BS EN ISO 16139:2006+A1:2019

BSI Standards Publication

Industrial valves — Gate valves of thermoplastics materials

bsi.

Documents
Document Sharing Hub

Full document details: BS EN ISO 16139:2006+A1:2019

National foreword

This British Standard is the UK implementation of EN ISO 16139:2006+A1:2019. It is identical to ISO 16139:2006, incorporating amendment 1:2019. It supersedes BS EN ISO 16139:2006, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee PSE/18/2, Gate, globe, diaphragm and check valves.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 580 51862 1

ICS 23.060.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2006.

Amendments/corrigenda issued since publication

Date	Text affected
30 September 2019	Implementation of ISO amendment 1:2019 with CENELEC endorsement A1:2019

Documents
Document Sharing Hub

Full document details: BS EN ISO 16139:2006+A1:2019

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16139:2006 +A1

August 2019

ICS 23.060.30

English Version

Industrial valves — Gate valves of thermoplastics materials (ISO 16139:2006)

Robinetterie industrielle — Robinets-vannes en matériaux thermoplastiques (ISO 16139:2006)

Industriearmaturen — Schieber aus Thermoplasten (ISO 16139:2006)

This European Standard was approved by CEN on 3 March 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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

© 2019 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members

Ref. No. EN ISO 16139:2006+A1:2019: E

Documents
Document Sharing Hub

Full document details: BS EN ISO 16139:2006+A1:2019

European foreword

This document (EN ISO 16139:2006) has been prepared by Technical Committee CEN/TC 69 "Industrial valves", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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 2006, and conflicting national standards shall be withdrawn at the latest by September 2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Foreword to amendment A1

This document (EN ISO 16139:2006/A1:2019) 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 69 “Industrial valves” the secretariat of which is held by AFNOR.

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 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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.

Endorsement notice

The text of ISO 16139:2006/Amd 1:2019 has been approved by CEN as EN ISO 16139:2006/A1:2019 without any modification.

Documents
Document Sharing Hub
Full document details: BS EN ISO 16139:2006+A1:2019

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2014/68/EU (Pressure Equipment Directive) aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/071 to provide one voluntary means of conforming to essential requirements of Directive 2014/68/EU of the European Parliament and of the Council of 15 May 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2014/68/EU

Essential Requirements of Directive 2014/68/EU	Clause(s)/subclause(s) of this EN	Remarks/Notes
2.2.1	4.3	Design loading factors
2.2.2	4.6.1; 5.2.1; 5.2.2; 5.2.3; 5.2.5	Design for adequate strength
2.7	4.8.1	Wear
3.1.5	4.7.1	Traceability
3.2.2	4.6.1; 4.6.3	Strength proof test
3.4	4.8.3	Operating instructions
4.1, 4.2 a)	4.2; 4.3	Materials for pressurised parts

WARNING 1 Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

Documents
Document Sharing Hub
Full document details: BS EN ISO 16139:2006+A1:2019

Contents

Page

Foreword ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **2**

4 Requirements ... **4**
4.1 Design ... 4
4.1.1 Valve function ... 4
4.1.2 Design characteristics ... 4
4.1.3 Types of valve end connection ... 4
4.2 Materials ... 5
4.2.1 Materials for the body and bonnet/cover ... 5
4.2.2 Materials for other valve components ... 5
4.3 Pressure/temperature rating ... 5
4.4 Dimensions ... 6
4.4.1 Face-to-face dimensions ... 6
4.4.2 Joint dimensions of the valve end connections ... 6
4.5 Operation ... 7
4.6 Functional characteristics ... 7
4.6.1 Design strength ... 7
4.6.2 Flow characteristics ... 7
4.6.3 〉A1〈 Seat and packing/shell leaktightness 〉A1〈 ... 7
4.6.4 Operating torque ... 7
4.6.5 Permissible manual forces ... 7
4.6.6 Durability ... 7
4.7 Manufacture ... 8
4.7.1 Control of the manufacture of body and bonnet ... 8
4.7.2 Permanent jointing ... 8
4.8 Other requirements ... 8
4.8.1 Wear ... 8
4.8.2 Corrosion resistance or other chemical attack ... 8
4.8.3 Operating instructions ... 8

5 Test procedures ... **9**
5.1 Documentation of test results ... 9
5.2 Initial type tests ... 9
5.2.1 General ... 9
5.2.2 Testing of materials ... 9
5.2.3 Shell test ... 9
5.2.4 Seat leaktightness test ... 9
5.2.5 Long-term behaviour test of the complete valve ... 9
5.2.6 Durability test ... 9
5.2.7 Operating torque test ... 10
5.2.8 Final test ... 10

6 Declaration of compliance ... **10**

7 Designation ... **10**

8 Marking and preparation for storage and transportation ... **10**
8.1 Marking and documentation ... 10
8.2 Preparation for storage and transportation ... 11

Annex A (informative) **Procurement information** ... **12**

Bibliography ... **13**

© ISO 2006 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 16139:2006+A1:2019

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 16139 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 69, *Industrial valves,* in collaboration with ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 7, *Valves and auxiliary equipment of plastics materials*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

© ISO 2006 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 16139:2006+A1:2019