

Plastics piping systems - Polyethylene (PE) valves -
Test method for resistance to bending between
supports

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 12100:2025 sisaldab Euroopa standardi EN 12100:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.03.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 12100:2025 consists of the English text of the European standard EN 12100:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 19.03.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN 12100

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 12100:1997

English Version

Plastics piping systems - Polyethylene (PE) valves - Test method for resistance to bending between supports

Systèmes de canalisations en plastiques - Robinets en polyéthylène (PE) - Méthode d'essai de résistance à la flexion entre supports

Kunststoff-Rohrleitungssysteme - Armaturen aus Polyethylen (PE) - Prüfverfahren für die Biegefestigkeit zwischen Auflagern

This European Standard was approved by CEN on 27 January 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 12100:2025) has been prepared 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of an identical text or by endorsement, at the latest by September 2025, and conflicting national standards shall be withdrawn at the latest by September 2025.

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 12100:1997.

EN 12100:2025 includes the following significant technical changes with respect to EN 12100:1997:

- the possibility to apply this test method to materials other than PE has been included in the Scope;
- in Clause 8, the test procedure has been revised.

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 organisations 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.

Introduction

This document specifies the requirements for the test method for resistance to bending between supports of a valve made from polyethylene (PE) and which is intended to be used in pipelines for the transport of fluids.

This document is a preview generated by EVS

1 Scope

This document specifies a test method for the resistance to bending of a test piece, made of a valve assembled together with two pipes and placed between supports, when subjected to internal pressure.

This document is applicable to valves with a polyethylene (PE) body for use with pipes having a nominal outside diameter from greater than 63 mm up to and including 400 mm and intended for the transport of fluids.

When specified in the product standard, this document can be applied to valves of material different than PE.

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.

EN 837-1, *Pressure gauges — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and testing*

EN ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1)*

EN ISO 8233, *Thermoplastic valves — Torque — Test method (ISO 8233)*

ISO 9393-1, *Thermoplastics valves for industrial applications — Pressure test methods and requirements — Part 1: General*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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/>

3.1

operating device

part of a valve for connection with the operating key which allows the opening and closing of the valve

[SOURCE: EN 1555-4:2021, 3.1.5]

4 Principle

A valve body is subjected to a bending load, by applying a given constant force to the body connected to two pipe sections resting on two supports. The valve is pressurized with air. Leaktightness and actuation torque are respectively checked and measured before, during and after loading.

The test pieces shall be conditioned at (23 ± 2) °C before testing at least for 24 h.

The test is carried out at an ambient temperature of (23 ± 2) °C.

It is assumed that the following test parameters are specified in the standard making reference to this document: