

Water supply - Requirements for systems and components outside buildings

Water supply - Requirements for systems and components outside buildings

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 805:2000 sisaldab Euroopa standardi EN 805:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.07.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 805:2000 consists of the English text of the European standard EN 805:2000.</p> <p>This document is endorsed on 17.07.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Käsitlusala:</p> <p>This standard specifies: - general requirements for water supply systems outside buildings (see figure 1) including potable water mains and service pipes, service reservoirs, other facilities and raw water mains but excluding treatment works and water resources development; - general requirements for components; - general requirements for inclusion in product standards which may include specifications which are more stringent; - requirements for installation, site testing and commissioning.</p>	<p>Scope:</p> <p>This standard specifies: - general requirements for water supply systems outside buildings (see figure 1) including potable water mains and service pipes, service reservoirs, other facilities and raw water mains but excluding treatment works and water resources development; - general requirements for components; - general requirements for inclusion in product standards which may include specifications which are more stringent; - requirements for installation, site testing and commissioning.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ICS 13.060.01, 23.040.01

Võtmesõnad: buildings, definitions, design, dimensions, exterior, mechanical strength, potable water, quality, specifications, tests, water distribution, water pipelines, water supply, water-tightness

ICS 13.060.01; 23.040.01

English version

Water supply

Requirements for systems and components outside buildings

Alimentation en eau – Exigences pour
les réseaux extérieurs aux bâtiments
et leurs composants

Wasserversorgung – Anforderungen
an Wasserversorgungssysteme und
deren Bauteile außerhalb von
Gebäuden

This European Standard was approved by CEN on 1999-06-07.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Contents

Foreword.....	3
Introduction	3
1 Scope	4
2 Normative references	5
3 Definitions	5
3.1 Pressures.....	5
3.2 System	7
3.3 Components	10
3.4 Diameters.....	11
3.5 Installation	11
3.6 Hydraulic design	13
3.7 Structural design	13
4 Application of standards and regulations.....	14
5 Requirements for water supply systems.....	14
5.1 Water quality.....	14
5.2 Design life	15
5.3 Demand for water.....	15
5.4 System security.....	15
6 Service objectives.....	15
7 Rehabilitation	15
8 Design	16
8.1 Design objectives	16
8.2 Peak flow factors	16
8.3 Hydraulic design	16
8.4 Structural design	18
8.5 System layout.....	20
8.6 Protection against aggressive environment.....	22
8.7 Reservoirs.....	22
8.8 Pumping stations.....	22
8.9 Documentation.....	22
9 General requirements for product standards	22
9.1 General.....	22
9.2 Materials.....	23
9.3 Dimensions.....	23
9.4 Structural design	24
9.5 Mechanical requirements.....	24
9.6 Water tightness	25
9.7 Joints.....	25
9.8 Protective measures	27
9.9 Durability.....	27
9.10 Test methods.....	27
9.11 Interconnection of products	29
9.12 Quality control.....	29
9.13 Marking	29
10 Installation	30
10.1 General requirements.....	30
10.2 Pipe trenches.....	31
10.3 Installation of pipeline components.....	31
10.4 Pipe joints.....	32
10.5 Protection against corrosion and contamination.....	33
10.6 Embedment and main backfill	33

10.7	Records of tests during installation	35
11	Testing of pipelines	35
11.1	General requirements.....	35
11.2	Safety	35
11.3	Pressure test	36
12	Disinfection	39
12.1	General.....	39
12.2	Preparation for disinfection.....	39
12.3	Selection of disinfectant	40
12.4	Disinfection procedures.....	40
12.5	Microbiological clearance and reporting.....	41
13	Additional requirements	41
14	Operation	41
14.1	Inspection and monitoring.....	41
14.2	Maintenance	42
15	Updating of documentation	42
Annex A (informative)	Guidance to EN 805	43
Annex B (informative)	A-deviations.....	60
Annex C (informative)	Bibliography	61

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

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 2000, and conflicting national standards shall be withdrawn at the latest by July 2000.

