
Cevni sistemi iz polimernih materialov za oskrbo s plinastimi gorivi - Cevni sistemi iz nemehčanega poliamida (PA-U) z zvari in mehanskimi spoji - 4. del: Ventili (ISO 16486-4:2022)

Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 4: Valves (ISO 16486-4:2022)

Kunststoff-Rohrleitungssysteme für die Gasversorgung - Rohrleitungssysteme aus weichmacherfreiem Polyamid (PA-U) mit Schweißverbindungen und mechanischen Verbindungen - Teil 4: Armaturen (ISO 16486-4:2022)

Systèmes de canalisations en matières plastiques pour la distribution de combustibles gazeux - Systèmes de canalisations en polyamide non plastifié (PA-U) avec assemblages par soudage et assemblages mécaniques - Partie 4: Robinets (ISO 16486-4:2022)

Ta slovenski standard je istoveten z: EN ISO 16486-4:2022

ICS:

75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment
83.140.30	Polimerne cevi in fittingi za snovi, ki niso tekočine	Plastics pipes and fittings for non fluid use

SIST EN ISO 16486-4:2022**en,fr,de**

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EUROPEAN STANDARD

EN ISO 16486-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2022

ICS 75.200; 83.140.30

English Version

Plastics piping systems for the supply of gaseous fuels -
Unplasticized polyamide (PA-U) piping systems with
fusion jointing and mechanical jointing - Part 4: Valves
(ISO 16486-4:2022)

Systèmes de canalisations en matières plastiques pour
la distribution de combustibles gazeux - Systèmes de
canalisations en polyamide non plastifié (PA-U) avec
assemblages par soudage et assemblages mécaniques -
Partie 4: Robinets (ISO 16486-4:2022)

Kunststoff-Rohrleitungssysteme für die Gasversorgung
- Rohrleitungssysteme aus weichmacherfreiem
Polyamid (PA-U) mit Schweißverbindungen und
mechanischen Verbindungen - Teil 4: Armaturen (ISO
16486-4:2022)

This European Standard was approved by CEN on 15 January 2022.

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European foreword

This document (EN ISO 16486-4:2022) 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 July 2022, and conflicting national standards shall be withdrawn at the latest by July 2022.

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Annex (informative)

A-deviation

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC national member.

This European Standard does not fall under any Directive of the EU.

In the relevant CEN-CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

Country	Clause	Deviation
ITALY	§1 Scope	<p>According to Italian legislation concerning the safety of gas installation</p> <p>- DM 16 April 2008 (DSO) prescribes that piping and components used in distribution system shall be in accordance with national standard UNI 9034 (pipes with MOP below 5 bar). In case of MOP greater than 5 bar DM 17 April 2008 shall be followed.</p> <p>(Official Journal Italian Republic GU n. 107 of 8th May 2008 https://www.gazzettaufficiale.it/eli/id/2008/05/08/08A02871/sg)</p> <p>- DM 17 April 2008 (TSO) prescribes that piping and components used in transmission system shall be made of steel (art. 3.1 of Technical Annex A to Decree).</p> <p>(Official Journal Italian Republic GU n. 107 of 8th May 2008 https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2008-05-08&atto.codiceRedazionale=08A02872&elenco30giorni=false)</p>

INTERNATIONAL
STANDARD

ISO
16486-4

Second edition
2022-01

**Plastics piping systems for the supply
of gaseous fuels — Unplasticized
polyamide (PA-U) piping systems
with fusion jointing and mechanical
jointing —**

iTeh STANDARD

Part 4:

Valves

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*Systèmes de canalisations en matières plastiques pour la distribution
de combustibles gazeux — Systèmes de canalisations en polyamide
non plastifié (PA-U) avec assemblages par soudage et assemblages
mécaniques*

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Partie 4: Robinets

2022



Reference number
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Published in Switzerland

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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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This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 7, *Valves and auxiliary equipment of plastics materials*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 16486-4:2016), which has been technically revised.

The main changes are as follows:

- the Scope highlights that this document is valid for On/Off valves;
- the Scope shows 16 bar¹⁾ as the regional CEN requirement for the limitation of the maximum operating pressure (MOP);
- in [7.3](#) and [7.4](#) the nominal diameter of spigot ends or electrofusion sockets has been expanded to d_n 400 mm;
- a new subclause, [5.2.4](#) Greases and lubricants, has been added;
- [subclause 5.2](#) for non-unplasticized polyamide parts has been redrafted to bring it in line with EN 1555-4. A NOTE for regional requirements has been introduced;
- [subclauses 6.3.1](#) General, [6.3.2](#) Valve body, [7.5](#) Dimensions of the operating device and [8.1](#) General have been redrafted;
- a new subclause, [6.3.3](#) Valve terminal ends, has been introduced for valve terminal ends;
- [subclauses 6.3.4](#) Operating device and [6.3.5](#) Seals have been modified to bring them in line with EN 1555-4;

1) 1 bar = 0,1 MPa = 10⁵ Pa; 1 MPa = 1 N/mm².

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- [subclause 7.2](#) Measurement of dimensions has been modified to bring it in line with EN 1555-4 with the exception that PA-U conditioning does not allow the use of test pieces earlier than 48 h after their manufacture;
- [subclause 8.4](#) Regional requirements has been added with reference to an extension of [subclause B.1.1](#) for CEN;
- in [Table 1](#), the number of test pieces has been added and new footnote ^b has been inserted relating to this addition;
- in [Table 1](#), the condition period has been changed to 16 h;
- in [Table 1](#), the test period has been changed to 1 000 h for hydrostatic strength (20 °C, 1 000 h);
- in [Table 1](#), the pressure drop test been deleted, as this is covered in the new [subclause 8.3.2](#);
- in [Table 1](#), the operating torque for $125 \text{ mm} < d_n \leq 400 \text{ mm}$ has been changed to $10 \text{ Nm} < M \leq 150$;
- in [Table 1](#), leaktightness after tensile load is added, including footnote ^j for limiting the diameter;
- a new subclause, [5.1.2](#) Fusion compatibility, substitutes the former subclause 6.4;
- a new [Clause 11](#) Technical File has become an individual paragraph in line with EN 1555-4;
- [subclause 12.1](#) General includes a NOTE for regional marking requirements on packaging, with reference to CEN/TS 12007-6, for CEN member countries, for example;
- [Table 3](#) for minimum required marking of valves has been modified in line with EN 1555-4;
- former subclause 12.5 Packaging has become [Clause 13](#) Delivery conditions, and has been modified and extended;
- [Annex A](#) has been updated in line with EN 1555-4;
- [Annex B](#) has been modified according longitudinal stress parameters in line with ISO 17885:2021, Table F.1;
- in [Clause B.2](#) Test piece, the definition for the length of test piece has been redrafted;
- in [Annex B](#), [subclause B.4.4](#) has been added including a regional requirement.

A list of all parts in the ISO 16486 series can be found on the ISO website.

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