SWEDISH STANDARDS INSTITUTE

SVENSK STANDARD
SS-EN 14452:2005

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Utgåva 1

Don för att förhindra förorening av dricksvatten genom återströmning – Lodrätt monterad rör-detalj med luftintag som stängs vid flöde och monterad nedströms pådragsventil DN 10 till DN 20 – Familj D, typ B

Devices to prevent pollution by backflow of potable water – Pipe interrupter with atmospheric vent and moving element DN 10 to DN 20 – Family D, type B

ICS 13.060.20; 23.060.50

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The European Standard EN 14452:2005 has the status of a Swedish Standard. This document contains the official English version of EN 14452:2005.

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ICS 13.060.20; 23.060.50

English version

Devices to prevent pollution by backflow of potable water - Pipe interrupter with atmospheric vent and moving element DN 10 to DN 20 - Family D, type B

Dispositifs de protection contre la pollution de l'eau potable par retour - Rupteur à évent atmosphérique avec élément mobile DN 10 à DN 20 - Famille D, type B

Sicherungseinrichtungen zum Schutz des Trinkwassers gegen Verschmutzung durch Rückfließen - Rohrunterbrecher mit Lufteintrittsöffnung und beweglichem Teil, DN 10 bis DN 20 - Familie D, 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.

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Foreword

This document (EN 14452:2005) 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of an identical text or by endorsement, at the latest by November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.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 worked out in reference with 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.

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.

1 Scope

This document specifies:

a) field of application;

b) requirements for pipe interrupters with atmospheric vent and moving element;

c) dimensional and the physico-chemical properties, and the properties of general hydraulic, mechanical and acoustic design of pipe interrupters with elastic membrane of DN 10 to DN 20;

d) test procedure and requirements for verifying these properties;

e) marking and presentation;

f) acoustics.

This document specifies the characteristics of pipe interrupters with atmospheric vent and moving element, DN 10 to DN 20 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, *Specification for installations inside buildings conveying water for human consumption — Part 1: General*

EN 1717:2000, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

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 3822-4, *Acoustics — Laboratory tests on noise emission from appliances and equipment used in water supply installations — Part 4: Mounting and operating conditions for special appliances (ISO 3822-4:1997)*

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: Dimensions, tolerances and designation*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1717:2000, EN 806-1:2000 and the following apply.

pipe interrupter with atmospheric vent and moving element
pipe interrupter with elastic membrane, fitted with air inlet port(s) which is (are) closed, when water flows through it above atmospheric pressure, but which opens (open) to admit air if there is a subatmospheric pressure at the water inlet or when the flow stops, and close to be watertight when the flow of water is resumed at normal pressure. It ensures protection against back siphonage only by draining to the atmosphere, but not against back pressure. Direction of water flow is vertically downwards.

For the purpose of this document “pipe interrupter with atmospheric vent and moving element DB” is hereafter referred to as "device(s)"

4 Nominal size

The nominal size of the device shall correspond to the denomination of the thread according to Table 1, EN ISO 228-1 or ISO 7-1.

Table 1 — Nominal size vs union end thread size

DN	10	15	20
Thread size	⅜	½	¾

5 Designation

The devices are designated by:

a) name;

b) reference to this document (EN 14452);

c) family, type;

d) nominal size (DN);

e) body material;

f) acoustic group.

Example of designation:

Pipe interrupter EN 14452, family D, type B, DN 20, gun metal, I.