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.

Introduction

In specifying the requirements of this standard due regard has been taken of the importance of a reliable and safe supply of water for human consumption as well as for the purpose of trade, industry, agriculture and fire fighting.

The widely varying water supply legislative requirements, populations, social and climatic conditions across Europe have also been taken into account.

This standard does not make any implication with regard to ownership of or responsibility for pipes or other apparatus in the supply system.

1 Scope

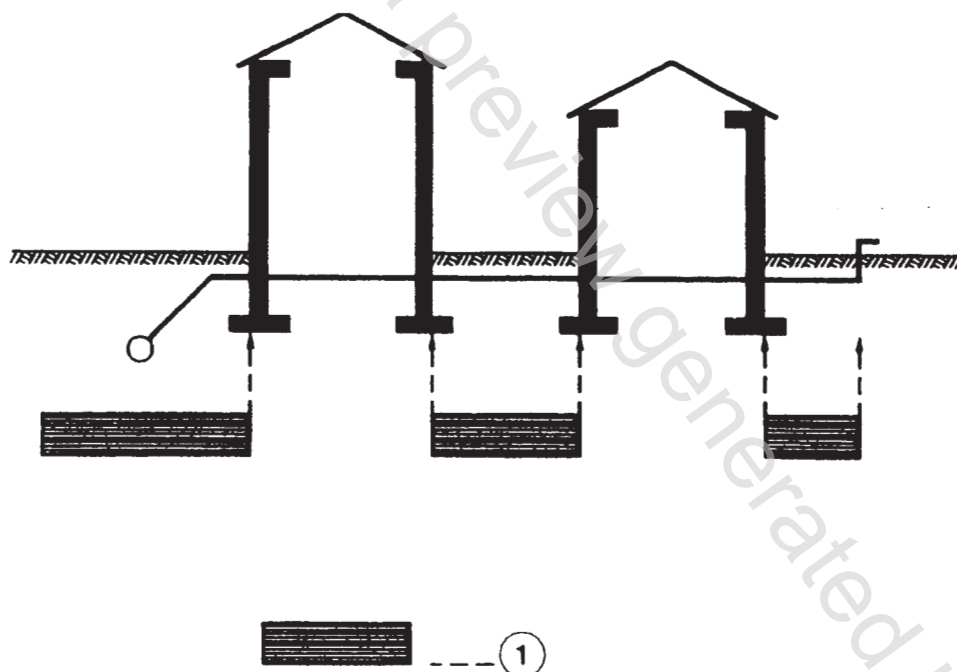
This standard specifies :

- general requirements for water supply systems outside buildings (see Figure 1) including potable water mains and service pipes, service reservoirs, other facilities and raw water mains but excluding treatment works and water resources development ;
- general requirements for components ;
- general requirements for inclusion in product standards which may include specifications which are more stringent ;
- requirements for installation, site testing and commissioning.

The requirements of this standard apply to :

- the design and construction of new water supply systems ;
- the extension of significant areas forming a coherent part of an existing water supply system ;
- significant modification and/or rehabilitation of existing water supply systems.

NOTE It is not intended that existing water supply systems are to be altered to comply with this standard, provided that there are no significant detrimental effects on water quantity, security, reliability and adequacy of the supply.



Key

- 1 Field of application of this standard

Figure 1 - Field of application of this standard

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 the European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

EN 1508, *Water supply - Requirements for systems and components for the storage of water.*

EN 45011, *General criteria for certification bodies operating product certification.*

EN 45012, *General criteria for certification bodies operating quality system certification.*

ISO 48, *Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 IRHD and 100 IRHD).*

EN ISO 9001, *Quality systems - Model for quality assurance in design/development, production, installation and servicing.*

EN ISO 9002, *Quality systems - Model for quality assurance in production, installation and servicing.*

3 Definitions

For the purposes of this standard, the following definitions apply.

3.1 Pressures

For the designation of pressures in English, French and German see table 1 and annex A.2.