



SLOVENSKI STANDARD

SIST EN 14455:2005

01-september-2005

Naprave za varovanje pred onesnaženjem pitne vode zaradi povratnega toka - Tlačni zračniki s premerom DN 15 do DN 50 – Družina L, tipa A in B

Devices to prevent pollution by backflow of potable water - Pressurised air inlet valves
DN 15 to DN 50 - Family L, type A and type B

Sicherungseinrichtungen zum Schutz des Trinkwassers gegen Verschmutzung durch
Rückfließen - Druckbeaufschlagte Rohrbelüfter in Durchflussform DN 15 bis DN 50 -
Familie L, Typ A und Typ B

Dispositifs de protection contre la pollution de l'eau potable par retour - Clapet d'entrée
d'air sous pression DN 15 a DN 50 - Famille L, type A et type B

Ta slovenski standard je istoveten z: **EN 14455:2005**

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

SIST EN 14455:2005

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14455

May 2005

ICS 13.060.20; 23.060.01

English version

**Devices to prevent pollution by backflow of potable water -
Pressurised air inlet valves DN 15 to DN 50 - Family L, type A
and type B**

Dispositifs de protection contre la pollution de l'eau potable
par retour - Clapet d'entrée d'air sous pression DN 15 à DN
50 - Famille L, type A et type B

Sicherungseinrichtungen zum Schutz des Trinkwassers
gegen Verschmutzung durch Rückfließen -
Druckbeaufschlagte Rohrbelüfter in Durchflussform DN 15
bis DN 50 - Familie L, Typ A und Typ B

This European Standard was approved by CEN on 24 December 2004.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 14455:2005) 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 November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

This document has been developed with reference to EN 1717 "Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow".

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN 14455:2005 (E)**Introduction**

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

- a) this document 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 document specifies:

- a) field of application;
- b) requirements for pressurised air inlet valves;
- c) dimensional and the physico-chemical properties and the properties of general hydraulic, mechanical and acoustic design of pressurised air inlet valves DN 15 to DN 50;
- d) test procedure and requirements for verifying these properties;
- e) marking and presentation;
- f) acoustics.

This document specifies the characteristics of pressurised air inlet valves DN 15 to DN 50 that are suitable for use in drinking water systems at pressures up to 1 MPa (10 bar) and temperatures up to 65 °C and for 1 h at 90 °C.

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 806-1:2000, *Specifications for installations inside buildings conveying water for human consumption — Part 1: General*

[SIST EN 14455:2005](https://standards.iteh.ai/catalog/standards/sist/7addc292-4122-4f5-943f-491ecc6c14/sist-en-14455-2005)

EN 1717:2000, *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 (ISO 3822-3:1997)*

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)*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Designation, dimensions and tolerances*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

EN 14455:2005 (E)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1717, EN 806-1 and the following apply.

3.1 pressurised air inlet valve "LA"
valve fitted with one or more air inlet ports which are normally closed, when the water is above or equal to the atmospheric pressure in the valve. The valve opens to admit air if there is a subatmospheric pressure at the water inlet, and closes to be watertight when the flow of water is resumed at normal pressure

NOTE LA protects against back siphonage.

3.2 pressurised air inlet valve combined with a check-valve located downstream "LB"
valve LA with integrated in-line check valve of family E, type EB, located downstream.

For the purpose of this document, "pressurised air inlet valve(s)" is (are) hereafter referred to as "device(s)"

4 Nominal size

The nominal size of the device shall correspond to the denomination of thread according to Table 1 and ISO 7-1.

Table 1 — Nominal size vs thread size

DN	15	20	25	32	40	50
Thread size	½	¾	1	1 ¼	1 ½	2

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5 Designation

The devices are designated by:

- name;
- reference to this document (EN 14455);
- family, type;
- DN;
- body material;
- acoustic group (\leq DN 32 only).

Example of designation

Pressurised air inlet valve, EN 14455, family L, type A, DN 20, gun metal, I

6 Marking and technical documents

6.1 General

In 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, may 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 marked permanently and visibly on the body or on a fixed data plate.

This information shall be on the upper side or on each lateral side of the device. The indications shall be indelible and obtained by moulding, engraving or similar procedures.

The marking shall indicate:

- a) name, manufacturer's brand or logo;
- b) arrow indicating normal direction of flow;
- c) nominal size (DN);
- d) acoustic group (\leq DN 32 only);
- e) letters indicating family and type of device.

