systems. No treatment requirements are specified.

- Part 3: Packaged and/or site assembled domestic wastewater treatment plants;

NOTE 3 This part specifies the requirements and test methods used to evaluate packaged wastewater treatment plants which are required to treat wastewater to a declared quality.

- Part 4: Septic tanks assembled in situ from prefabricated kits;
- Part 5: Pre-treated effluent filtration systems (this Technical Report);
- Part 6: Prefabricated treatment units for septic tank effluent (in preparation);
- Part 7: Prefabricated tertiary treatment units (in preparation).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Report: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.



Key

- | | |
|---------------------------------|---|
| A: Raw domestic wastewater | 1: Prefabricated septic tank |
| B: Septic tank effluent | 2: Soil infiltration system |
| C: Treated infiltrated effluent | 3: Packaged and/or site assembled domestic wastewater treatment plant |
| D: Treated wastewater | 4: Septic tank assembled in situ from prefabricated kit |
| E: Tertiary treated wastewater | 5: Pre-treated effluent filtration system |
| | 6: Prefabricated treatment unit used for septic tank effluent |
| | 7: Prefabricated tertiary treatment unit |

Figure 1 – Scheme related to the arrangement of the parts of EN 12566

Introduction

Filtration systems have effluent collection systems and the effluent quality can be measured. The systems described are intended to illustrate the main principles of construction and are subject to variation. The regulatory authorities shall be consulted for suitability. All filtration systems shall be designed to accept the total daily flow from at least one house.

No treatment efficiencies are indicated in this document for any particular system.

The dimensional values and ranges given in the document were agreed as sufficient to provide acceptable treatment for basic parameters in the majority of simple situations.

Some specific dimensional values and ranges can be found in country's codes of practice and regulations given in the bibliography.

1 Scope

This Technical Report provides details of filtration systems used for applications ranging from a single house up to and included 50 PT. The filtration systems receive domestic wastewater from septic tanks manufactured according to the requirements given in EN 12566-1 and EN 12566-4.

This document is a code of practice and gives design parameters, construction details, installation and component requirements for constructed sand filters and subsurface flow sand or gravel reed beds.

2 Normative references

The following referenced documents are indispensable for the application 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 1085:2007, *Wastewater treatment – Vocabulary*

EN 12050-2, *Wastewater lifting plants for buildings and sites - Principles of construction and testing - Part 2: Lifting plants for faecal-free wastewater*

EN 13252, *Geotextiles and geotextile-related products — Required characteristics for use in drainage systems*

3 Terms and definitions

For the purposes of this Technical Report, the terms and definitions given in EN 1085:2007 and the following apply.

3.1

biological layer

biological film which grows on the top of the filter material when pre-treated effluent from the septic tank infiltrates the filter material

3.2

buried filter

filter covered with a layer of soil

3.3

collection layer

layer in which collection pipes collect treated waste water that has passed through the filter

3.4

collection pipe

perforated pipe placed at the bottom within the collection layer connected to the collection chamber

3.5

collection chamber

chamber receiving treated waste water from the collection layer and discharging through the pipe to the outfall

NOTE It is designed to enable effluent sampling.

3.6

collection trench

mound of granular fill material on the base of the excavation at the outlet side, in which a collection pipe collects water which has passed through the filter