
**Naprave za varovanje pred onesnaženjem pitne vode zaradi povratnega toka -
Ventili za preprečevanje podtlaka v pregibnih ceveh - DN 15 do DN 25, vključno z
družino H, vrsto B in vrsto D - Splošna tehnična specifikacija**

Devices to prevent pollution by backflow of potable water - Hose Union anti-vacuum valves - DN 15 to DN 25 inclusive Family H, type B and type D - General technical specification

Sicherungseinrichtungen zum Schutz des Trinkwassers gegen Verschmutzung durch Rückfließen - Rohrbelüfter für Schlauchanschlüsse - DN 15 bis DN 25, Familie H, Typ B und Typ D - Allgemeine technische Bestimmungen

[SIST EN 15096:2009](https://standards.iteh.ai/catalog/standards/sist/a9111e62-6635-45cf-b8ff-7720114dca-2009/15096-2009)

Dispositifs de protection contre la pollution par retour de l'eau potable - Soupapes anti-
vide d'extrémité - DN 15 à DN 25 inclus Famille H, type B et type D - Spécifications
techniques générales

Ta slovenski standard je istoveten z: EN 15096:2008

ICS:

13.060.20	Pitna voda	Drinking water
23.060.01	Ventili na splošno	Valves in general
91.140.60	Sistemi za oskrbo z vodo	Water supply systems

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15096

January 2008

ICS 91.140.60

English Version

**Devices to prevent pollution by backflow of potable water - Hose
Union anti-vacuum valves - DN 15 to DN 25 inclusive Family H,
type B and type D - General technical specification**

Dispositifs de protection contre la pollution par retour de
l'eau potable - Soupape anti-vide d'extrémité - DN 15 à DN
25 inclus famille H, type B et type D - Spécifications
techniques générales

Sicherungseinrichtungen zum Schutz des Trinkwassers
gegen Verschmutzung durch Rückfließen - Rohrbelüfter für
Schlauchanschlüsse - DN 15 bis DN 25, Familie H, Typ B
und Typ D - Allgemeine technische Bestimmungen

This European Standard was approved by CEN on 3 November 2007.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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.



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Foreword

This document (EN 15096:2008) has been prepared by Technical Committee CEN/TC 164 "Water supply", 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 July 2008, and conflicting national standards shall be withdrawn at the latest by July 2008.

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 standard has been developed in reference with EN 1717.

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, 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 the United Kingdom.

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EN 15096:2008 (E)**Introduction**

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this standard:

- a) this standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

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1 Scope

This European Standard specifies:

- a) the field of application;
- b) the requirements of hose union anti vacuum valves;
- c) dimensional and physio-chemical properties, and properties of general hydraulic, mechanical and acoustic design of hose union anti-vacuum valves of nominal sizes DN 15 up to and including DN 25;
- d) marking and technical product information.

This standard specifies the characteristics of hose union anti-vacuum valves of nominal size DN 15 up to and including DN 25 that are suitable for use in drinking water systems at pressures up to and including 1 MPa (10 bar) and temperatures up to and including 65 °C and for 1 h at 90 °C.

HB protects against back siphonage only and should be installed in vertical downward flow position.

HB and HD anti-vacuum valves are for installation exclusively at the connecting point between stop valve and hose in vertical downward flow position.

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.

[SIST EN 15096:2009](https://standards.iteh.ai/standard/sist-en-15096-2009)

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 13959, *Anti-pollution check valves - DN 6 to DN 250 inclusive family E, type A, B, C and D*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 3822-1, *Acoustics — Laboratory tests on noise emission from appliances and equipment used in water supply installations — Part 1: Method of measurement (ISO 3822-1:1999)*

EN ISO 3822-3, *Acoustics — Laboratory tests on noise emission from appliances and equipment used in water supply installations — Part 3: Mounting and operating conditions for in-line valves and appliances*

EN ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 1: General principles and requirements (ISO 5167-1:2003)*

EN ISO 6509, *Corrosion of metals and alloys — Determination of dezincification resistance of brass (ISO 6509:1981)*

EN ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2006)*

EN 15096:2008 (E)**3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

3.1**hose union anti-vacuum valve HB**

valve equipped with air inlet ports, which are closed at zero flow and when water flows in the intended direction above atmospheric pressure

NOTE The air inlets are opened if there is subatmospheric pressure at the water inlet and closed to be watertight again when the supply lines are back to at least atmospheric pressure.

