

LOKAALSED TEHNILISE VEE SÜSTEEMID. OSA 1:
SADEMEVEE KASUTUSSÜSTEEMID

On-site non-potable water systems - Part 1: Systems for
the use of rainwater

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

On-site non-potable water systems - Part 1: Systems for the use of rainwater

Réseaux d'eau non potable sur site - Partie 1 : Systèmes pour l'utilisation de l'eau de pluie

Vor-Ort-Anlagen für Nicht-Trinkwasser - Teil 1: Anlagen für die Verwendung von Regenwasser

This European Standard was approved by CEN on 28 August 2017.

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European foreword

This document (EN 16941-1:2018) 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of an identical text or by endorsement, at the latest by July 2018 and conflicting national standards shall be withdrawn at the latest by July 2018.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.

EN 16941, *On-site non-potable water systems* consists of the following parts:

- *Part 1: Systems for the use of rainwater*
- *Part 2: Systems for the use of greywater* (in preparation)

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Ecological and sustainable water management is a goal of rainwater management. Herein rainwater harvesting and infiltration, as well as the decentralized detention of rainwater, are alternatives to the customary drainage of rainwater. Rainwater harvesting also reduces the potable water demand and the discharge of water.

In order to keep the natural cycle of water, excess water from the rainwater harvesting system can be infiltrated or otherwise evacuated in line with national or regional requirements.

On-site collection and use of rainwater covers a variety of applications like toilet flushing, laundry, irrigation, climate control of buildings, cleaning, etc. at private and rented properties, residential areas, community developments, industrial sites, hotels, streets, parks, golf courses, theme parks, car parks, stadia, etc.

A generic flow chart of rainwater use on-site is presented in Figure 1.

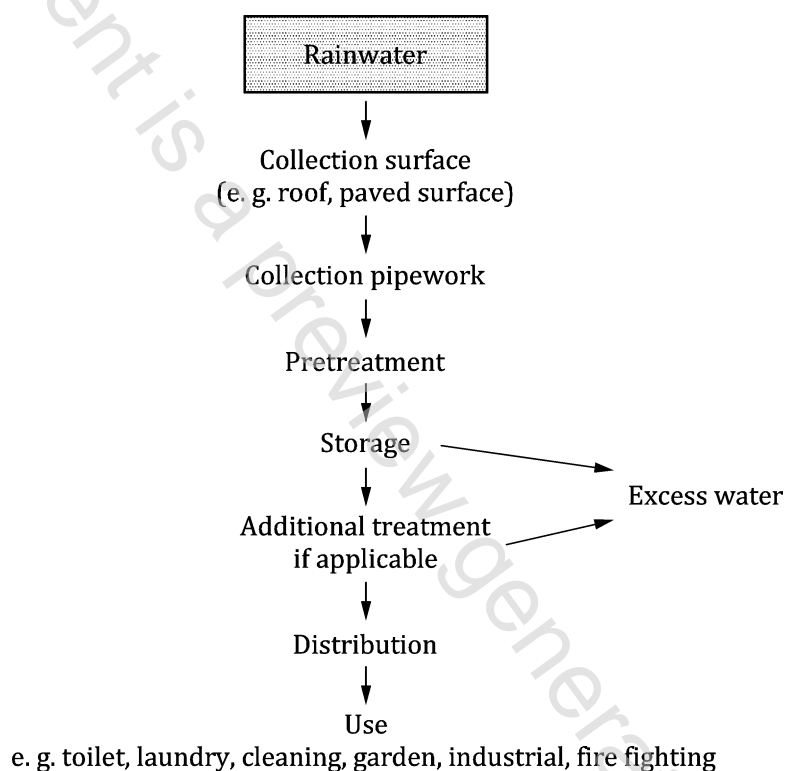


Figure 1 — Generic flow chart of rainwater use

1 Scope

This European Standard specifies the requirements and gives recommendations for the design, sizing, installation, identification, commissioning and maintenance of rainwater harvesting systems for the use of rainwater on-site as non-potable water. This European Standard also specifies the minimum requirements for these systems.

Excluded from the scope of this European Standard are:

- the use as drinking water and for food preparation;
- the use for personal hygiene purposes;
- decentralized attenuation;
- infiltration.

NOTE Conformity with the standard does not exempt from compliance with the obligations arising from local or national regulations.

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 476, *General requirements for components used in drains and sewers*

EN 805, *Water supply - Requirements for systems and components outside buildings*

EN 806-2, *Specification for installations inside buildings conveying water for human consumption - Part 2: Design*

EN 806-3, *Specifications for installations inside buildings conveying water for human consumption - Part 3: Pipe sizing - Simplified method*

EN 809, *Pumps and pump units for liquids - Common safety requirements*

EN 1295-1, *Structural design of buried pipelines under various conditions of loading - Part 1: General requirements*

EN 1610, *Construction and testing of drains and sewers*

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 12050 (all parts), *Wastewater lifting plants for buildings and sites*

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

EN 12056-3, *Gravity drainage systems inside buildings - Part 3: Roof drainage, layout and calculation*

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

EN 12056-5, *Gravity drainage systems inside buildings - Part 5: Installation and testing, instructions for operation, maintenance and use*

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

EN 13076, *Devices to prevent pollution by backflow of potable water - Unrestricted air gap-Family A - Type A*

EN 13077, *Devices to prevent pollution by backflow of potable water - Air gap with non-circular overflow (unrestricted) - Family A - Type B*

EN 13564 (all parts), *Anti-flooding devices for buildings*

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

EN 60335-2-41, *Household and similar electrical appliances - Safety - Part 2-41: Particular requirements for pumps (IEC 60335-2-41)*

EN ISO 4064 (all parts), *Water meters for cold potable water and hot water (ISO 4064)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16323:2014 and the following apply.

3.1

rainwater

water arising from atmospheric precipitation

[SOURCE: EN 16323:2014, 2.1.1.1, modified]

3.2

rainwater harvesting

collecting rainwater from surfaces in order to be used

3.3

rainwater harvesting system

system for collecting rainwater from surfaces in order to be used, which consists of collection, treatment, storage and distribution elements

3.4

storage device

unit for the storage of harvested rainwater

3.5

cistern

fixed container for holding water at atmospheric pressure for use as part of the plumbing system

3.6

non-potable water

water which has been made available for use, except for drinking, food preparation and personal hygiene