



SLOVENSKI STANDARD
oSIST prEN 12266-2:2009
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Industrijski ventili - Preskušanje kovinskih ventilov - 2. del: Preskusi, postopki preskušanja in prevzemni pogoji - Dodatne zahteve

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

Industriearmaturen - Prüfung von Armaturen aus Metall - Teil 2: Prüfungen, Prüfverfahren und Annahmekriterien - Ergänzende Anforderungen

Robinetterie industrielle - Essais des appareils de robinetterie métalliques - Partie 2: Essais, modes opératoires d'essai et critères d'acceptation - Prescriptions complémentaires

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23.060.01 Ventili na splošno Valves in general

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

Robinetterie industrielle - Essais des appareils de robinetterie métalliques - Partie 2: Essais, modes opératoires d'essai et critères d'acceptation - Prescriptions complémentaires

Industriearmaturen - Prüfung von metallischer Armaturen - Teil 2: Prüfungen, Prüfverfahren und Annahmekriterien - Ergänzende Anforderungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 69.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 12266-2:2009) has been prepared by Technical Committee CEN/TC 69 “Industrial valves”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12266-2:2002.

EN 12266 *Industrial valves — Testing of metallic valves* consists of the following parts:

- *Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements*
- *Part 2: Tests, test procedures and acceptance criteria — Supplementary requirements*

EN 12266-1 was drawn up on the basis of International Standard ISO 5208. EN 12266-2 contains supplementary testing requirements for tests, test procedures and acceptance criteria of valves.

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Introduction

The purpose of this European Standard is to establish certain basic requirements for supplementary production pressure testing of industrial valves in order to ensure uniform tests and test procedures. Tests and procedures given in this European Standard may be used for production tests and, where applicable, for type tests and acceptance tests.

Special requirements, which are specific to one product or one performance standard only, are not included in this European Standard. Details should be included in the appropriate standard.

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1 Scope

This European Standard specifies supplementary requirements for tests, test procedures and acceptance criteria of industrial valves made of metallic materials.

The specified tests may be used as type tests, production tests or acceptance tests. The application of these tests is specified in the appropriate product or performance standards.

When specified as a normative reference in a valve product or performance standard, this European Standard shall be considered in conjunction with given specific requirements of the valve product or performance standard. Where requirements in a product or performance standard differ from those given in this European Standard, the requirements of the product or performance standard apply.

NOTE For testing of industrial valves of thermoplastic materials, ISO 9393-1 and ISO 9393-2 apply.

2 Normative references

The following referenced documents are indispensable for the application 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.

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*

prEN 1267¹⁾, *Industrial valves — Test of flow resistance using water as test fluid*

prEN ISO 10497¹⁾, *Testing of valves — Fire type-testing requirements*

prEN 12266-1:2009¹⁾, *Industrial valves — Testing of metallic valves — Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements*

EN 12516 (all parts), *Industrial valves — Shell design strength*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 736-1, EN 763-2 and EN 763-3 apply.

4 Test requirements

The product or performance standards specifies which tests or inspections shall be applied to the valve listed in Table 1.

Test procedures and acceptance criteria shall be as given in Annex A for pressure tests, in Annex B for functional tests or in other specified standards, see Table 1.

1) Under preparation.

Table 1 – Requirements for tests, test procedures and acceptance criteria

| Test | | Purpose | Test procedure and acceptance criteria |
|-----------------------------|----------------|--|--|
| Title | Test reference | | |
| Obturator strength | P20 | To confirm the allowable differential pressure containing capability of the obturator in the closed position | see A.2 |
| Back seat tightness | P21 | To confirm the capacity of the back seat to the specified leakage rate at the time of manufacture | see A.3 |
| Operability | F20 | To confirm the complete opening and closing capability of the valve and, where applicable, the correct operation of the position indicators or other auxiliary devices | see B.1 |
| Anti-static design at 12 V | F21 | To confirm electrical conductivity between the obturator and the body of the valve | see B.2.2.2 |
| Anti-static design at 100 V | F22 | To confirm electrical conductivity between the obturator and the body of the valve | see B.2.2.3 |
| Fire tested design | F23 | To confirm the pressure containing capability of the valve under pressure during and after specified fire conditions | prEN ISO 10497 |
| Flow resistance | F24 | To confirm the specified flow coefficient or flow resistance coefficient | prEN 1267 |

5 Designation

Tests in accordance with this European Standard shall be designated by the following elements:

- title of test and test reference;
- EN 12266-2.