3.2**hose union anti-vacuum valve HD**

valve HB with integrated check valve EB located upstream (monoblock)

NOTE For the purpose of this standard, "hose union anti-vacuum valve(s)" are hereafter referred to as "device(s)".

4 Nominal size

The nominal size of the devices (DN designated) shall correspond to the nominal size of the threaded connection according to Table 1.

Table 1 — Thread size vs nominal size

Thread size according to EN ISO 228-1	G 1/2	G 3/4	G 1
DN	15	20	25

5 Designation

The device is designated by:

- name
- family
- type
- nominal size
- body material
- reference to this document (EN 15096)

Example of designation

Hose union anti-vacuum valve family H type B, DN 20, gun metal, EN 15096

6 Marking and technical product information

6.1 General

In the countries where the use of products made of dezincification resistant materials is not required, the dezincification resistant products according to EN ISO 6509, as well as the products which do not contain zinc, are allowed to be marked << DR >>. In countries where the use of dezincification resistant materials is required, the dezincification resistant products, as well as the products which do not contain zinc, shall be marked << DR >>.

6.2 Marking

The devices shall be permanently and visibly marked on the body or on a fixed identification plate.

This information shall be on the outside of the device. The marking has to be indelible and obtained by moulding, engraving or similar procedures.

The marking shall indicate

- a) name, manufacturer's brand or logo;
- b) arrow indicating direction of flow;
- c) nominal size (DN);
- d) acoustic group; **iTeh STANDARD PREVIEW**
- e) letters indicating family and type of device; **(standards.iteh.ai)**
- f) nominal pressure (PN);
- g) conformance with this document (EN 15096); SIST EN 15096:2009
http://standards.iteh.ai/catalog/standards/sist/a9111e62-6635-45cf-b8ff-7b23182cadd/sist-en-15096-2009
- h) maximum operating temperature °C.

Marking a), b), c), and e) are obligatory. In case there is no marking for d), the device has to be considered as not classified acoustically.

6.3 Technical product information

Each package and/or each batch and/or each catalogue of the supplier/manufacturer shall contain technical product information which shall be written in a commonly spoken language of the country in which the product is sold.

It shall provide the following information:

- a) designation and purpose of the product;
- b) installation instructions;
- c) minimum installation height;
- d) (brand) name and address of supplier/manufacturer;
- e) instructions for maintenance, if any;
- f) spare part list, if any;
- g) nature of materials;
- h) terminal/inline use.

7 Graphic symbol

In this document, the devices are expressed graphically by:

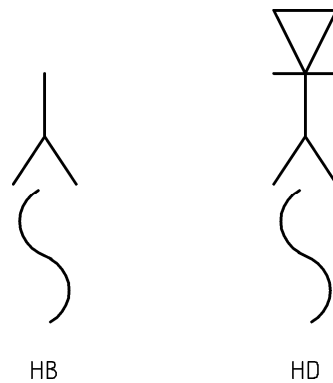


Figure 1 — Hose union anti-vacuum valve symbol

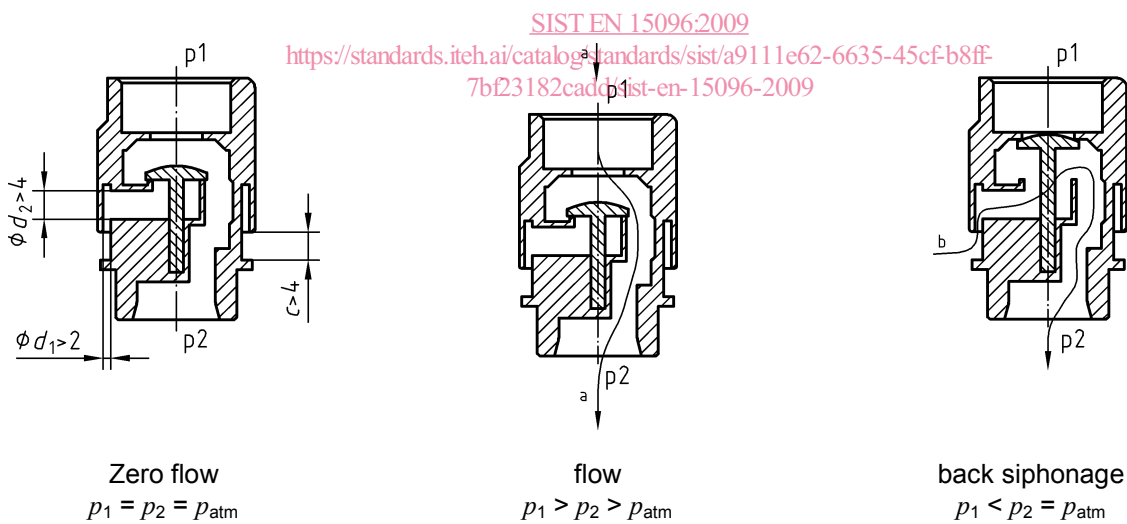
8 General design characteristics

8.1 Design principle

A typical design principle of HB and HD device is given in Figure 2 and Figure 3.

