

Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for leaktightness under internal pressure of assemblies subjected to bending (ISO 3503:2015)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 3503:2015 sisaldab Euroopa standardi EN ISO 3503:2015 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3503:2015 consists of the English text of the European standard EN ISO 3503:2015.
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 04.03.2015.	Date of Availability of the European standard is 04.03.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for leaktightness under internal pressure of assemblies subjected to bending (ISO 3503:2015)

Systèmes de canalisations en plastique - Assemblages mécaniques entre raccords et tubes sous pression - Méthode d'essai pour l'étanchéité sous pression interne de montages soumis à une courbure (ISO 3503:2015)

Kunststoff-Rohrleitungssysteme - Mechanische Verbindungen zwischen Fittings und Druckrohren - Prüfverfahren für die Dichtheit von Verbindungen bei Innendruck und gleichzeitiger Biegebeanspruchung (ISO 3503:2015)

This European Standard was approved by CEN on 8 November 2014.

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

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

Foreword

This document (EN ISO 3503:2015) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with 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of an identical text or by endorsement, at the latest by September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

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 713:1993.

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.

Endorsement notice

The text of ISO 3503:2015 has been approved by CEN as EN ISO 3503:2015 without any modification.

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

This second edition cancels and replaces the first edition (ISO 3503:1976) which has been technically revised. The reason for modification is for applicability to other plastics materials, other sizes, and/or other test conditions and alignment with texts of other International Standards on test methods.

The modifications are the following:

- no material is mentioned;
- test parameters are omitted, although the original test parameters can be found in [Annex A](#);
- the diameter limit is removed;
- no requirements are given;
- editorial changes have been introduced.

Plastics piping systems — Mechanical joints between fittings and pressure pipes — Test method for leaktightness under internal pressure of assemblies subjected to bending

WARNING — Persons using this document should be familiar with normal laboratory practice, if applicable. The use of this International Standard may involve hazardous materials, operations, and equipment. This International Standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for checking the leaktightness under internal pressure of assembled joints between mechanical fittings and plastic pressure pipes when subjected to bending. It defines the calculation method for the average bending radius and how to perform this bending.

Checking of the leaktightness under internal pressure is carried out in accordance with the method given in ISO 3458.

This test method is not applicable to fusion-welded joints.

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.

ISO 3458, *Plastics piping systems — Mechanical joints between fittings and pressure pipes — Test method for leaktightness under internal pressure*

3 Principle

Checking of the leaktightness of joints of an assembly, containing one test fitting, to which a bending force is applied throughout its free length (L) under internal pressure.

This bending has an average radius calculated from the pipe nominal diameter and pressure.

4 Test parameters and requirements

The test parameters of the standard which refers to this test standard shall be used and the requirements shall be fulfilled. If one or more parameters are not given in the referring International Standard, the ones given in [Annex A](#) shall apply.

The following test parameters should be given by the standard which refers to this test standard:

- a) test medium;
- b) test pressure (bar or MPa);
- c) test duration (h);