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**Ventili - Terminologija - 3. del: Definicije pojmov**

Valves - Terminology - Part 3: Definition of terms

Armaturen - Terminologie - Teil 3: Definition von Begriffen

Appareils de robinetterie - Terminologie - Partie 3: Définition des termes

**Ta slovenski standard je istoveten z: EN 736-3:1999****SIST EN 736-3:2000**<https://standards.iteh.ai/catalog/standards/sist/11a8a150-2378-4538-a20b-88523bcdff29/sist-en-736-3-2000>**ICS:**

01.040.23	V\ [ a • \ A a c { a A ^ • c e } a Fluid systems and a ^   A a ] [ z } [ A a a [ A U ] [ c a e a D components for general use (Vocabularies)
23.060.01	Ventili na splošno Valves in general

**SIST EN 736-3:2000****en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

## EN 736-3

May 1999

ICS 01.040.23; 23.060.01

English version

## Valves - Terminology - Part 3: Definition of terms

Appareils de robinetterie - Terminologie - Partie 3:  
Définition des termes

Armaturen - Terminologie - Teil 3: Definition von Begriffen

This European Standard was approved by CEN on 16 April 1999.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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ALJEDVOSTI ANIŠČEVI  
C'HOŠIČETI B'UJAVI IN OŠIČETI  
opredeljena v skladu s standardom  
SIST EN 736-3:2000  
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## Foreword

This European Standard 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 November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association. This European Standard is considered to be a supporting standard to those application and product standards which in themselves support an essential safety requirement of a New Approach Directive and which make reference to this European Standard.

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

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## Introduction

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This Part 3 is the first step in harmonizing the definitions of terms for valves. Part 1 deals with the definitions of types of valves and Part 2 with definitions of components.

It is possible that other terms and their definitions will be found in other European Standards.

Experts writing European Standards are asked to use the terms and definitions given in this standard. If other terms and definitions are necessary or are published in other European Standards, please inform the secretariat of CEN/TC 69 so that the terms and definitions in these European Standards can be included or harmonized.

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## 1 Scope

This standard defines the terms and their definitions (or the source if defined in other standards) necessary for describing pressure and temperature, dimensions, design, flow characteristics, operation and tests for valves. It aims to provide a uniform terminology for all types of valves.

The terms and definitions in this standard may also apply to products other than valves, in which case it may be necessary to apply these definitions analogously.

This standard covers terms common to more than one type of valve. The terms and definitions specific to one type of valve are found in the relevant product standard.

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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- |             |   |
|-------------|---|
| EN 558-1    | Industrial valves - Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems - Part 1 : PN. designated valves   |
|             | <a href="https://standards.iteh.ai/catalog/standards/sist/11a8a150-2378-4538-a20b-88523bcdff29/sist-en-736-3-2000">https://standards.iteh.ai/catalog/standards/sist/11a8a150-2378-4538-a20b-88523bcdff29/sist-en-736-3-2000</a> |
| EN 558-2    | Industrial valves - Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems - Part 2 : Class-designated valves   |
| EN 764      | Pressure equipment - Terminology and symbols – Pressure, temperature, volume  |
| EN 1333     | Pipework components - Definition and selection of PN  |
| prEN 1759-3 | Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, class designated - Part 3: Copper alloy and composite flanges  |
| EN ISO 6708 | Pipework components - Definition and selection of DN (nominal size) (ISO 6708:1995)   |
| EN 60534-1  | Industrial-process control valves - Part 1: Control valve terminology and general considerations (IEC 60534-1:1987 )  |

### 3 Definitions

For the purposes of this standard, the following definitions apply:

#### 3.1 Terms relating to pressure and temperature

3.1.1 allowable pressure,  $p_s$ : EN 764.

3.1.2 test pressure,  $p_t$ : EN 764.

3.1.3 allowable temperature,  $t_s$ : EN 764.

3.1.4 test temperature,  $t_t$ : EN 764.

3.1.5 PN : EN 1333.

3.1.6 Class: prEN 1759-3

3.1.7 allowable differential pressure: maximum allowable static differential pressure at a given temperature of a valve when it is in the closed position.

