

STN	Guľové ventily pre potrubné systémy z termoplastov pre tlakové inštalácie teplej a studenej vody Typy, rozmery a požiadavky (ISO 18984: 2025)	STN EN ISO 18984
		13 8830

Ball valves for thermoplastics piping systems for hot and cold water installations under pressure - Types, dimensions and requirements (ISO 18984:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/25

Obsahuje: EN ISO 18984:2025, ISO 18984:2025

141278

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 18984

August 2025

ICS 23.060.20

English Version

Ball valves for thermoplastics piping systems for hot and
cold water installations under pressure - Types,
dimensions and requirements (ISO 18984:2025)

Robinets à tournant sphérique pour systèmes de
canalisations en matières thermoplastiques pour
installations d'eau chaude et froide sous pression -
Types, dimensions et exigences (ISO 18984:2025)

Kugelventile für thermoplastische Heiß- und
Kaltwasserdruckrohrleitungen - Arten, Abmessungen
und Anforderungen (ISO 18984:2025)

This European Standard was approved by CEN on 3 August 2025.

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

Contents

Page

European foreword.....	3
-------------------------------	----------

European foreword

This document (EN ISO 18984:2025) 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 February 2026, and conflicting national standards shall be withdrawn at the latest by February 2026.

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.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. 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 18984:2025 has been approved by CEN as EN ISO 18984:2025 without any modification.



International Standard

ISO 18984

Ball valves for thermoplastics piping systems for hot and cold water installations under pressure — Types, dimensions and requirements

Robinets à tourant sphérique pour systèmes de canalisations en matières thermoplastiques pour installations d'eau chaude et froide sous pression — Types, dimensions et exigences

**First edition
2025-07**

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Requirements	5
4.1 Design	5
4.1.1 Design operating conditions	5
4.1.2 Function	5
4.1.3 Design characteristics	5
4.1.4 Types of valve ends	5
4.2 Materials	6
4.2.1 General	6
4.2.2 Body and shell material	6
4.2.3 Valve end materials	6
4.2.4 Materials for internal components and functional components of the valve	6
4.2.5 Metal parts	7
4.2.6 Sealing materials	7
4.2.7 Greases and lubricants	7
4.2.8 Adhesives	7
4.2.9 Assembly	7
5 Application classes for hot water	7
5.1 General	7
5.2 Design pressure for the application class	7
6 Dimensions	8
6.1 Face-to-face dimensions	8
6.2 Joint dimensions of the valve end connection (DN)	8
7 Operation	8
8 Functional characteristics and requirements	8
8.1 General	8
8.2 Flow characteristics	8
8.3 Endurance test	8
8.3.1 Principle	8
8.3.2 Test installation	9
8.3.3 Test	9
8.3.4 Acceptance criteria	9
8.4 Operating torque test	10
9 Other requirements	10
9.1 Control and traceability of the body and bonnet/cover	10
9.2 Permanent jointing	10
9.3 Wear	10
9.4 Operating instructions	10
10 Marking, documentation, storage and transportation	11
10.1 Marking and technical information	11
10.2 Preparation for storage and transportation	11
Annex A (normative) PP ball valve	13
Annex B (normative) PVC-C ball valve	16
Annex C (informative) Determination of nominal flow coefficient, K_v	18
Bibliography	19

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 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).

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.

Introduction

Ball valves made by thermoplastic materials such as mineral-filled thermoplastic polymer, fibre-reinforced thermoplastics, plasticized thermoplastics, blends and alloys can have specific considerations with regards to prediction of long term strength. These considerations have to be taken into account in the corresponding product standards.

Ball valves for thermoplastics piping systems for hot and cold water installations under pressure — Types, dimensions and requirements

1 Scope

This document is applicable to two-way or multi-way ball valves manufactured with all types of polypropylene (PP) and chlorinated polyvinylchloride (PVC-C) thermoplastic materials to be used for the transport of pressurized water whether or not intended for human consumption (domestic systems) for applications in buildings and utility branches.

NOTE 1 The two-way valve is generally used for sectioning and control of flows, and the multi-way valve is used to divert or mix the flows. For information on their functionality, see ISO 16135:2006, Annex B.

NOTE 2 The reader of this document is informed that the water intended for human consumption is subjected to national, regional or local regulatory provisions as applicable.

The application classes are indicated in ISO 15874 and ISO 15877 series.

This document specifies valve characteristics as follows:

- dimensions for assembly in the relevant pipelines,
- physical and mechanical requirements.

Other materials can fit the scope of this document if the application classes are specified in a material related specific standard.

Ball valves specified in this document are not intended to be used in conjunction with pipes made by metallic material and copper alloys.

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 5211, *Industrial valves — Part-turn actuator attachments*

ISO 8233, *Thermoplastics valves — Torque — Test method*

ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation*

ISO 9393-2:2005, *Thermoplastics valves for industrial applications — Pressure test methods and requirements — Part 2: Test conditions and basic requirements*

ISO 9624, *Thermoplastics piping systems for fluids under pressure — Flange adapters and loose backing flanges — Mating dimensions*

ISO 15874-1, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 1: General*

ISO 15874-2, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 2: Pipes*

ISO 15874-3, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 3: Fittings*

ISO 18984:2025(en)

ISO 15874-5, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 5: Fitness for purpose of the system*

ISO 15874-5:2013/Amd 1:2018, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 5: Fitness for purpose of the system*

ISO 15877-2, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 2: Pipes*

ISO 15877-3, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 3: Fittings*

ISO 15877-3/Amd 1:2010, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 3: Fittings*

ISO 15877-3/Amd 2:2021, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 3: Fittings*

ISO 15877-5, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 5: Fitness for purpose of the system*

ISO 15877-5/Amd 1:2010, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 5: Fitness for purpose of the system*

ISO 15877-5/Amd 2:2020, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C) — Part 5: Fitness for purpose of the system*

ISO 16135:2006, *Industrial valves — Ball valves of thermoplastics materials*

EN 558, *Industrial valves — Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems — PN and Class designated valves*

EN 681-1, *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications - Part 1: Vulcanized rubber*

EN 681-2, *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications - Part 2: Thermoplastic elastomers*

EN 736-1, *Valves — Terminology — Part 1: Definition of types of valves*

EN 736-2, *Valves — Terminology — Part 2: Definition of components of valves*

EN 736-3, *Valves — Terminology — Part 3: Definition of terms*

EN 1092-1, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1267, *Industrial valves — Test of flow resistance using water as test fluid*

EN 12570:2000, *Industrial valves — Method for sizing the operating element*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN