

norm**NEN-EN 817**

Sanitaire kranen - Mechanisch instelbare mengkranen (PN10) - Algemene technische eisen

Publicatie uitsluitend voor commentaar

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

januari 2005

ICS 91.140.60; 91.140.70

Commentaar voor 2005-04-09

Zal vervangen NEN-EN 817:1997

Als Europees normontwerp is gepubliceerd: prEN 817:2004, IDT

Definitief vastgestelde normen zullen als Nederlandse norm gelden. Daarom wordt dit normontwerp in Nederland voor commentaar gepubliceerd. Op het ontwerp ingebracht commentaar zal aan de bevoegde normcommissie worden voorgelegd die hiermee rekening zal houden bij de bepaling van de Nederlandse stem. Indien er geen bezwaar bij NEN wordt ingebracht, kan dat leiden tot ongewijzigd definitieve vaststelling van het ontwerp als norm.

Van Europese normen bestaan drie officiële versies: Engels, Frans en Duits. Voor Nederland zal de Engelse versie gelden, tenzij voor een geautoriseerde versie in het Nederlands wordt gekozen.

Normcommissie 349 164 "Drinkwateropvoeding"

Apart from exceptions provided by the law, nothing from this publication may be duplicated and/or published by means of photocopy, microfilm, storage in computer files or otherwise, which also applies to full or partial processing, without the written consent of the Netherlands Standardization Institute.

The Netherlands Standardization Institute shall, with the exclusion of any other beneficiary, collect payments owed by third parties for duplication and/or act in and out of law, where this authority is not transferred or falls by right to the Reproduction Rights Foundation.

Auteursrecht voorbehouden. Behoudens uitzondering door de wet gesteld mag zonder schriftelijke toestemming van het Nederlands Normalisatie-instituut niets uit deze uitgave worden veelevoudigd en/of openbaar gemaakt door middel van fotokopie, microfilm, opslag in computerbestanden of anderszins, hetgeen ook van toepassing is op gehele of gedeeltelijke bewerking.

Het Nederlands Normalisatie-instituut is met uitsluiting van ieder ander gerechtigd de door derden verschuldigde vergoedingen voor veelevoudiging te innen en/of daartoe in en buiten rechte op te treden, voor zover deze bevoegdheid niet is overgedragen c.q. rechtens toekomt aan de Stichting Reprecht.

Although the utmost care has been taken with this publication, errors and omissions cannot be entirely excluded. The Netherlands Standardization Institute and/or the members of the committees therefore accept no liability, not even for direct or indirect damage, occurring due to or in relation with the application of publications issued by the Netherlands Standardization Institute.

Hoewel bij deze uitgave de uiterste zorg is nagestreefd, kunnen fouten en onvolledigheden niet geheel worden uitgesloten. Het Nederlands Normalisatie-instituut en/of de leden van de commissies aanvaarden derhalve geen enkele aansprakelijkheid, ook niet voor directe of indirecte schade, ontstaan door of verband houdend met toepassing van door het Nederlands Normalisatie-instituut gepubliceerde uitgaven.

December 2004

ICS

Will supersede EN 817:1997

English version

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

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

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

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 164.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword.....	3
Introduction.....	4
1 Scope.....	4
2 Normative references.....	4
3 Designation.....	5
4 Marking - Identification.....	6
5 Materials.....	6
6 Dimensional characteristics.....	6
7 Tightness characteristics.....	12
8 Pressure resistance characteristics - mechanical performance under pressure.....	14
9 Hydraulic characteristics.....	16
10 Mechanical strength characteristics - torsion test for operating mechanism.....	21
11 Mechanical endurance characteristics.....	22
12 Backflow protection.....	29
13 Acoustic characteristics.....	29
Annex A (normative).....	31
Annex B (informative).....	33

Foreword

This document (prEN 817 :2004) has been prepared by Technical Committee CEN/TC 164, "Water supply", the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 817:1997.

This standard now acknowledges the field of application for mechanical mixing valves used in:

Water supply systems with a pressure range of 0.05 MPa (0.5 bar) to 1.0 MPa (10 bar)

Copyright
Preview

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this standard:

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.

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.

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

1 Scope

This European Standard specifies:

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

It is applicable:

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

Table 1 Conditions for the use of mechanical mixing valves

	Limits of use	Recommended limits for correct operation
Dynamic pressure	0,05 MPa (0,5 bar) min.	0,1 MPa \leq P \leq 0,5 MPa (1 bar \leq P \leq 5 bar)
Static pressure	1 MPa (10 bar) max.	
Temperature	\leq 90 °C	\leq 65 °C

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

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 31 Pedestal wash basins - Connecting dimensions
- EN 32 Wall hung wash basins - Connecting dimensions

EN 35	Pedestal bidet 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 tapware - General technical specifications for electrodeposited nickel chrome coatings
EN 695	Kitchen sinks - Connecting dimensions
EN 1717	Protection against pollution of potable water in drinking water installations and general requirements of devices to prevent pollution by backflow
EN ISO 3822-1:1995	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 1: Method of measurement
EN ISO 3822-2:1995	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
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 228-1:1994	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 Designation

Mechanical mixing valves with 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.