#### 3.2 Terms relating to dimensions

3.2.1 DN (nominal size): EN ISO 6708

3.2.2 NPS: prEN 1759 - 3

3.2.3 face-to-face dimension, FTF: EN 558-1 and EN 558-2

3.2.4 centre-to-face dimension, CTF: EN 558-1 and EN 558-2

3.2.5 end-to-end dimension, ETE: Distance expressed in millimetres between the ends of the body for straight pattern valves other than those with flanged ends.

3.2.6 centre-to-end dimension, CTE: Distance expressed in millimetres between one of the ends of the body and the centre of the body for angle pattern valves other than those with flanged ends.

3.2.7 travel: EN 60534-1

3.2.8 relative travel, h: EN 60534-1

3.2.9 rated travel: EN 60534-1

3.2.10 maximum travel: For valves with mechanical end stops, the total displacement of the obturator between these mechanical end stops.

NOTE: The mechanical end stops may be in the body, the bonnet or cover, the operating device, etc.

### 3.3 Terms relating to design

**3.3.1 full bore valve:** Valve with the seat diameter not less than 90% of the nominal inside diameter of the body end port.

NOTE: The nominal inside diameter of the body end port for the particular valve type is specified in the corresponding product or performance standard.

**3.3.2 clearway valve:** Valve designed to have an unobstructed flow way which allows the passage of a theoretical sphere with a diameter which is not less than the nominal inside diameter of the body end port.

NOTE: The nominal inside diameter of the body end port for the particular valve type is specified in the corresponding product or performance standard.

**3.3.3 reduced bore valve:** Valve with a seat diameter less than 90% and not less than 60% of the nominal inside diameter of the body end port.

NOTE: The nominal inside diameter of the body end port for the particular valve type is specified in the corresponding product or performance standard.

**3.3.4 symmetric valve:** Valve with an internal construction which has a plane of symmetry perpendicular to the axis of the body ends.

**3.3.5 asymmetric valve:** Valve with an internal construction which has no plane of symmetry perpendicular to the axis of the body ends.

**3.3.6 anti-static design:** Valve design which ensures electrical continuity between all the components in contact with the fluid and the shell.

**3.3.7 anti-blow out design:** Valve design which ensures that the valve operating mechanism cannot be blown out of the shell by disassembly of any external part when the valve is under pressure.

**3.3.8 coating:** Protective layer applied to a valve component or the valve itself to provide a protection against corrosion and /or to prevent contamination of the fluid by the valve

### 3.4 Terms relating to flow characteristics

**3.4.1 flow coefficient,  $K_v$  ( $C_v$ ):** EN 60534-1

**3.4.2 rated flow coefficient:** EN 60534-1.



**3.4.3 relative flow coefficient,  $\Phi$ :** EN 60534-1.

**3.4.4 inherent flow characteristic:** EN 60534-1.

**3.4.5 flow resistance coefficient,  $\zeta$ :** Dimensionless, is a specific differential pressure across the valve. The value of  $\zeta$  can be obtained from test results by using the following equation :

$$\zeta = \frac{2\Delta p}{\rho u^2}$$

where

$\Delta p$  is the measured static pressure drop across the valve, in pascal ;

$\rho$  is the density of the fluid, in kilograms per cubic metre ;

$u$  is the mean flow velocity in metre per second.

**NOTE:** If the flow resistance coefficient  $\zeta$  is related to the mean velocity calculated using the DN number of the valve in millimetres the flow resistance is designated  $\zeta_{DN}$

**3.4.6 cavitation:** Two stage process associated with the flow of liquids. The first phase involves the formation of vapour bubbles in the fluid stream further to the dropping of the static pressure to below the saturation vapour pressure of the liquid. The second phase of the process is the implosion of these vapour bubbles which recondense into the liquid state when the static pressure rises above the saturation vapour pressure of the liquid.

### 3.5 Terms relating to operation

**3.5.1 operating torque:** Torque applied to the operating device which is necessary to operate the valve against specified working conditions, between the open and closed positions.

**3.5.2 strength torque:** Torque applied to the operating mechanism or when fitted, the operating device, for which the valve has been designed to resist.

### 3.6 Terms relating to tests

**3.6.1 type test:** Test carried out on one or more valves representative of the design and the manufacturing process to confirm conformance of the production with specified requirements.

**3.6.2 production test:** Test carried out on valves during the manufacturing process to confirm conformance of the production with the specified requirements.