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Sanitary tapware - Mechanical mixing valves (PN 10) -
General technical specifications

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 817:2024 sisaldab Euroopa standardi EN 817:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 25.09.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 817:2024 consists of the English text of the European standard EN 817:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 25.09.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 91.140.70

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EUROPEAN STANDARD

EN 817

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 817:2008

English Version

Sanitary tapware - Mechanical mixing valves (PN 10) - General technical specifications

Robinetterie sanitaire - Mitigeurs mécaniques (PN 10)
- Spécifications techniques générales

Sanitärarmaturen - Mechanisch einstellbare Mischer
(PN 10) - Allgemeine technische Spezifikation

This European Standard was approved by CEN on 21 July 2024.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 817:2024) 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of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 817:2008.

In comparison with the previous edition, the following technical modifications have been made:

- all test of hydraulic performance, acoustic characteristics and leaktightness have been completely revised;
- new endurance test for single sequential control devices has been created;
- figures, tables and dimensions have been revised;
- normative references have been updated.

This document acknowledges the field of application for mechanical mixing valves used in water supply systems of type 1 (see Figure 1 and Table 1) with a pressure range of (0,05 to 1,0) MPa [(0,5 to 10) bar].

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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 document, this document provides no information as to whether the product can be used without restriction in any of the Member States of the EU or EFTA.

NOTE Attention is drawn to existing national regulations that might apply concerning the use and/or the characteristics of these products.

This document identifies characteristics and technical requirements for mechanical mixing valves.

This document is a preview generated by EVS

1 Scope

This document specifies:

- a) the field of application for mechanical mixing valves for use in a supply system of Type 1 (see Figure 1);
- b) the dimensional, leaktightness, pressure resistance, hydraulic performance, mechanical strength, endurance, corrosion resistance of the surface of the product, sequence of testing and acoustic characteristics with which sanitary tapware products including their components (flexible hose, pull out spray) need to comply where applicable;
- c) test methods to verify the characteristics.

The tests described in this document are type tests (laboratory tests) and not quality control or factory production control (FPC) tests carried out during manufacture.

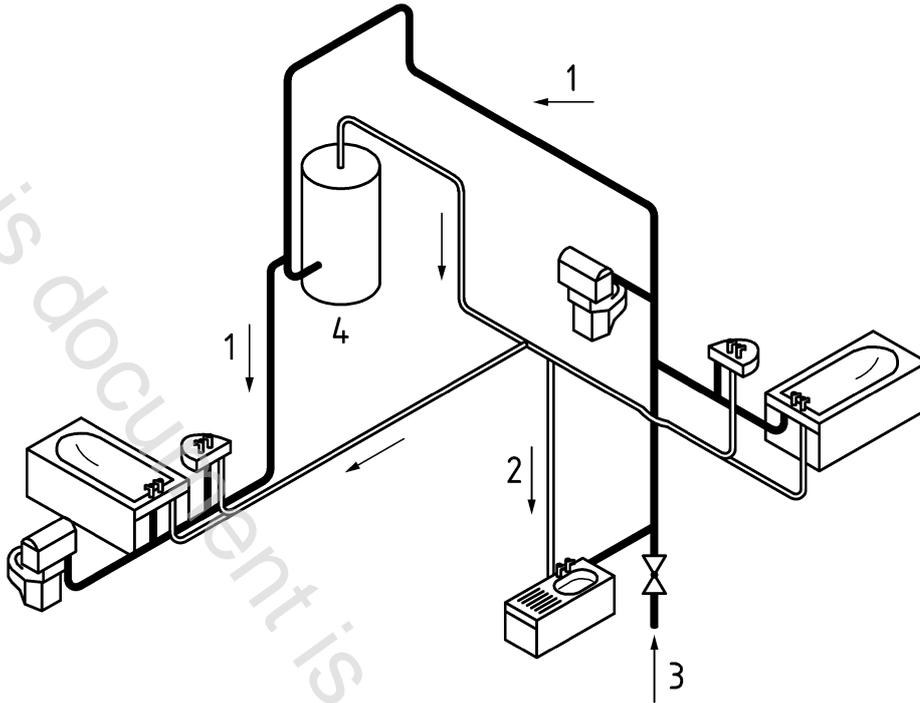
This document applies to draw-off taps (mechanical mixing valves) for use with sanitary appliances installed in rooms used for personal hygiene (cloakrooms, bathrooms, etc.) and for food preparation (kitchens), i.e. for use with baths, wash basins, bidets, showers and sinks.

The conditions of use and classifications are given in Table 1.

Table 1 — Conditions of use

Water Supply System	Operating Range of Taps	
	Limits	Recommended ^a
Type 1 see Figure 1	<u>Dynamic Pressure</u> $\geq 0,05 \text{ MPa}$ (0,5 bar) <u>Static Pressure</u> $\leq 1,0 \text{ MPa}$ (10,0 bar)	<u>Dynamic Pressure</u> (0,1 to 0,5) MPa [(1,0 to 5,0) bar]
Temperature	$\leq 70 \text{ }^\circ\text{C}$	$\leq 65 \text{ }^\circ\text{C}$
^a Measured at the point of discharge		

Figure 1 shows a supply system of Type 1 with a pressure range of (0,05 to 1,0) MPa [(0,5 to 10) bar].



Key

- 1 cold water
- 2 hot water
- 3 mains supply pipe (Supply pressures up to 10 bar)
- 4 water heater

Figure 1 — Supply system of Type 1 with a pressure range of (0,05 to 1,0) MPa [(0,5 to 10) bar]

Final materials included in the product are not covered by this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 for water supply systems of type 1 and type 2 — General technical specification*

EN 246, *Sanitary tapware — General specifications for aerators*

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

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

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

EN 13618, *Flexible hose assemblies in drinking water installations — Functional requirements and test methods*

EN 13959, *Anti-pollution check valves — DN 6 to DN 250 inclusive family E, type A, B, C and D*

EN 14506, *Devices to prevent pollution by backflow of potable water — Automatic diverter — Family H, type C*

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)*

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)*

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)*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

sanitary tapware aerator

device which is fitted at the outlet of a sanitary tapware product to impact the flow rate and stream appearance of the water stream

Note 1 to entry: A distinction is made between stream appearance:

- a) aerators without air intake, (known as “laminar” stream);
- b) aerators with air intake;
- c) spray models (numerous single jets).

Note 2 to entry: See EN 246.

3.2

anti-pollution device

device to prevent pollution by backflow of potable water

Note 1 to entry: Refer to EN 1717 for anti-pollution devices and their specific use.

3.3

cold water

water with a temperature ≤ 30 °C, unless specified for a specific test

3.4

diverter

moveable component for changing the direction of water flow between optional outlets