

**Sanitary tapware - Single taps and combination taps for water supply systems of type 1 and type 2 - General technical specification**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 200:2008 sisaldab Euroopa standardi EN 200:2008 ingliskeelset teksti.

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**Võtmesõnad:** cocks, leak tests, noise, noise (environmental), noise emission, pillar taps, pressure, single taps, specification (approval), specifications, strength of materials, tightness, valves, water practice, water supply, water supply (buildings), wear, wearing behaviour

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English Version

## Sanitary tapware - Single taps and combination taps for water supply systems of type 1 and type 2 - General technical specification

Robinetterie sanitaire - Robinets simples et mélangeurs  
pour les systèmes d'alimentation type 1 et type 2 -  
Spécifications techniques générales

Sanitärarmaturen - Auslaufventile und Mischbatterien für  
Wasserversorgungssysteme vom Typ 1 und Typ 2 -  
Allgemeine technische Spezifikation

This European Standard was approved by CEN on 15 June 2008.

CEN members are bound to comply with the CEN/GENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists 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 CEN Management Centre has the same status as the official versions.

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## Foreword

This document (EN 200:2008) 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of an identical text or by endorsement, at the latest by January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

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 200:2004.

This document acknowledges the field of application of tapware used in:

- water supply systems of Type 1 (see Figure 1 and Table 1) with a pressure range of 0,05 MPa (0,5 bar) to 1,0 MPa (10 bar);
- water supply systems of Type 2 (see Figure 2 and Table 1) with a pressure range of 0,01 MPa (0,1 bar) to 1,0 MPa (10 bar) – which combines mains-fed and cistern-fed water supply systems.

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 single and combination taps.

## 1 Scope

This European Standard specifies:

- a) the field of application for pillar taps, bib taps, single and multi-hole combination taps for use in:
  - 1) a supply system of Type 1 (see Figure 1);
  - 2) a supply system of Type 2 (see Figure 2);
- b) the dimensional, leaktightness, pressure resistance, hydraulic performance, mechanical strength, endurance and acoustic characteristics of nominal size  $\frac{1}{2}$  and  $\frac{3}{4}$  single taps and combination taps;
- c) 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 draw-off taps (single taps and combination taps) 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.

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].

Figure 2 shows a supply system of Type 2 with a pressure range of (0,01 to 1,0) Mpa [(0,1 to 10) bar].

This European Standard applies to sanitary draw-off taps of nominal size  $\frac{1}{2}$  and  $\frac{3}{4}$  (PN 10).

The conditions of use and classifications are given in Table 1. The Table 2 gives the performance characteristics to be noted if the tap is used outside the recommended operating range.

**Table 1 — Conditions of use/Classifications**

Water supply system	Operating range of taps		Flow rate classes	Acoustics	Marking
	Limits	Recommended	See Table 13	See 14	See 4
Type 1 see Figure 1	<u>Dynamic Pressure</u> $\geq 0,05$ Mpa (0,5 bar) <u>Static Pressure</u> $\leq 1,0$ Mpa (10,0 bar)	<u>Dynamic Pressure</u> (0,1 to 0,5) Mpa [(1,0 to 5,0) bar] see note <sup>b)</sup>	Z $\leq 0,15$ l/s A $\leq 0,25$ l/s S $\leq 0,33$ l/s B $\leq 0,42$ l/s C $\leq 0,50$ l/s D $\leq 0,63$ l/s	Group I -  Group II -  unclassified	for example IA IIC/B  I /- <sup>a)</sup> II /- <sup>a)</sup>
Type 2 see Figure 2	<u>Dynamic Pressure</u> $\geq 0,01$ Mpa (0,1 bar) <u>Static Pressure</u> $\leq 1,0$ Mpa (10,0 bar)	<u>Dynamic Pressure</u> (0,02 to 0,1) MPa [(0,2 to 1,0) bar] see note <sup>b)</sup>	<b>See Table 10</b> X $\leq 0,125$ l/s Y $\leq 0,250$ l/s R <sup>d)</sup> $\leq 0,125$ l/s Hot <b>and</b> $\leq 0,070$ l/s Cold	see note <sup>c)</sup> (unclassified)	X Y R
Temperature	$\leq 90$ °C	$\leq 65$ °C			

a) Without flow rate class: Taps without interchangeable outlet accessories are tested with the original outlet accessories of the manufacturer and are not marked with a flow rate class.