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

6.3 Technical documents

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.

7 Symbolisation

The graphic representation of the devices is according to EN 1717 (see Figure 1):



Figure 1 — Graphic symbol

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8 General design characteristics

8.1 Design principle

A typical design principle of LA and LB is given in Figure 2.

Dimensions in millimetres

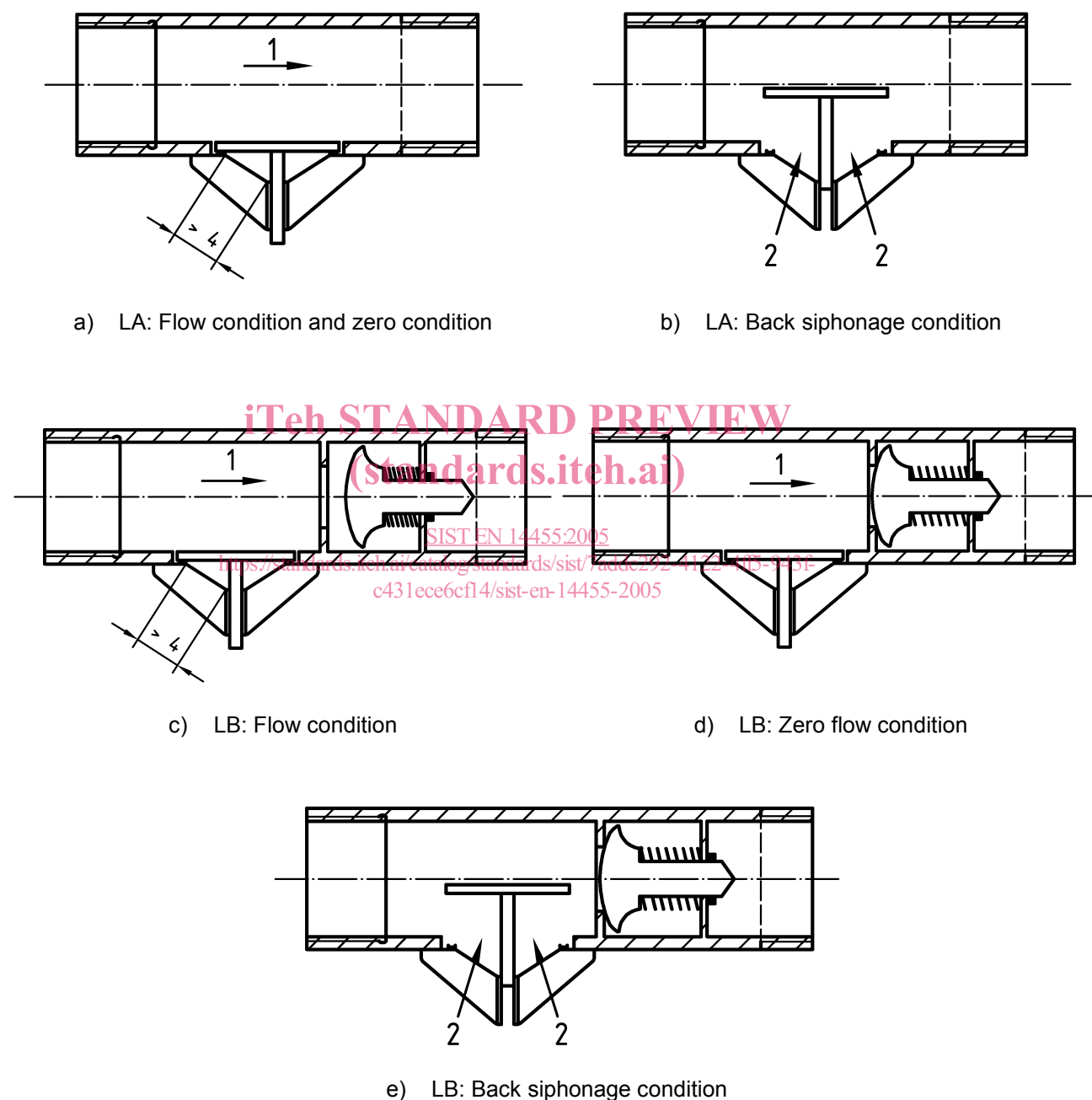


Figure 2 — Design principle