

REOVEE VÄIKEPUHASTID KUNI 50 IE. OSA 7: TEHASES
VALMISTATUD SÜVAPUHASTID

Small wastewater treatment systems for up to 50 PT -
Part 7: Prefabricated tertiary treatment units

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12566-7:2016 sisaldab Euroopa standardi EN 12566-7:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 12566-7:2016 consists of the English text of the European standard EN 12566-7:2016.
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 31.08.2016.	Date of Availability of the European standard is 31.08.2016.
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.

ICS 13.060.30

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12566-7

August 2016

ICS 13.060.30

Supersedes EN 12566-7:2013

English Version

Small wastewater treatment systems for up to 50 PT - Part
7: Prefabricated tertiary treatment units

Petites installations de traitement des eaux usées
jusqu'à 50 PTE - Partie 7: Unités préfabriquées de
traitement tertiaire

Kleinkläranlagen für bis zu 50 EW - Teil 7: Im Werk
vorgefertigte Einheiten für eine dritte Reinigungsstufe

This European Standard was approved by CEN on 25 June 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

	Page
Contents	
European foreword	4
1 Scope	6
2 Normative references	6
3 Terms, definitions, symbols and abbreviated terms	6
3.1 Terms and definitions	6
3.2 Symbols and abbreviated terms	8
4 Product characteristics	8
4.1 Design	8
4.1.1 General	8
4.1.2 Overall dimensions	8
4.1.3 Inlets, outlets, internal pipework and connections	8
4.1.4 Access	9
4.2 Load bearing capacity	9
4.3 Tertiary treatment efficiency	9
4.4 Watertightness	10
4.5 Power consumption	10
4.6 Durability	10
4.6.1 General	10
4.6.2 Concrete, steel, PVC-U, PE, GRP, PDCPD and flexible sheets	10
4.7 Reaction to fire	10
4.7.1 General	10
4.7.2 Units classified as Class A1 without the need for testing	11
4.7.3 Units classified according to the test results	11
4.8 Dangerous substances	11
5 Testing, assessment and sampling	12
5.1 Load bearing capacity	12
5.1.1 Generals	12
5.1.2 Load bearing capacity determined by calculation	12
5.1.3 Load bearing capacity determined by testing	13
5.2 Tertiary treatment efficiency	15
5.3 Watertightness	15
5.4 Power consumption	15
6 Assessment and verification of constancy of performance – AVCP	15
6.1 General	15
6.2 Type testing	16
6.2.1 General	16
6.2.2 Test samples, testing and compliance criteria	16
6.2.3 Test reports	18
6.2.4 Shared other party results	18
6.2.5 Cascading determination of the product type results	19
6.3 Factory production control	20
6.3.1 General	20
6.3.2 Requirements	20
6.3.3 Product specific requirements	23
6.3.4 Initial inspection of factory and of FPC	23
6.3.5 Continuous surveillance of FPC	24
6.3.6 Procedure for modifications	24

6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity.....	24
7 Nominal designation.....	25
8 Marking, labelling and packaging.....	25
8.1 Marking	25
8.2 Technical information accompanying the unit.....	26
8.3 Installation instructions.....	27
8.4 Operation manual.....	27
Annex A (normative) Tertiary treatment efficiency test procedure.....	29
A.1 Preliminary requirements	29
A.1.1 General	29
A.1.2 Installation and commissioning	29
A.1.3 Operation procedures during testing	29
A.1.4 Data to be monitored.....	29
A.2 Test procedure	30
A.2.1 Time for establishment	30
A.2.2 Influent characteristics	30
A.2.3 Daily flow pattern for testing	30
A.2.4 Test procedure	30
A.2.4.1 General	30
A.2.4.2 Overload.....	31
A.2.4.3 Power breakdown/Machine breakdown.....	31
A.2.4.4 Power consumption.....	31
A.2.5 Influent and effluent sampling.....	32
A.3 Sample analysis	32
A.4 Test report	32
Annex B (normative) Definition of processes.....	33
Annex C (informative) Analysis method.....	34
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation.....	35
ZA.1 Scope and relevant characteristics	35
ZA.2 Procedure of attestation of conformity of prefabricated tertiary treatment unit.....	36
ZA.2.1 System(s) of AVCP.....	36
ZA.2.2 Declaration of performance (DoP)	39
ZA.2.2.1 General	39
ZA.2.2.2 Content	40
ZA.2.2.3 Example of DoP	41
ZA.3 CE marking and labelling	43
Bibliography	46

European foreword

This document (EN 12566-7:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by May 2018.

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 12566-7:2013.

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.