EXAMPLE Operability, Test F20 — EN 12266-2

Annex A (normative)

Pressure tests – Test procedures and acceptance criteria

A.1 General requirements

A.1.1 Purpose

These general requirements shall be applied to all the test procedures defined in Annex 1.

Safety aspects of valve testing are not covered in this European Standard. Users of this European Standard should analyse the hazard resulting from the pressure and take proper safety precautions.

A.1.2 Test equipment

The test equipment shall be of such a design, that it does not subject the valve to externally applied loads which may affect the results of the test.

NOTE The test equipment can apply external loads sufficient to react to the forces resulting from the test pressure.

When using test equipment and procedures different to that detailed in this European Standard, the manufacturer shall be able to demonstrate the equivalence of such test procedures and acceptance criteria with the requirements of this European Standard.

A.1.3 Measuring equipment

The measuring equipment shall be capable of measuring fluid pressure with an accuracy of $\pm 5\%$ of the required test pressure.

A.1.4 Painted, coated or lined valves

Valves with liners, internal linings or internal coatings forming a design feature of the valve may be tested with the liner, after lining or coating.

Attention shall be given that the internal linings or internal coatings are not damaged by the test procedure.

NOTE If tests in the presence of a representative of the purchaser are specified, painted or coated valves from stock may be retested without removal of painting or coating.

A.1.5 Test fluid

The test fluid to be used shall be:

- either a liquid (water which may contain a corrosion inhibitor, or any other suitable liquid having a viscosity not greater than water);
- or a gas (air or other suitable gas).

Relevant detailed test procedures are specified in A.2.2.1 and A.3.2.1.

The test fluid temperature shall be between 5 °C and 40 °C.

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A.1.6 Equivalent DN numbers

For the purpose of calculating seat leakage rates and test duration times it is necessary to establish the equivalent DN number for those valves which are designated other than by DN.

The equivalent DN numbers of valves having flanged ends, threaded ends, weld ends, capillary or compression ends shall be as given in Table A.1.

Table A.1 — Equivalent DN numbers for different types of body ends

| Equivalent DN numbers | Flanged, threaded or welding ends NPS | Capillary or compression ends for copper tube | Compression ends for plastic tube |
|-----------------------|--|--|--------------------------------------|
| | | mm | mm |
| 8 | ¼ | 8 | — |
| 10 | — | 10; 12 | 10; 12 |
| 15 | ½ | 14; 14,7; 15; 16; 18 | 14,7; 15; 16; 18 |
| 20 | ¾ | 21; 22 | 20; 21; 22 |
| 25 | 1 | 25; 27,4; 28 | 25; 27,4; 28 |
| 32 | 1 ¼ | 34; 35; 38 | 32; 34 |
| 40 | 1 ½ | 40; 40,5; 42 | 40; 40,5 |
| 50 | 2 | 53,6; 54 | 50; 53,6 |
| 65 | 2 ½ | 64; 66,7; 70 | 63 |
| 80 | 3 | 76,1; 80; 88,9 | 75; 90 |
| 100 | 4 | 108 | 110 |
| 125 | 5 | — | — |
| 150 | 6 | — | — |
| 200 | 8 | — | — |
| 250 | 10 | — | — |
| 300 | 12 | — | — |
| 350 | 14 | — | — |
| 400 | 16 | — | — |
| 450 | 18 | — | — |
| 500 | 20 | — | — |
| 600 | 24 | — | — |
| 650 | 26 | — | — |
| 700 | 28 | — | — |
| 750 | 30 | — | — |
| 800 | 32 | — | — |
| 900 | 36 | — | — |
| 1 000 | 42 | — | — |