

Devices to prevent pollution by backflow of potable water — Automatic diverter — Family H, type C.

ICS 13.060.20

National foreword

This British Standard is the UK implementation of EN 14506:2005.

The UK participation in its preparation was entrusted to Technical Committee B/504/4, Backflow Prevention.

A list of organizations represented on this committee can be obtained on request to its secretary.

The UK technical committee B/504 would like to draw attention to the procedure in 10.4.4.2 in which a low pressure is applied to the device whilst in flow to bath mode. In the opinion of the committee this is unlikely to demonstrate the ability of the device to remain leak tight at the shower outlet when a high bath flow is drawn. Therefore, the committee is of the opinion that instead of a pressure being applied, a flow rate of 0,75 would be a more effective method of testing.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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English version

**Devices to prevent pollution by backflow of potable water -
Automatic diverter - Family H, type C**

Dispositifs de protection contre la pollution de l'eau potable
par retour - Inverseur à retour automatique - Famille H, type
C

Sicherungseinrichtungen zum Schutz des Trinkwassers
gegen Verschmutzung durch Rückfließen - Automatischer
Umsteller - Familie H, Typ C

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

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Foreword

This document (EN 14506:2005) 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of an identical text or by endorsement, at the latest by November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.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.

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 automatic diverters;
- c) dimensional and the physico-chemical properties and the properties of general hydraulic, mechanical and acoustic design of automatic diverters;
- d) test method and requirements for verifying these properties. For sanitary tapware (see Clause 2) with integrated devices, the automatic diverter is only considered to be a backflow protection device if it has passed the requirements of this document and additionally those of the applicable product standard for the draw off tap or mixing valve;
- e) marking and presentation;
- f) acoustics.

This document specifies the characteristics of automatic diverters 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. They are intended only for installation with no downstream closing device.

This document is applicable to the product type indicated as follows:

- i) integrated in spout (outlet);
- ii) integrated in the mixing body;
- iii) non-integrated (part of a set) above the maximum water level.

This document is not applicable to the product type non-integrated below the maximum water level.

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 200, *Sanitary tapware — Single taps and combination taps (PN 10) - General technical specification*

EN 248, *Sanitary tapware — General specification for electrodeposited coatings of Ni-Cr*

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

EN 817, *Sanitary tapware — Mechanical mixers (PN 10) — General technical specifications*

EN 1111, *Sanitary tapware — Thermostatic mixing valves (PN 10) — General technical specification*

EN 1112, *Shower outlets for (PN 10) sanitary tapware*

EN 1113, *Showers hoses for (PN 10) sanitary tapware*

EN 1286, *Sanitary tapware — Low pressure mechanical mixing valves — General technical specification*

EN 1287, *Sanitary tapware — Low pressure thermostatic mixing valves — General technical specifications*

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 3822-2, *Acoustics — Laboratory tests on noise emission from appliances and equipment used in water supply installations — Part 2: Mounting and operating conditions for draw-off taps and mixing valves (ISO 3822-2:1995)*

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 and EN 806-1:2000 and the following apply.

automatic diverter

part of sanitary tapware capable of switching the water supply from the shower hose outlet (secondary outlet) to the bath outlet (primary outlet) in the event of insufficient supply pressure. It incorporates the following characteristics:

- a) means of manually diverting flow to a hose outlet and of maintaining diversion as long as a positive supply pressure is maintained;
- b) automatic closure of the hose outlet with anticipation and return to air gap discharge when the supply pressure falls below a prescribed minimum;
- c) sufficient mechanical loading to maintain closure of the hose outlet in the event of a negative supply pressure.

For the purpose of this document "automatic diverter HC "is hereafter referred to as "device(s)"

4 Nominal size and pressure ranges

The nominal size of non-integrated devices (DN) shall correspond to the denomination of the thread according to Table 1.

Nominal size is not applicable to integrated devices.

For specifications of threads please see 8.2.