SLOVENSKI STANDARD
SIST EN 817:2009

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Nadomeģ a:
SIST EN 817:1997

Sanitarne armature - Mehansko nastavljiva meģalna armatura (PN 10) - Sploģne tehniļ ne zahteve

Sanitary tapware - Mechanical mixers (PN 10) - General technical specifications

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

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

Ta slovenski standard je istoveten z: **EN 817:2008**

ICS:

91.140.70	Sanitarne naprave	Sanitary installations

SIST EN 817:2009 **en,fr,de**

EUROPEAN STANDARD

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ICS 91.140.70

Supersedes EN 817:1997

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 29 May 2008.

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

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Foreword

This document (EN 817:2008) 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of an identical text or by endorsement, at the latest by December 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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

This document supersedes EN 817:1997.

This European Standard acknowledges the field of application for mechanical mixing valves used in water supply systems with a pressure range of (0,05 to 1,0) MPa (0,5 bar to 10 bar).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, 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 European Standard.

This European Standard provides no information as to whether the product can be used without restriction in any of the Member States of the EU or EFTA.

It should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of these products remain in force.

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

1 Scope

This European Standard specifies:

— the dimensional, leaktightness, pressure resistance, hydraulic performance, mechanical strength, endurance and acoustic characteristics with which mechanical mixing valves need to comply;

— test methods to verify the characteristics.

The tests described in this European Standard are type tests (laboratory tests) and not quality control tests carried out during manufacture.

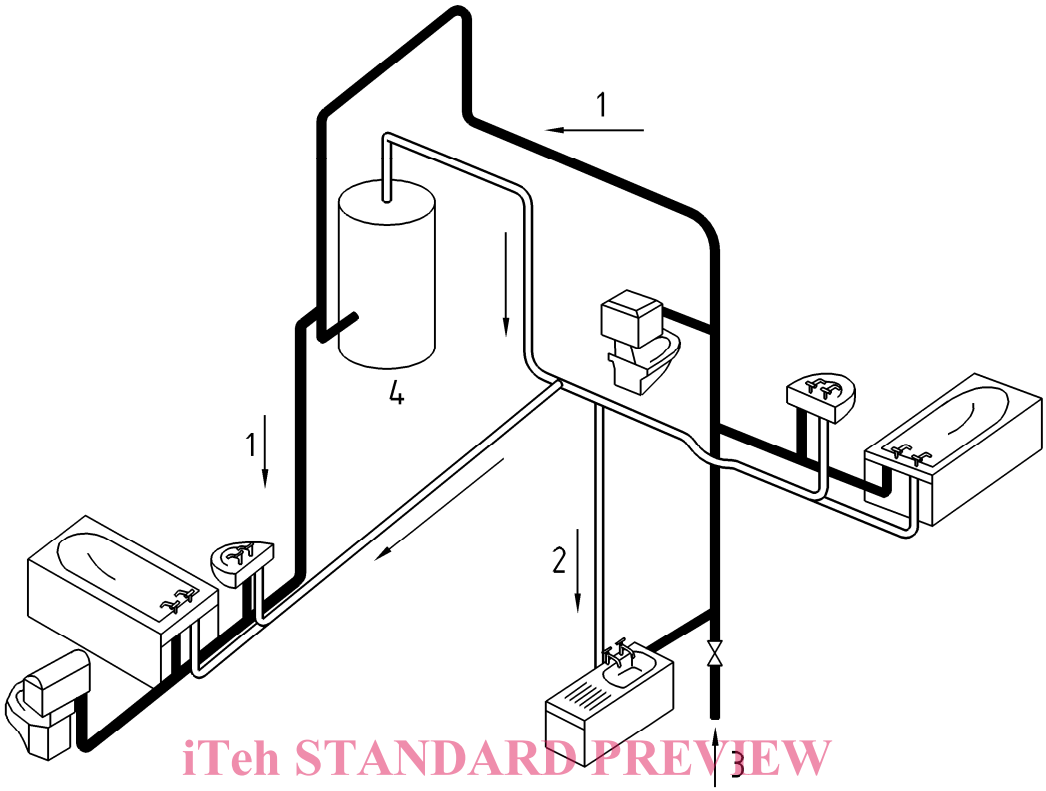
This European Standard applies to PN 10 mechanical mixing valves for use with sanitary appliances installed in rooms used for bodily hygiene (cloakrooms, bathrooms, etc.) and in kitchens, i.e. for use with baths, wash basins, bidets, showers and sinks.

The conditions of use and classifications are given in 0.

Table 1 — Conditions of use/classifications

Water supply system	**Operating range of mechanical mixing valves**		**Flow rate classes**	**Acoustics**	**Marking**
	Limits	**Recommended**	**See 0**	**See Clause 14**	**See Clause 4**
Pressure	Dynamic pressure ≥ 0,05 MPa (0,5 bar) Static pressure ≤ 1,0 MPa (10,0 bar)	Dynamic pressure (0,1 to 0,5) MPa [(1,0 to 5,0) bar]	Z ≤ 0,15 l/s A ≤ 0,25 l/s S ≤ 0,33 l/s B ≤ 0,42 l/s C ≤ 0,50 l/s D ≤ 0,63 l/s	Group I - Group II – unclassified	for example IA IIC / B I /- [a] II /- [a]
Temperature	≤ 90 °C	≦ 65 °C			
[a] Without flow rate class: mechanical mixing valves without interchangeable outlet accessories are tested with the original outlet accessories of the manufacturer and are not marked with a flow rate class.					

