

Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics inspection chamber and manhole bases - Test methods for buckling resistance (ISO 13267:2022)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 13267:2023 sisaldab Euroopa standardi EN ISO 13267:2023 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13267:2023 consists of the English text of the European standard EN ISO 13267:2023.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.01.2023.	Date of Availability of the European standard is 11.01.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 23.040.20, 23.040.45, 91.140.80, 93.030

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: 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 and Accreditation

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 and Accreditation.

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

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

EUROPEAN STANDARD

EN ISO 13267

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2023

ICS 23.040.20; 23.040.45; 91.140.80; 93.030

Supersedes EN 14830:2006

English Version

Thermoplastics piping systems for non-pressure
underground drainage and sewerage - Thermoplastics
inspection chamber and manhole bases - Test methods for
buckling resistance (ISO 13267:2022)

Systèmes de canalisations thermoplastiques pour
branchements et collecteurs d'assainissement enterrés
sans pression - Éléments de fond de boîtes d'inspection
et de branchement et de regards thermoplastiques -
Méthode d'essai de résistance au flambage (ISO
13267:2022)

Kunststoff-Rohrleitungssysteme aus Thermoplasten
für erdverlegte drucklose Abwasserkanäle und -
leitungen - Böden von Kontroll- und Einsteigschächten
aus Thermoplasten - Prüfverfahren für die
Widerstandsfähigkeit gegen Einbeulen (ISO
13267:2022)

This European Standard was approved by CEN on 2 January 2023.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 13267:2022 has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13267:2023 by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems" the secretariat of which is held by NEN.

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 2023, and conflicting national standards shall be withdrawn at the latest by July 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14830:2006.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 13267:2022 has been approved by CEN as EN ISO 13267:2023 without any modification.

Contents

	Page
Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	1
5 Apparatus.....	2
6 Conditioning.....	2
7 Test environment.....	3
8 Procedure.....	3
8.1 Internal negative pressure testing using a free-standing test assembly.....	3
8.2 Internal negative pressure testing using a test box.....	7
8.3 External pressure testing with the assembly submerged in a water tank.....	8
8.4 Evaluation.....	9
9 Test report.....	9
Annex A (informative) Evaluation example.....	11

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 1, *Plastics pipes and fittings for soil, waste and drainage (including land drainage)*.

This second edition cancels and replaces the first edition (ISO 13267:2010), which has been technically revised.

The main changes are as follows:

- normative references have been updated;
- definitions have been removed;
- technical changes have been made in [8.1](#), including new figures;
- minor editorial changes have been made.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics inspection chamber and manhole bases — Test methods for buckling resistance

1 Scope

This document specifies methods of test for the resistance of the base of thermoplastics inspection chambers and manholes to external soil and ground-water pressure after installation.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 9967:2016, *Thermoplastics pipes — Determination of creep ratio*

CEN/TS 1046:2021, *Thermoplastics piping and ducting systems — Outside the building structures for gravity and pressurised systems — Trench installation*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Principle

A sealed test assembly, comprising an inspection chamber or manhole base with a minimum height of 300 mm above the top of the main channel, is placed free standing, or buried in a test box on a 100 mm sand or granular bed and covered with granular backfill to a level of minimum 300 mm above the top of the outlets and inlets of the main channel(s). In some cases, the first section of the riser may be required in order to achieve the minimum height of 300 mm.

The assembly is then subjected to a constant internal negative pressure, specified by the product or system standard, for a specified time at a temperature of between 15 °C and 25 °C or as otherwise specified in the product standard.

Alternatively, the pressure difference can be achieved by exposing the test assembly to a constant positive external hydrostatic pressure of the same numeric value as that specified by the product or system standard. The assembly is submerged under water in a closed tank for a specified time at a temperature of between 15 °C and 25 °C or as otherwise specified in the product standard.

During the test, the assembly may be monitored by measuring increasing deflections with time as defined in the product standard.

At the end of the test, the chamber base/manhole is visually checked for cracking or other defects likely to impair the performance of the inspection chamber or manhole.