The valves covered by this standard are designated (see Table 2) by reference to:

- nominal size ($\frac{1}{2}$ or $\frac{3}{4}$);
- this standard.

For example: Mechanical mixing valve, nominal size $\frac{1}{2}$, 1-hole, visible body, mounting on horizontal surface, diverter, fixed outlet, flow rate class(es), with acoustic group, EN.

Table 2 Designation

Mechanical mixer according to application	
Intended use	Basin, bidet, sink, shower, bath/shower
Mounting method	Horizontal or vertical surfaces
Type of body	Single or multi-hole, visible, or concealed
Type of outlet	Fixed-, moveable-, with or without flow rate regulator

Mechanical mixer according to application	
Diverter	with or without diverter
Acoustic group, classification	Group I, or group II, unclassified
Flow rate class of mixers	Z, A, S, B, C, D
Ref. to the Standard	EN 817

4 Marking - Identification

4.1 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 headwork;
- the acoustic group (see Table 13) and the flow rate class(es), (see Table 12), - on the body.

Examples of marking:

Name or identification and I-A-A, or II-B-B (acoustic group and flow rate class(es))

Bath/Shower mixer: the first letter for the bath outlet, the second letter for the shower outlet

4.2 Identification

The direction of movement of the control device for water temperature adjustment of mechanical mixing valves shall be identified:

- for cold water by the colour blue;
- for hot water by the colour red.

The identification of cold water shall be on the right and the hot water on the left.

5 Materials

5.1 Chemical and hygiene requirements

All materials coming into contact with water intended for human consumption shall present no health risk up to a temperature of 90°C.

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 permits various design solutions to be adopted by the manufacturer.

Special cases are covered in clause 6.2

- Inlet dimensions (shanks, connections, tubes, attachments) are shown in Table 3, Figure 1, Figure 2, Figure 3, Figure 4 and Figure 5
- Outlet dimensions (length, flow rate regulators, attachments) are shown in Table 4, Figure 6, Figure 7 and Figure 8.
- Mounting dimensions of mixers described in this standard are shown in Table 5, Figure 9.

6.1.1 Inlet Dimensions - Single-hole mixer - visible body - Supply Connections

Table 3 Inlet Dimensions

INLET – DIMENSIONS (all dimensions are in mm)		COMMENTS
Shank, Union, Captive nut, (useful thread length)		
A	G ½ B	Shank, union ISO 228 /1
A 1	G ¾ B	
A 2	9 min	Captive nut Useful thread length
A 3	15 min	
Connecting centres		
G	150 ± 1	3-hole wall-mounted size ½ (Bath, Shower) Supply connection, with captive nut or straight unions
G 1	140 – 160	- with eccentric unions (extension of this range is permitted)
G 2	200 ± 3,5	Multi-hole tap size ½ (Kitchen, Basin)
Inlet connections (Connecting ends)		
N 1	12,3 +0.2	Type 1 size ½
N 2	5 min	
N 1	15,2 ± 0.05	Type 2 size ½ 30° chamfer / flat 0,3
N 2	13 min	
T		Plain end Ø 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) Flex. Hoses in acc. with EN 13618

Bestelformulier

NEN

Stuur naar:

NEN Standards Products & Services
t.a.v. afdeling Klantenservice
Antwoordnummer 10214
2600 WB Delft

NEN Standards Products & Services

Postbus 5059
2600 GB Delft

Vlinderweg 6
2623 AX Delft

T (015) 2 690 390
F (015) 2 690 271

www.nen.nl/normshop

Ja, ik bestel

__ ex. NEN-EN 817:2005 Ontw. en Sanitaire kranen - Mechanisch instelbare mengkranen (PN10) - Algemene technische eisen € 29.20

Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via www.nen.nl/normshop

Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. www.nen.nl/nieuwsbrieven

Retourneren

Fax: (015) 2 690 271
E-mail: klantenservice@nen.nl
Post: NEN Standards Products & Services,
t.a.v. afdeling Klantenservice
Antwoordnummer 10214,
2600 WB Delft
(geen postzegel nodig).

Gegevens

Bedrijf / Instelling _____

T.a.v. _____ O M O V

E-mail _____

Klantnummer NEN _____

Uw ordernummer _____ BTW nummer _____

Postbus / Adres _____

Postcode _____ Plaats _____

Telefoon _____ Fax _____

Factuuradres (indien dit afwijkt van bovenstaand adres)

Postbus / Adres _____

Postcode _____ Plaats _____

Datum _____ Handtekening _____

Voorwaarden

- De prijzen zijn geldig tot 31 december 2016, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon (015) 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typfouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: www.nen.nl/leveringsvoorwaarden.