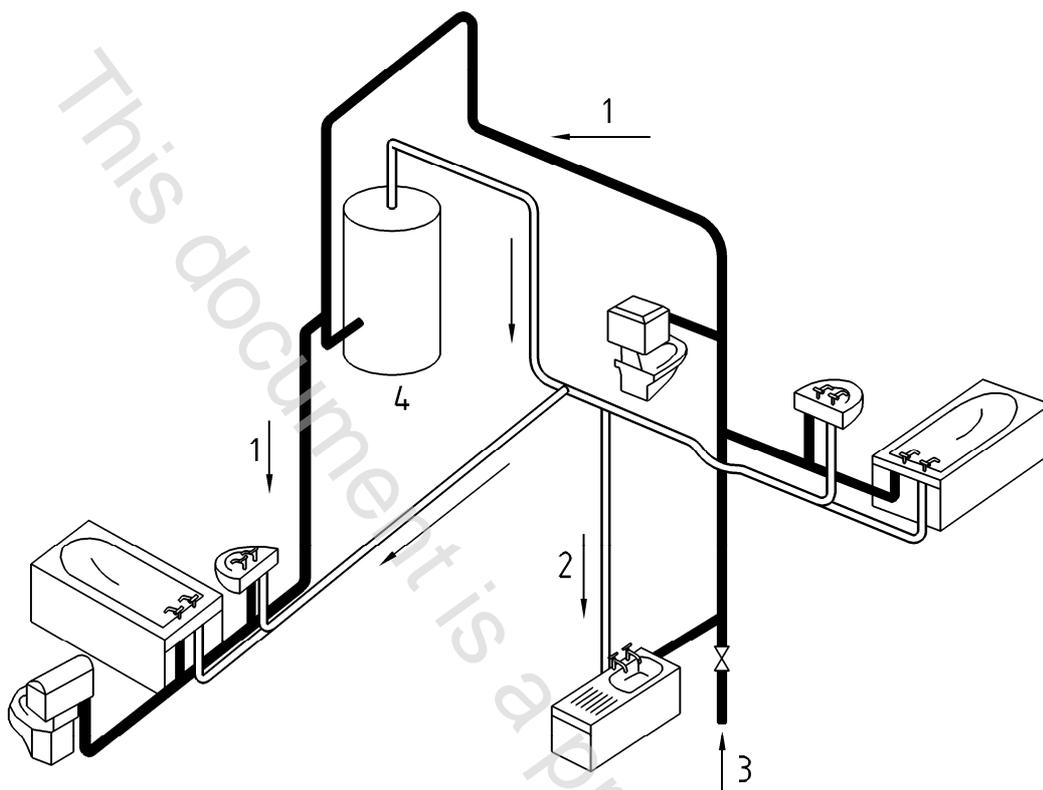
b) Measured at the shower outlet when incorporated.

c) There is usually no acoustic classification for taps used in supply systems of Type 2 and no specifications governing the level of noise emissions from these water installations. If supply pressures are such that excessive noise is generated it is recommended that pressure or flow regulators are fitted in the system, or where practicable, taps conforming to the appropriate acoustic classification given in 14.3.5 are used.

d) Combination taps with divided outlet (mains fed on cold inlet) for Type 2 systems: It is essential that such taps are connected to a main's water supply capable of maintaining a minimum flow pressure of 0,04 MPa (0,4 bar) through the cold inlet.

