

SLOVENSKI STANDARD

SIST EN ISO 8655-1:2022

01-julij-2022

Nadomešča:

SIST EN ISO 8655-1:2002

SIST EN ISO 8655-1:2002/AC:2009

Volumetrične naprave, delujoče na bat - 1. del: Terminologija, splošne zahteve in priporočila za uporabnike (ISO 8655-1:2022)

Piston-operated volumetric apparatus - Part 1: Terminology, general requirements and user recommendations (ISO 8655-1:2022)

Volumenmessgeräte mit Hubkolben - Teil 1: Begriffe, allgemeine Anforderungen und Gebrauchsempfehlungen (ISO 8655-1:2022)

Appareils volumétriques à piston - Partie 1: Définitions, exigences générales et recommandations pour l'utilisateur (ISO 8655-1:2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>

Ta slovenski standard je istoveten z: EN ISO 8655-1:2022

ICS:

01.040.17	Meroslovje in merjenje. Fizikalni pojavi (Slovarji)	Metrology and measurement. Physical phenomena (Vocabularies)
17.060	Merjenje prostornine, mase, gostote, viskoznosti	Measurement of volume, mass, density, viscosity
71.040.20	Laboratorijska posoda in aparati	Laboratory ware and related apparatus

SIST EN ISO 8655-1:2022

en,fr,de

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 8655-1

May 2022

ICS 01.040.17; 17.060

Supersedes EN ISO 8655-1:2002, EN ISO 8655-1:2002/AC:2009

English Version

**Piston-operated volumetric apparatus - Part 1:
Terminology, general requirements and user
recommendations (ISO 8655-1:2022)**

Appareils volumétriques à piston - Partie 1:
Définitions, exigences générales et recommandations
pour l'utilisateur (ISO 8655-1:2022)

Volumenmessgeräte mit Hubkolben - Teil 1: Begriffe,
allgemeine Anforderungen und
Gebrauchsempfehlungen (ISO 8655-1:2022)

This European Standard was approved by CEN on 13 February 2022.

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, Turkey 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

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>

European foreword

This document (EN ISO 8655-1:2022) has been prepared by Technical Committee ISO/TC 48 "Laboratory equipment" in collaboration with Technical Committee CEN/TC 332 "Laboratory equipment" the secretariat of which is held by DIN.

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 November 2022, and conflicting national standards shall be withdrawn at the latest by November 2022.

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 ISO 8655-1:2002.

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, Turkey and the United Kingdom.

(standards.iteh.ai)
Endorsement notice

The text of ISO 8655-1:2022 has been approved by CEN as EN ISO 8655-1:2022 without any modification.

SIST EN ISO 8655-1:2022
<https://standards.iteh.ai/catalog/standards/sist/9920318d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>

INTERNATIONAL
STANDARD

ISO
8655-1

Second edition
2022-04

**Piston-operated volumetric
apparatus —**

**Part 1:
Terminology, general requirements
and user recommendations**

Appareils volumétriques à piston —

*Partie 1: Définitions, exigences générales et recommandations pour
l'utilisateur*

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>



Reference number
ISO 8655-1:2022(E)

© ISO 2022

**iTeh STANDARD
PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

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.....	1
4 Abbreviated terms.....	6
5 Types of piston-operated volumetric apparatus.....	6
5.1 General.....	6
5.2 Pipettes.....	6
5.3 Burettes.....	7
5.4 Dilutors.....	7
5.5 Dispensers.....	7
5.6 Syringes.....	7
6 General requirements.....	7
6.1 Frequency of calibrations and tests.....	7
6.2 Reporting measurement errors.....	7
6.3 Exchangeable Parts.....	7
6.4 Metrological confirmation.....	8
6.5 Routine testing.....	8
6.6 Maintenance and repair.....	8
6.7 Suitability to give statements on performance.....	8
6.8 Determination of pass/fail status.....	9
7 Product information.....	9
7.1 User information.....	9
7.2 Decontamination and sterilisation.....	9
7.3 Chemical resistance.....	9
8 Factors affecting choice of piston-operated volumetric apparatus.....	9
8.1 Interaction with liquids.....	9
8.2 Use of air displacement pipettes.....	10
9 Marking.....	10
Bibliography.....	11

ISO 8655-1:2022(E)

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 48, *Laboratory equipment*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 332, *Laboratory equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 8655-1:2002), which has been technically revised. It also incorporates the Technical Corrigendum ISO 8655-1:2002/Cor.1:2008.

The main changes are as follows:

- ISO 8655-7, ISO 8655-8, and ISO 8655-9 have been added as normative references;
- abbreviated terms have been introduced as [Clause 4](#);
- terms and definitions have been revised and some new ones included;
- general requirements for frequency of calibration, reporting measurement errors, exchangeable parts, metrological confirmation, routine testing, and maintenance and repair, suitability of statements on performance and determination of pass/fail status have been added in [Clause 6](#).

A list of all parts in the ISO 8655 series can be found on the ISO website.

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

The ISO 8655 series addresses the needs of:

- manufacturers, as a basis for quality control including, where appropriate, the issuance of manufacturer's declarations;
- calibration laboratories, test houses, users of the equipment and other bodies as a basis for independent calibration, testing, verification and routine tests.

The tests specified in the ISO 8655 series are intended to be carried out by trained personnel.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 8655-1:2022](https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022)

<https://standards.iteh.ai/catalog/standards/sist/99203f8d-8138-48b5-85f6-4ce13a32925d/sist-en-iso-8655-1-2022>