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Dimensions in millimetres



Key

- a water supply
- b air inlet

Figure 2 — Design principle of HB device

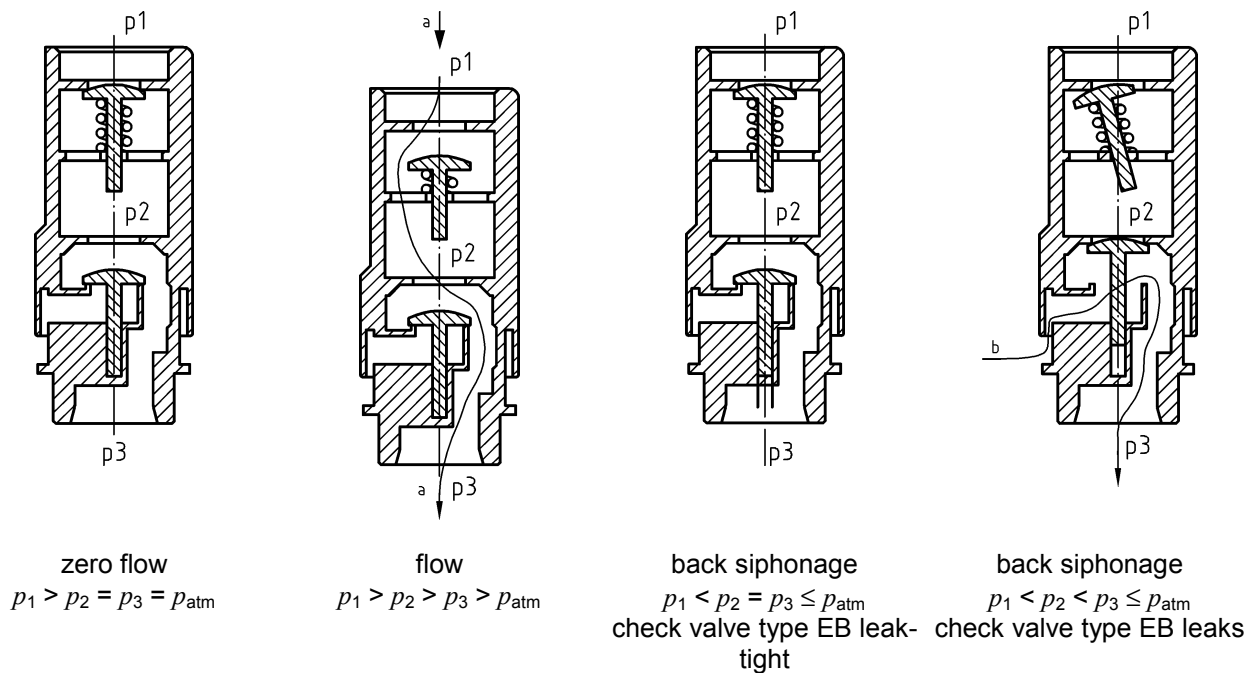


Figure 3 — Design principle of HD device

8.2 Connections

Connections shall comply with EN ISO 228-1.

The device shall have a means to be fixed permanently to the point of use outlet such that after removal of the device a hose cannot be connected to the outlet of the point of use (e.g. irreversible damage of the connecting thread or different thread dimensions inlet/outlet) or a permanent visible leakage is created.

8.3 Check valve

The check valve of a HD has to comply with the requirements of EN 13959 for EB.

In case of subatmospheric pressure in the supply lines, the air inlets of an HD will only be opened if the EB is defective (leaks).

9 Physico-chemical characteristics

9.1 Materials

The materials and the coatings used, liable to come normally or accidentally in contact with potable water, shall satisfy the EU regulations concerning water quality.

The materials and the coatings shall be:

- corrosion resistant in accordance with EN ISO 9227;
- prone to the least scaling possible;
- in conformity with the European Standards and regulations;
- compatible among themselves and