

Sanitary tapware - Thermostatic mixing valves (PN 10) - General technical specification

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1111:2001 sisaldab Euroopa standardi EN 1111:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1111:2001 consists of the English text of the European standard EN 1111:1998.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies: - the dimensional, leaktightness, mechanical and hydraulic performance, mechanical endurance and acoustic characteristics with which thermostatic mixers shall comply; - the procedures for testing these characteristics. It is applicable: - to thermostatic mixing valves intended for use on sanitary appliances in washrooms (toilets, bathrooms etc.) and in kitchens; - to PN 10 thermostatic mixing valves used under pressure and temperature conditions given in table 1.</p>	<p>Scope:</p> <p>This European Standard specifies: - the dimensional, leaktightness, mechanical and hydraulic performance, mechanical endurance and acoustic characteristics with which thermostatic mixers shall comply; - the procedures for testing these characteristics. It is applicable: - to thermostatic mixing valves intended for use on sanitary appliances in washrooms (toilets, bathrooms etc.) and in kitchens; - to PN 10 thermostatic mixing valves used under pressure and temperature conditions given in table 1.</p>
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English version

Sanitary tapware

Thermostatic mixing valves (PN 10)

General technical specification

Robinetterie sanitaire – Mitigeurs
thermostatiques (PN 10) –
Spécifications techniques générales

Sanitärarmaturen – Thermostatische
Mischer (PN 10) – Allgemeine
technische Spezifikation

This European Standard was approved by CEN on 1998-05-07.

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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

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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 November 1998, and conflicting national standards shall be withdrawn at the latest by November 1998.

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 state 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 :

- the dimensional, leaktightness, mechanical and hydraulic performance, mechanical endurance and acoustic characteristics with which thermostatic mixing valves shall comply ;
- the procedures for testing these characteristics.

It is applicable :

- to thermostatic mixing valves intended for use on sanitary appliances in washrooms (toilets, bathrooms etc.) and in kitchens ;
- to PN 10 thermostatic mixing valves used under the pressure and temperature conditions given in table 1.

This standard allows for the use of thermostatic mixing valves to supply a single outlet or a small number of outlets in a "domestic" application (e.g. one valve, controlling a shower, bath, basin, bidet). But excludes valves specifically designed for supplying a large number of outlets (i.e. for institutional use).

Table 1 : Conditions for the use of thermostatic mixing valves

	Limits of use	Recommended limits for correct operation
Dynamic pressure	0,05 MPa (0,5 bar) min.	$0,1 \text{ MPa} \leq P \leq 0,5 \text{ MPa}$ (1 bar $\leq P \leq$ 5 bar)
Static pressure	1 MPa (10 bar) max.	
Hot water temperature	$T \leq 90 \text{ }^{\circ}\text{C}$	$55 \text{ }^{\circ}\text{C} \leq T \leq 65 \text{ }^{\circ}\text{C}$
Cold water temperature		$T \leq 25 \text{ }^{\circ}\text{C}$
NOTE : Thermostatic mixing valves intended for use at flow pressures below those in this table are covered by prEN 1287.		

2 Normatives references

This European Standard incorporates by dated or undated references 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 hand rinse basins - Connecting dimensions
EN 200	Sanitary tapware - General technical specifications for single taps and mixer taps (Nominal size 1/2) PN 10 - Minimum flow pressure of 0,05 MPa (0,5 bar)
EN 232	Baths - Connecting dimensions
EN 246	Sanitary tapware - General specifications for flow rate regulators
EN 248	Sanitary tapware - General technical specifications for electrodeposited nickel chrome coatings
EN 695	Kitchen sinks - Connecting dimensions
prEN 1717	Protection against pollution of potable water in drinking water installations and general requirements of devices to prevent pollutions by backflow
prEN ISO 3822-1	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 1 : Method of measurement (ISO/DIS 3822-1:1995)
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 3822-3	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 3 : Mounting and operating conditions for in-line valves and appliances

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

3 Definition

For the purposes of this standard the following definition applies :

thermostatic mixing valve : A valve, with one or more outlets, which mixes hot and cold water and automatically controls the mixed water to a user selected temperature. The flow rate between no flow and maximum flow conditions can be effected either by the same control device or a separate flow control device, where fitted.

4 Classification

This classification covers the following types of thermostatic mixing valves :

Type 1 - Single control : Thermostatic mixing valves with a single control device for regulating flow rate and temperature ;

Type 2 - Dual control : Thermostatic mixing valves with two separate control devices for regulating flow rate and temperature ;

Type 3 - Single sequential control : Thermostatic mixing valves with a single control which operates through a predetermined sequence of flow and temperature. It shall have a shut-off device ;

Type 4 - Thermostatic mixing valves without flow control device ;

Type 5 - Other : Thermostatic mixing valves with special control devices.

5 Designation

The thermostatic mixing valves covered by this standard are designated as follows :

- 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) ;
- the sanitary appliance on which it is to be used (table 2) ;
- the method of mounting (see table 2) ;
- its acoustic group and flow rate classes (clause 14) ;