NOTE Mechanical mixing valves for use at pressures lower than those in Table 1 are covered by EN 1286.



Key

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

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

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 246, *Sanitary tapware — General specifications for flow rate regulators*

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

EN 1112, *Sanitary tapware – Shower outlets for sanitary tapware for water supply systems of type 1 and type 2 – General technical specification*

EN 1113, *Sanitary tapware – Shower hoses for sanitary tapware for water supply systems of type 1 and type 2 – General technical specification*

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

prEN 13618-1, *Hose assembly — Flexible hose assembly — Part 1: Product standard for flexible hose assembly (with or without braiding)*

prEN 13618-2, *Water supply — Hose assembly — Part 2: Semi-rigid hose assembly*

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 228-1:2000)*

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 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 (ISO 3822-4:1997)*

3 Terms, definitions and designation

3.1 Terms and definitions

For the purpose of this document, the following term and definition applies.

mechanical mixing valve
valve which mixes hot and cold water and which, by means of a control device, allows the user to adjust between ‘all cold water’ and ’all hot water’, which implies the flow rate of the mixture obtained may be adjusted between ‘no flow’ and ‘maximum flow’ using either the same control device or another separate control device

3.2 Designation

Mechanical mixing valves covered by this European Standard are designated by the characteristics identified in 0.

Table 2 — Designation

Tapware according to application (see 0)	
Type of valve	Mechanical mixing valve
Intended use	Basin, bidet, sink, bath or shower
Mounting method	Horizontal or vertical surfaces
Body	Single or multi-hole, visible, or concealed
Diverter	With or without diverter
Type of outlet	Fixed, moveable, divided outlet spout, with or without flow rate regulator
Acoustic group and classification	Group I, or group II, or unclassified
Water saving properties	Yes / no
Flow rate class	Z, A, S, B, C, D
Reference to this European Standard	EN 817

Example of designation:

Mechanical mixing valve for bath/shower, 2-hole with combined visible body, mounting on horizontal surface, diverter, fixed outlet, flow rate classes C/B, with acoustic group I, EN 817.

4 Marking and identification

4.1 Marking

Mechanical mixing valves shall be marked permanently and legibly with:

— the manufacturer's or agent's name or identification - on the body or handle;

— the manufacturer's name or identification - on the cartridge (not applicable when the cartridge is of special design to suit the body);

— the acoustic group (see 0) and the flow rate class(es) (see 0), if applicable - on the body.

For water saving mixing valves, appropriate information to installers and users shall be provided.

NOTE In the case of bath/shower mixing valves, the flow rate is indicated by the first letter for the bath outlet and by the second letter for the shower outlet.

Examples of marking:

Name or identification and IA, or IIA (acoustic group and flow rate class(es))

Name or identification and I/-, or II/- (acoustic group, without flow rate class(es))

Name or identification and IC/A, or IIC/A (bath/shower tap; the first letter for the bath outlet, the second letter for the shower outlet).

4.2 Identification

The control devices for mechanical mixing valves shall be identified:

— for cold water by the colour blue or word/letters for cold;

— for hot water by the colour red or word/letters for hot;

— any other suitable means.

5 Materials

5.1 Chemical and hygiene requirements

All materials coming into contact with water intended for human consumption shall present no risk to health.

They shall not cause any change of the drinking water in terms of quality, appearance, smell or taste.

5.2 Exposed surface conditions

Visible chromium plated surfaces and Ni-Cr coatings shall comply with the requirements of EN 248.

6 Dimensional characteristics

6.1 General remarks

The design and construction of components without defined dimensions permit various design solutions to be adopted by the manufacturer.

Special cases are covered in 6.5.

6.2 Inlet dimensions

Inlet dimensions shall be as specified in Table 3, 0, 0 and 0.

Table 3 — Inlet dimensions (mechanical mixing valve)

Dimensions (mm)			Comments
Shank, union, captive nut			
A	G ½ B	Shank, union	In accordance with EN ISO 228-1
A 2	9 min	Captive nut	Useful thread length
A 3	15 min	Shank, Union (straight or eccentric)	
Connecting centres			
G [a]	150 ± 1	2 – hole wall mounted	Supply connection, Straight unions
G 1	140 to 160		- with eccentric unions (extension of this range is permitted)
Inlet connections			
N 1	12,3 + 0,2	Type A	
N 2	5 min		
N 1	15,2 ± 0,05	Type B	
N 2	13 min	30° chamfer/flat 0,3	
N 1	14,7 + 0,3	Type C	
N 2	6,4 min		
N 1	19,9 + 0,3	Type C	
N 2	6,4 min		
T		Plain end ∅ 10 or 12 or 15 or G ½ or G 3/8 male or female	Copper tube(s) or flexible hose(s)
U	350 min		Tube(s) or flexible hose(s) Flexible hoses in accordance with prEN 13618-1 and/or prEN 13618-2

[a] Other dimensions are permissible (for replacement) when market tradition requires it, provided the manufacturer specifies the actual dimension in literature to avoid confusion with the standard dimension – which can be achieved using an excentric connection.