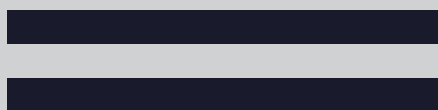


SVENSK STANDARD

SS-EN 14451:2020

Don för att förhindra förorening av dricksvatten genom återströmning – Luftningsventil monterad nedströms pådragsventil DN 10 till DN 50 – Familj D, typ A

Devices to prevent pollution by backflow of potable water – In-line anti-vacuum valves DN 10 to DN 50 inclusive – Family D, type A



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Språk: engelska/English

Utgåva: 2

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Europastandarden EN 14451:2020 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 14451:2020.

Denna standard ersätter SS-EN 14451:2005, utgåva 1.

The European Standard EN 14451:2020 has the status of a Swedish Standard. This document contains the official version of EN 14451:2020.

This standard supersedes the SS-EN 14451:2005, edition 1.

EUROPEAN STANDARD

EN 14451

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2020

ICS 13.060.20; 23.060.50

Supersedes EN 14451:2005

English Version

Devices to prevent pollution by backflow of potable water
- In-line anti-vacuum valves DN 10 to DN 50 inclusive -
Family D, type A

Dispositifs de protection contre la pollution de l'eau
potable par retour - Soupape anti-vide en ligne DN 10 à
DN 50 inclus - Famille D, type A

Sicherungseinrichtungen zur Verhütung von
Trinkwasserverunreinigung durch Rückfließen -
Rohrleitungsbelüfter DN 10 bis einschließlich DN 50 -
Familie D, Typ A

This European Standard was approved by CEN on 24 May 2020.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

SS-EN 14451:2020 (E)

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SS-EN 14451:2020 (E)

European foreword

This document (EN 14451:2020) has been prepared by Technical Committee CEN/TC 164 “Water supply”, the secretariat of which is held by AFNOR.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

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 document supersedes EN 14451:2005.

In comparison with the previous edition, the following changes have been made:

- a) title changed;
- b) scope of application revised;
- c) Clause 2 updated;
- d) nominal size range in Clause 4 restricted;
- e) Clause 9 adapted.

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 organisations of the following countries are bound to implement this document: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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) note 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.

SS-EN 14451:2020 (E)

1 Scope

This document specifies the field of application, the dimensional, the physico-chemical, the design, the hydraulic, the mechanical, and the acoustic characteristics of in-line anti vacuum valve family D Type A.

This document covers in-line anti vacuum valve family D Type A, intended to prevent pollution of potable water by backflow, caused by backsiphoning only.

It is applicable to in-line anti vacuum valve in denominations DN 10 up to DN 50.

It covers in-line anti vacuum valve of PN 10 that are capable of working without modification or adjustment:

- at any pressure, up to 1 MPa (10 bar);
- with any pressure variation, up to 1 MPa (10 bar);
- in permanent duty at a limited temperature of 65 °C and for maximum 1 h at 90 °C.

It specifies also the test methods and requirements for verifying their characteristics, the marking and the presentation at delivery.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 248, *Sanitary tapware - General specification for electrodeposited coatings of Ni-Cr*

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

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10226-2, *Pipe threads where pressure tight joints are made on the threads - Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designation*

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)*

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)*

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)*

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)*

EN ISO 6509-1, *Corrosion of metals and alloys - Determination of dezincification resistance of copper alloys with zinc - Part 1: Test method (ISO 6509-1)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

in-line anti-vacuum valve

mechanical device with an air inlet which is closed when water flows through it at or above atmospheric pressure, but which opens to admit air if there is a subatmospheric pressure at the water inlet or when the flow stops, and closes so as to be watertight when the flow of water is resumed at normal pressure

Note 1 to entry: In case of subatmospheric pressure the obturator should admit air to the downstream pipework as well as throttling the inlet waterway of the device.

Note 2 to entry: It ensures no protection against back flow by back pressure.

Note 3 to entry: For the purpose of this document “in-line-anti-vacuum valve(s) DA” is hereafter referred to as “device(s)”

4 Nominal size

The nominal size (DN) of the device shall correspond to the denomination of the thread according to Table 1.

For the specification of threads see 8.2. The thread size shall comply to EN 10226-1.

Table 1 — Nominal size vs thread size

DN	10	15	20	25	32	40	50
Thread size	R 3/8	R 1/2	R 3/4	R 1	R 1 1/4	R 1 1/2	R 2

5 Designation

The devices are designated by:

- a) name;
- b) reference to this document (EN 14451);
- c) family, type;
- d) nominal size (DN);
- e) its size and type of end connection
- f) the acoustic group I, II or nc (for DN ≤ 32);
- g) body material.

Example of designation: In-line anti-vacuum valve, EN 14451, family D, type A, DN 20, FF 3/4 “, I, CW617N.