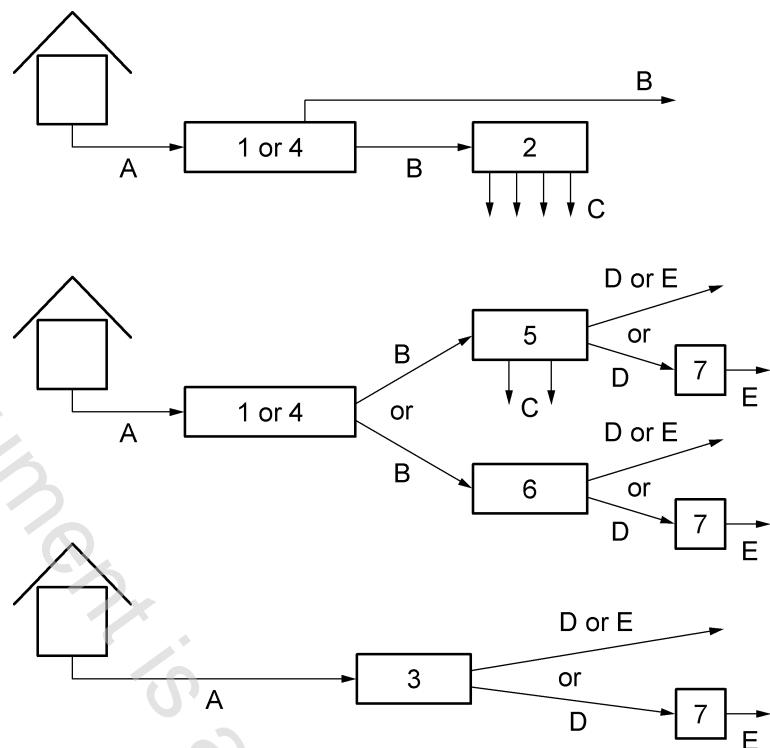
The differences between this version and EN 12566-7:2013 are mainly editorial changes according to the Construction Product Regulation (CPR) and declaration of power consumption and desludging during treatment efficiency test.

The standard series EN 12566 "Small wastewater treatment systems for up to 50 PT" contains the following parts (see Figure 1):

- *Part 1: Prefabricated septic tanks;*
- *Part 3: Packaged and/or site assembled domestic wastewater treatment plants;*
- *Part 4: Septic tanks assembled in situ from prefabricated kits;*
- *Part 6: Prefabricated treatment unit used for septic tank effluent;*
- *Part 7: Prefabricated tertiary treatment unit (this document).*

For filtration systems, CEN/TC 165 decided to publish the following CEN Technical reports, which are considered as Code of practices and do not specify treatment requirements:

- *Part 2: Soil infiltration systems;*
- *Part 5: Pre-treated Effluent Filtration systems.*

**Key**

A 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 <i>in situ</i> 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

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

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

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 specifies requirements, test methods, the marking and evaluation of conformity for a packaged and/or site assembled tertiary treatment unit (see Figure 1).

It applies for tertiary treatment units that are placed on the market as complete units used for the tertiary treatment of domestic wastewater by biological, physical, chemical, electrical processes and coming from:

- a) units in accordance with EN 12566-3 or EN 12566-6;
- b) installations designed and constructed in accordance with CEN/TR 12566-5.

Equivalent secondary treated effluent may come from existing systems.

Package and/or site assembled tertiary treatment units according to this standard consist of one or more watertight tanks without any direct infiltration into the ground, made of concrete, corrosion resistant or coated steel, un-plasticised poly-vinyl chloride (PVC-U), polyethylene (PE), glass reinforced thermosetting plastics (GRP) based on polyester resin (UP) (GRP-UP), polypropylene (PP), polydicyclopentadiene (PDPCPD) and flexible sheets (HDPE, PP, PVE and EPDM).

This standard applies to tertiary treatment units for use above ground (outside the building) or buried in the ground where no vehicle loads are applied to the unit.

This standard does not apply to tertiary treatment systems forming part of units covered by EN 12566-3 and EN 12566-6.

This standard does not cover the systems for microorganism reduction.

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 12566-3:2016, *Small wastewater treatment systems for up to 50 PT — Part 3: Packaged and/or site assembled domestic wastewater treatment plants*

CEN/TR 12566-5, *Small wastewater treatment systems up to 50 PT — Part 5: Pre-treated Effluent Filtration systems*

EN 12566-6:2016, *Small wastewater treatment systems for up to 50 PT — Part 6: Prefabricated treatment units for septic tank effluent*

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

EN 16323:2014, *Glossary of wastewater engineering terms*

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12566-3:2016, EN 12566-6:2016, EN 16323:2014 and the following apply.