

**Don för att förhindra förorening av dricksvatten genom återströmning – Lodrätt monterad rördetalj 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 permanent atmospheric vent DN 10 to DN 20 – Family D, type C**

Europastandarden EN 14453:2005 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 14453:2005.

The European Standard EN 14453:2005 has the status of a Swedish Standard. This document contains the official English version of EN 14453:2005.

---

Uppllysningar om **sakinnehållet** i standarden lämnas av SIS, Swedish Standards Institute, telefon 08 - 555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar **allmänna upplysningar** om svensk och utländsk standard.

*Postadress:* SIS Förlag AB, 118 80 STOCKHOLM  
*Telefon:* 08 - 555 523 10. *Telefax:* 08 - 555 523 11  
*E-post:* [sis.sales@sis.se](mailto:sis.sales@sis.se). *Internet:* [www.sis.se](http://www.sis.se)

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 14453**

May 2005

ICS 13.060.20; 23.060.50

English version

**Devices to prevent pollution by backflow of potable water - Pipe  
interrupter with permanent atmospheric vent DN 10 to DN 20 -  
Family D, type C**

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

Sicherungseinrichtungen zum Schutz des Trinkwassers  
gegen Verschmutzung durch Rückfließen -  
Rohrunterbrecher mit ständig geöffneten Luftein-  
trittsöffnungen, DN 10 bis DN 20 - Familie D, Typ C

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.



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

**EN 14453:2005 (E)**

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>3</b>
<b>Introduction</b> .....		<b>4</b>
<b>1</b>	<b>Scope</b> .....	<b>5</b>
<b>2</b>	<b>Normative references</b> .....	<b>5</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>6</b>
<b>4</b>	<b>Nominal sizes</b> .....	<b>6</b>
<b>5</b>	<b>Designation</b> .....	<b>6</b>
<b>6</b>	<b>Marking and technical documents</b> .....	<b>7</b>
<b>7</b>	<b>Symbolization</b> .....	<b>8</b>
<b>8</b>	<b>General design characteristics</b> .....	<b>8</b>
<b>9</b>	<b>Physico-chemical characteristics</b> .....	<b>9</b>
<b>10</b>	<b>Characteristics and tests</b> .....	<b>9</b>
<b>11</b>	<b>Acoustic characteristics</b> .....	<b>14</b>
<b>Annex A (normative) Sampling and test sequence</b> .....		<b>15</b>
<b>Bibliography</b> .....		<b>16</b>

## **Foreword**

This document (EN 14453:2005) 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<sup>o</sup>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.

## EN 14453:2005 (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.

## 1 Scope

This document specifies:

- a) field of application;
- b) requirements for pipe interrupters with permanent atmospheric vent;
- c) dimensional, the physico-chemical properties and the properties of general hydraulic, mechanical and acoustic design of pipe interrupters with permanent atmospheric vent, DN 10 to DN 20;
- d) test method and requirements for verifying these properties;
- e) marking and presentation;
- f) acoustics.

This document specifies the characteristics of pipe interrupters with permanent atmospheric vent, 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 90 °C.

Backflow protection devices integrated in flushing valves are similar to DC and are not covered under this document. The requirements are stated in EN 12541.

## 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*

EN 1717:2000, *Protection against pollution of potable water in drinking 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 — Part 1: Orifice plates, nozzles and Venturi tubes inserted in circular cross-section conduits running full (ISO 5167-1:1991)*

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

## EN 14453:2005 (E)

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 permanent atmospheric vent**

pipe interrupter fitted with air inlet port(s) which is (are) totally unrestricted and permanent. Water flows vertically downwards. The device prevents back flow by venting to atmosphere all the downstream and upstream elements.

For the purpose of this document "pipe interrupter with permanent atmospheric vent DC" is hereafter referred to as "device(s)"

### 4 Nominal size

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

For specifications of threads refer to 8.2.

**Table 1 — Nominal size vs thread size**

<b>DN</b>	10	15	20
<b>Thread size</b>	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$

### 5 Designation

The devices are designated by:

- a) name;
- b) reference to this document (EN 14453);
- c) family, type;
- d) DN;
- e) body material;
- f) acoustic group.

Example for a designation:

Pipe interrupter, EN 14453, family D, type C, DN 20, gun metal, I