

**Sanitary tapware - Low pressure mechanical  
mixing valves - General technical specifications**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1286:2001 sisaldab Euroopa standardi EN 1286:1999 ingliskeelset teksti.

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**English version**

Sanitary tapware

**Low pressure mechanical mixing valves**

General technical specification

Robinetterie sanitaire – Mitigeurs  
mécaniques basse pression –  
Spécifications techniques générales

Sanitärarmaturen – Mechanisch  
einstellbare Mischer für die  
Anwendung im Niederdruckbereich –  
Allgemeine technische Spezifikation

This European Standard was approved by CEN on 1999-04-01.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

## Contents

<b>1</b>	<b>Scope</b>	<b>4</b>
<b>2</b>	<b>Normative references</b>	<b>4</b>
<b>3</b>	<b>Definition</b>	<b>5</b>
<b>4</b>	<b>Classification</b>	<b>5</b>
4.1	Single control mechanical mixing valves	5
4.2	Other mechanical mixing valves	5
<b>5</b>	<b>Designation</b>	<b>5</b>
<b>6</b>	<b>Marking - Identification</b>	<b>6</b>
6.1	Marking	6
6.2	Identification	6
<b>7</b>	<b>Materials</b>	<b>6</b>
7.1	Chemical and hygienic characteristics	6
7.2	Exposed surface condition and quality of coating	7
<b>8</b>	<b>Dimensional characteristics</b>	<b>7</b>
8.1	General comment on drawing	7
8.2	Low pressure mechanical mixing valves mounted on horizontal surfaces	7
8.3	Mechanical mixing valves mounted on vertical surfaces	18
8.4	Dimensions of water outlets	21
8.5	Special cases	23
<b>9</b>	<b>Leaktightness characteristics</b>	<b>24</b>
9.1	General	24
9.2	Test methods	24
9.3	Leaktightness of the mixing valves upstream of the obturator and of the obturator	26
9.4	Leaktightness of the obturator : cross flow between hot water and cold water	26
9.5	Leaktightness of the mixing valves downstream from the obturator	26
9.6	Leaktightness of manual diverters	27
9.7	Leaktightness of diverters with automatic return	27
9.8	Summary of requirements	29
<b>10</b>	<b>Hydraulic operating characteristics</b>	<b>29</b>
10.1	General	29
10.2	Test method	29
10.3	Apparatus	29
10.4	Mounting and initial set-up procedure	31
10.5	Determination of flow rate	32
10.6	Sensitivity	33
<b>11</b>	<b>Mechanical performance under pressure</b>	<b>34</b>
11.1	General	34
11.2	Apparatus	35
11.3	Testing the mechanical performance upstream of the obturator - Obturator in the closed position	35
11.4	Testing the mechanical performance downstream of the obturator - Obturator in the open position	35
<b>12</b>	<b>Mechanical endurance characteristics</b>	<b>35</b>
12.1	Mechanical endurance of the control device	35
12.2	Mechanical endurance of diverters	40
12.3	Mechanical endurance of swivel nozzles	41
<b>13</b>	<b>Torsion resistance characteristics of the control</b>	<b>42</b>
13.1	General	42
13.2	Test method	43

<b>14 Protection against pollution of drinking water</b> .....	<b>43</b>
Annex A (normative) <b>Design of reducing adaptors</b> .....	<b>44</b>
Annex B (normative) <b>Examples of pressure take-off tees</b> .....	<b>45</b>
Annex C (informative) <b>Low hydraulic resistance fittings</b> .....	<b>47</b>
Annex D (informative) <b>Summary of leaktightness tests</b> .....	<b>48</b>

## Foreword

This European Standard 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 October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 :

- 1) this standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA ;
- 2) 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 requirements for low hydraulic resistance mechanical mixing valves suitable for use in low pressure water supply systems as described in informative Annex C.

This European Standard specifies :

- the dimensional, leaktightness, mechanical and hydraulic performance, mechanical endurance characteristics with which low pressure mechanical mixing valves shall comply ;
- the procedure for testing these characteristics.

It is applicable :

- to low pressure mechanical mixing valves, intended for use on sanitary appliances in washrooms (toilets, bathrooms etc.) and in kitchens ;
- to low pressure mechanical mixing valves used under the following pressure and temperature conditions given in table 1.

**Table 1 - Conditions for the use of low pressure mechanical mixing valves**

	Limits of use	Recommended limits for correct operation
Dynamic pressure	0,02 to 0,1 MPa (0,1 to 1 bar)	0,02 MPa ≤ P ≤ 0,1 MPa (0,2 bar ≤ P ≤ 1,0 bar)
Hot water temperature	T ≤ 90 °C	55 ≤ T ≤ 65 °C
Cold water temperature	T ≤ 25 °C	T ≤ 25 °C
Mechanical strength <sup>1)</sup>	static pressure = 1 MPa (10 bar)	
For low pressure mechanical mixing valves complying with this table there are no acoustical requirements. Low pressure mechanical mixing valves complying with this standard may also be used with inlet supply pressures in the range from 0,1 MPa to 0,2 MPa (1,0 bar to 2,0 bar) on condition that acoustical performance is not a requirement of the installation.		
<sup>1)</sup> Low pressure mechanical mixing valves are designed to provide sufficient mechanical strength for operation at 1 MPa (10 bar) static pressure.		

NOTE Mechanical mixing valves for use at pressures in excess than those in Table 1 are covered by EN 817.

## 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.

EN 31, Pedestal wash basins - Connecting dimensions.

EN 32, Wall hung wash basins - Connecting dimensions.

EN 35, Pedestal bidets over rim supply only - Connecting dimensions.

EN 36, Wall hung bidets over rim supply only - Connecting dimensions.

EN 111, Wall hung rinse basins - Connecting dimensions.

EN 232, Baths - Connecting dimensions.

EN 246, Sanitary tapware - General specifications for flow rate regulators.

EN 248, Sanitary taps - General technical specifications for electrodeposited nickel chrome coatings.

EN 695, Kitchen sinks - Connecting dimensions.

EN 817, Sanitary tapware - Mechanical mixers (PN 10) - General technical specifications.

EN 1254-2, Copper and copper alloys - Plumbing fittings - Part 2 : Fittings with compression ends for use with copper tubes.

prEN 1717, Protection against pollution of potable water in drinking water installations and general requirements of devices to prevent pollution by backflow.

ISO 228-1, Pipe threads where pressure-tight joints are not made on the threads - Part 1 : Dimensions, tolerances and designation.

ISO 5167-1:1991, Measurement of fluid flow by means of pressure differential devices - Part 1 : Orifice plates, nozzles and Venturi tubes inserted in circular cross-section conduits running full.

### 3 Definition

For the purposes of this Standard, the following definition applies :

#### 3.1

##### **mechanical mixing valve**

valve which by means of a control device mixes hot and cold water between the "all cold water" position and the "all hot water" position and adjusts the flow rate of the mixture obtained between the "no flow" and "maximum flow" positions, either using the same control device or another separate control device

### 4 Classification

There are two types of low pressure mechanical mixing valves :

#### 4.1 Single control mechanical mixing valves

Mechanical mixing valves with a single control device for adjusting flow rate and temperature.

#### 4.2 Other mechanical mixing valves

Mechanical mixing valves with separate control devices for adjusting flow rate and temperature.

### 5 Designation

A low pressure mechanical mixing valve is designated by :

- its type (see clause 4) ;
- its nominal size (1/2 or 3/4) (see table 4), with or without diverter (see table 2) ;
- type of body (see table 2) ;
- type of nozzle (see table 2) ;