

Antipollution of water installations

Technical document 045-09

Devices incorporated in an equipment item

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Modification history

| Revision No. | Date | Modifications |
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| 15 | 01/07/2017 | Update to the document introduction and reference. Basic modifications: Part 3 Inspection procedures employed by the CSTB: Paragraph 3.3 re "Sampling" modified. |
| 16 | 25/07/2022 | Editorial update according to the structure in force following the creation of the Technical management appendix of the NF045 reference system rev. 17. |

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1 TECHNICAL SPECIFICATIONS

This document gives the technical characteristics of the components and antipollution protection devices incorporated in an equipment item connected to the potable water system.

The use to which these devices are put differs from that described in the standard documents.

As integrated devices are subject to different stresses than non-integrated devices, the test requirements may be altered accordingly.

This document does not define the type of antipollution protection system required to protect the potable water system.

Note: Only the health authorities are authorised to define the protections required.

1.1 General

1.1.1 Purpose

The purpose of this document is to:

- define the technical requirements of the components and protection devices built into appliances that are connected to the potable water system,
- remind the reader of the sanitation safety requirements of the product standards applicable to such components and protection devices,
- define the marking and presentation.

1.1.2 Standard and technical references

NF EN 1717:2001, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

1.1.3 Definitions

For the purposes of this document, the terms and definitions given in Standard NF EN 1717, as well as the following ones apply.

1.1.3.1 Integrated component: Element fulfilling the antipollution function (e.g. EB cartridge) and designed to prevent contamination of potable water by backflow into the systems.

Antipollution protection assemblies built into appliances are comprised of a combination of the components or functions described in Appendix A of Standard NF EN 1717.

1.1.3.2 Integrated protection device: Device built into an appliance and intended to prevent contamination of potable water by backflow into the appliance. The device shall meet the essential sanitation safety requirements.

1.1.3.3 Appliance: Any functional device connected to the potable water system (boiler, washing machine, dilution system, etc.).

1.2 Marking

The device shall be marked in a permanent manner, visible on the body.

It shall indicate the following as a minimum requirement:

Table 1 – Marking

| Marking | Protection device | Integrated component |
|--|-------------------|----------------------|
| The holder's name or logo | X | (*) |
| Arrow indicating the direction of flow | X | (*) |
| The NF logo | X | X |

(*) Optional.

1.3 Technical documentation and packaging

A technical document defining the limits of use or final intended use of the incorporated device (e.g. specially dimensioned check valve solely intended for installation in an appliance such as a meter box, etc.) shall be provided.

Technical documentation with the integration procedures (installation and assembly) shall be supplied to the user of the device in accordance with the requirements of Standard NF EN 1717.

It shall indicate the following:

Table 2 – Technical documentation and packaging

| Information | To be placed on | |
|---|-----------------|-----------|
| | Documentation | Packaging |
| The holder's name or logo | X | X |
| The family & type | X | X |
| The nominal dimension (DN) | X (*) | X (*) |
| The pressure rating (PN) | X | X |
| The maximum working temperature (°C) | X | X |
| An indication of the device flow rate (l/min) | optional | optional |
| The acoustic class | optional | optional |
| The holder's reference | X | X |
| The NF logo | X | X |

(*) Where applicable

1.4 Characteristics and tests

This chapter defines the minimum standard requirements to be checked according to device type.

Table 3 – Characteristics and tests

| DESIGNATION OF THE DEVICE | STANDARDS | Essential sanitation requirements to be verified (paragraph number in the standard) |
|---|-------------|---|
| BA backflow preventer | NF EN 12729 | Paragraph Nos. 7; 8; 9.5.2 (*); 9.6; 9.7.3 (**); 9.7.4; 9.7.5; 9.7.8 and 10. 9.7.9, where applicable. |
| CA a and b backflow preventers | NF EN 14367 | Paragraph Nos. 7; 8; 9.5.3 (*); 9.5.4; 9.6; 9.7.3; 9.7.5 and 10. |
| Check valves | NF EN 13959 | Paragraph Nos. 9; 11.5; 11.6; 11.7; 11.8; 11.9 (*); 11.10; 11.11; 11.12 and 12.1. |
| HA backflow preventer | NF EN 14454 | Paragraph Nos. 8; 9; 10.4; 10.6; 10.8; 10.9 (*); 10.10 and 10.11. |
| DA anti-vacuum valve | NF EN 14451 | Paragraph Nos. 8; 9; 10.4; 10.5; 10.8 (*); 10.9 and 10.10. |
| DB pipe interrupter with atmospheric vent | NF EN 14452 | Paragraph Nos. 8; 9; 10.4; 10.7; 10.8 (*); 10.9 and 10.10. |
| DC pipe interrupter with permanent atmospheric vent | NF EN 14453 | Paragraph Nos. 8; 9 and 10.5. |
| AA air gaps | NF EN 13076 | Paragraph Nos. 6 and 7. |
| AD air gaps | NF EN 13079 | Paragraph Nos. 6 and 7. |

(*): This test can be adapted to suit the field of application (T°C, etc.).

(**): This requirement will be verified under device use flow conditions.

The other standard requirements that have not been cited may or may not be tested, depending upon how the integration into the appliance is done and whether or not the data supplied by the manufacturer departs from the standard.