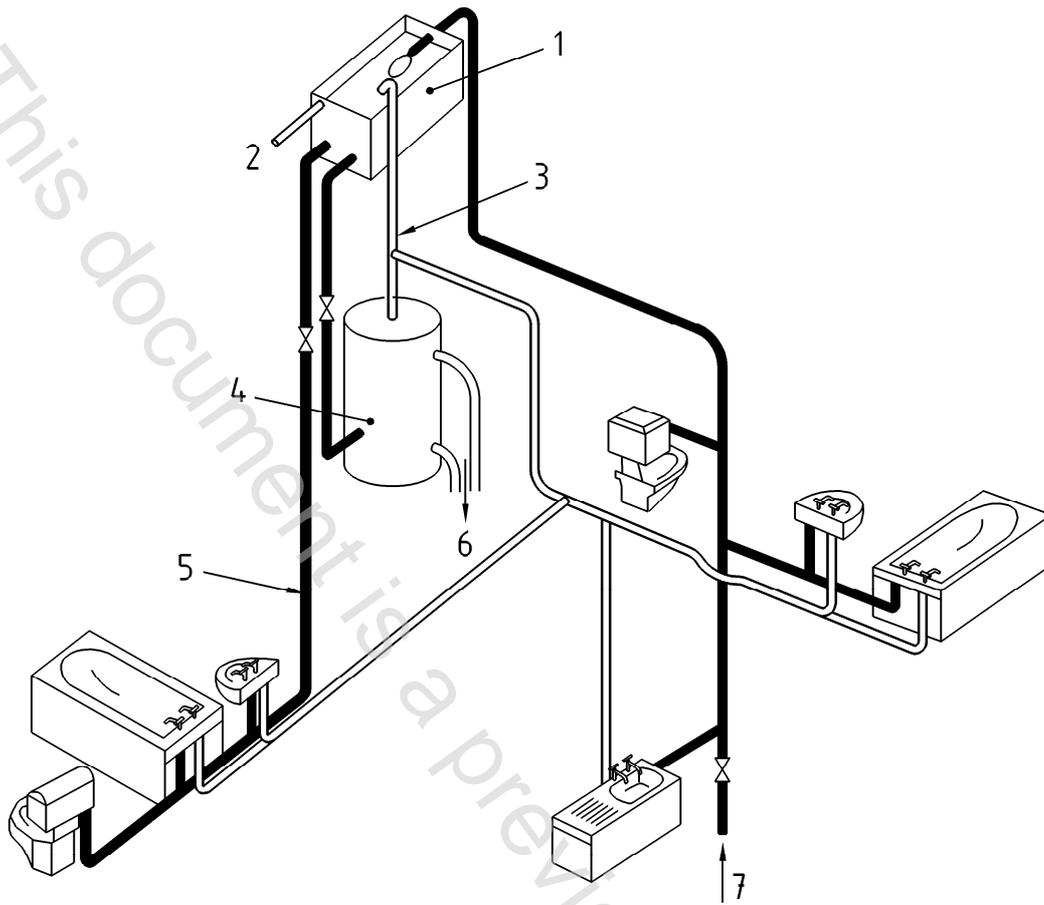
**Table 2 — Performance characteristics to be noted if used outside the recommended operating range**

Issue	Supply system Type 1	Supply system Type 2
Operational Force	Taps for Type 2 systems having rapid action mechanisms can require a higher operating force.	
Diverter Operation	Taps for Type 2 systems can require more operational force.	Taps for Type 1 systems with automatic diverters may not hold in the shower mode due to low dynamic supply pressure.
Flow Performance	Taps for Type 2 systems can result in excessive flow velocities.	Taps for Type 1 systems may not provide an acceptable rate of flow.
Noise	National regulations can require an acoustically classified tap to be specified.  Taps for Type 1 and Type 2 systems can result in excessive noise when used above the recommended maximum pressure.	

**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]**



**Key**

- 1 Cold water storage cistern (cover omitted for clarity)
- 2 Warning pipe
- 3 Vent pipe
- 4 Hot water cylinder
- 5 Alternative cistern fed cold supply to sanitary appliances
- 6 To boiler
- 7 Mains supply pipe (supply pressures up to 10 bar)

**Figure 2 - Supply system of Type 2 with a pressure range of (0,01 to 1,0) MPa [(0,1 to 10) bar]**

Figure 2 shows a vented domestic hot water and cold water supply system incorporating gravity hot water, mains cold water and alternative gravity cold water supply to sanitary appliances.

## 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 1254-2, *Copper and copper alloys - Plumbing fittings – Part 2: Fittings with compression ends for use with copper tubes*

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 Designation

The taps covered by this European Standard are designated by characteristics identified in Table 3.

EXAMPLE Example of designation:

Combination tap for supply system of Type 1, nominal size  $\frac{1}{2}$ , 2-hole with combined visible body, for mounting on horizontal surface, diverter, fixed outlet, flow rate classes C/B, with acoustic group I, EN 200.