

TÖÖSTUSVENTIILID. MALMIST SIIBRID

Industrial valves - Cast iron gate valves

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

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English Version

Industrial valves - Cast iron gate valves

Robinetterie industrielle - Robinets-vannes en fonte

Industriearmaturen - Schieber aus Gusseisen

This European Standard was approved by CEN on 1 August 2015.

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European foreword

This document (EN 1171:2015) has been prepared by 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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1171:2002.

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 97/23/EC (PED).

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

In this new edition, the following modifications were made:

- the normative references were updated in Clause 2 and throughout the text;
- 4.1.1, 4.1.2.1, 4.1.2.3, 4.2.1, 8.1, Annex C and Table ZA.1 were revised to be in compliance with EU Directive 97/23/EC (PED).

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for cast iron gate valves with flanged ends, socket ends or spigot ends.

This European Standard is applicable to cast iron gate valves mainly used for industrial and general-purpose applications. However, they can be used for other applications provided the requirements of the relevant performance standards are met.

The range of nominal sizes covered is:

DN 40 ; DN 50 ; DN 65 ; DN 80 ; DN 100 ; DN 125 ; DN 150 ; DN 200 ; DN 250 ; DN 300 ; DN 350 ; DN 400 ; DN 450 ; DN 500 ; DN 600 ; DN 700 ; DN 800 ; DN 900 ; DN 1 000.

The range of pressure designations covered is:

- isobaric PN 6; PN 10; PN 16; PN 25;
- isomorphic, PS 10 bar to PS 1 bar at room temperature.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 19:2002, *Industrial valves — Marking of metallic valves*

EN 545:2010, *Ductile iron pipes, fittings, accessories and their joints for water pipelines — Requirements and test methods*

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 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 1092-2:1997, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 2: Cast iron flanges*

EN 12266-1, *Industrial valves — Testing of metallic valves — Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements*

EN 12266-2, *Industrial valves — Testing of metallic valves — Part 2: Tests, test procedures and acceptance criteria - Supplementary requirements*

EN 12351, *Industrial valves — Protective caps for valves with flanged connections*

EN 12516-3:2002, *Valves — Shell design strength — Part 3: Experimental method*

EN 12516-4:2014, *Industrial valves — Shell design strength — Part 4: Calculation method for valve shells manufactured in metallic materials other than steel*

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

EN ISO 5210, *Industrial valves — Multi-turn valve actuator attachments (ISO 5210)*

ISO 185:2005, *Grey cast irons — Classification*

ISO 1083:2004, *Spheroidal graphite cast irons — Classification*

ISO 2531:2009, *Ductile iron pipes, fittings, accessories and their joints for water applications*

ISO 5922:2005, *Malleable cast iron*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 736-1, EN 736-2 and EN 736-3 and the following apply.

NOTE The terms maximum allowable pressure, PS , and test pressure, PT , defined in EU Directive 97/23/EC (PED) are equivalent to the terms allowable pressure, p_s , and test pressure, p_t , defined in EN 736-3.

3.1

isomorphic series

series of cast iron gate valves of a specified type and design having maximum allowable pressures which tend to decrease as the nominal size increases (see Table 2) and having specific flanged end connections (see 4.1.3.2.1)

3.2

isobaric series

series of cast iron gate valves of a specified type and design having the same maximum allowable pressure for all nominal sizes

3.3

strength torque

torque applied directly to the operating mechanism or, when fitted, the operating device, which the valve is capable of withstanding

4 Requirements

4.1 Design

4.1.1 Materials

4.1.1.1 The body and bonnet materials shall be selected from Table 1 and designed in accordance with EN 12516-4:2014.

NOTE Materials listed in Table 1 comply with the requirements of EN 1561 for grey cast iron, EN 1562 for malleable cast iron and EN 1563 for spheroidal graphite cast iron.