# SLOVENSKI STANDARD
# SIST EN 13076:2003

**01-oktober-2003**

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**Naprave za varovanje pred onesnaženjem pitne vode zaradi povratnega toka - Neoviran prosti iztok - Družina A - Tip A**

Devices to prevent pollution by backflow of potable water - Unrestricted air gap-Family A - Type A

Sicherungseinrichtungen zum Schutz des Trinkwassers gegen Verschmutzung durch Rückfließen - Ungehinderter freier Auslauf-Familie A - Typ A, Freie Ausläufe Typ AA



Dispositifs de protection contre la pollution de l'eau potable par retour - Surverse totale - Famille A, type A



**Ta slovenski standard je istoveten z:** **EN 13076:2003**

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**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 13076:2003** **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

**EN 13076**

March 2003

ICS 13.060.20; 23.060.01

English version

# Devices to prevent pollution by backflow of potable water - Unrestricted air gap-Family A - Type A

Dispositifs de protection contre la pollution de l'eau potabble par retour - Surverse totale-Famille A - Type A

Sicherungseinrichtungen zum Schutz des Trinkwassers gegen Verschmutzung durch Rückfließen - Ungehinderter freier Auslauf-Familie A - Typ A, Freie Ausläufe Typ AA

This European Standard was approved by CEN on 28 November 2002.

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 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 Management Centre has the same status as the official versions.



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

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Ref. No. EN 13076:2003 E

# Contents

## Foreword

This document (EN 13076:2003) 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 September 2003, and conflicting national standards shall be withdrawn at the latest by September 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland 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 standard:

a) this standard provides no information as to whether the product may be used without restriction in any 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 European standard specifies the characteristics and the requirements of unrestricted air gaps Family A Type A intended for protection of potable water in water installations from pollution.

This standard applies to air gaps in factory assembled products and to constructed air gaps in situ, and defines the physico-chemical characteristics of materials of construction used for the purpose and application to ensure compliance with this standard during normal working use.

# 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies(including amendments).

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

# 3 Terms and definitions



For the purposes of this European Standard, the terms and definitions of EN 1717:2000 and the following terms and definitions apply.



**3.1**
**unrestricted air gap Family A – Type A**



'AA' air gap is a visible, unobstructed and complete air gap, placed permanently and vertically between the lowest point of the feed inlet orifice and surface of the receiving vessel that determines the maximum operational level at which the device overflows

NOTE See Figure 1 for the design principle.

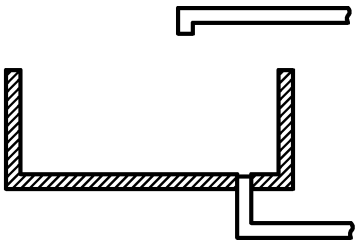

**Figure 1 — Design principle**

**3.2**
**spillover level**
level at which water will start to overflow the receiving vessel with all outlets closed

**3.3**
**diameter of feed pipe (bore "D")**
diameter 'D' is the maximum internal diameter found within the last metre of the supply pipe or the DN of the inlet connection

NOTE the dimension is in millimetres.

**3.4**
**maximum level**
highest water level 'H' reached above the spillover level under positive pressure fault condition with all outlets closed

**3.5**
**splashing**
when contamination from microbiological or viral elements is likely to occur and when maintaining the maximum flow rate at the normal operational water level, will contact be observed between the upstream components, and the liquid in the receiving vessel due to the splashing, foaming or turbulence, the air gap will be increased to a point where no contact is observed

## 4 Designation

An unrestricted air gap Family A – Type A is designated by:

— its name;

— its family and its type;

— its denomination (see 3.3 DN or D);

— the reference to this standard.

EXAMPLE for a designation

Air gap Family A - Type A DN 15, EN 13076.



## 5 Symbolization

The graphic representation of the unrestricted air gap Family A – Type A is as follows (see Figure 2).

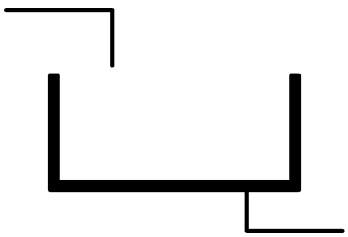

**Figure 2 — Graphic symbol**

## 6 Materials

The manufacturer shall state the type of materials chosen in his technical and commercial documents.

The materials used in water installations, including the materials of protection units in contact with drinking water, shall satisfy the European standards and national acceptance criteria and/or national restrictions for use currently in force in EU and EFTA.

They shall be compatible with each other, with the water supply and with the fluids or substances that can come in contact with them.

There are no special requirements concerning the materials downstream of the atmospheric outlet opening provided they do not have any harmful effect on the upstream part.

# 7 Requirements

## 7.1 General

The protection assembly comprises two parts:

— a water inlet device;

— a receiving vessel (container).

The feed pipe and any flow control device shall be external to any of the receiving vessel walls. The assembly shall be fixed so that the air gap is permanently maintained and unrestricted.

## 7.2 Water inlet device

a) every float-operated valve or other device which controls the inflow of water to a receiving vessel shall be securely and rigidly fixed;

b) every feed pipe supplying water to such a valve or other device shall be fixed in its position to prevent it from moving or buckling;

c) the direction of flow from a feed pipe into the receiving vessel shall be into air at atmospheric pressure, downwards and not more than 15° from the vertical;

d) the discharge from the feed pipe shall not be compromised by any object within 2'D', measured horizontally and vertically downward (see Figure 4).



Where non-circular pipes are used, the bore shall be taken as the internal diameter of a circular pipe having the same cross-sectional areas as the non-circular pipe.