



SLOVENSKI STANDARD

SIST EN 200:2024

01-marec-2024

Nadomešča:
SIST EN 200:2009

Sanitarne armature - Enojne in kombinirane pipe za oskrbo z vodo tipa 1 in tipa 2 - Splošne tehnične zahteve

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

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

Robinetterie sanitaire - Robinets simples et mélangeurs pour les systèmes d'alimentation en eau des types 1 et 2 - Spécifications techniques générales

Ta slovenski standard je istoveten z: EN 200:2023

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-dbd1-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

ICS:

91.140.70 Sanitarne naprave Sanitary installations

SIST EN 200:2024 en,fr,de

EUROPEAN STANDARD

EN 200

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2023

ICS 91.140.70

Supersedes EN 200:2008

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 en eau des types 1 et 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 27 November 2023.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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

[SIST EN 200:2024](https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024)

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	7
Introduction	8
1 Scope.....	9
2 Normative references.....	11
3 Terms and definitions.....	12
4 Designation	15
5 Marking and identification.....	16
5.1 Marking	16
5.2 Identification	16
5.2.1 Identification of inlets.....	16
5.2.2 Identification of flow controls equipment.....	16
6 Materials	17
6.1 Chemical and hygiene requirements.....	17
6.2 Exposed surface condition and quality of coating	17
7 Backflow protection.....	17
8 Sequence of testing.....	17
9 Dimensional characteristics	17
9.1 General remarks	17
9.2 Inlet dimensions.....	18
9.3 Outlet dimensions.....	20
9.4 Mounting dimensions.....	24
9.5 Special cases	26
10 Leaktightness characteristics.....	27
10.1 Principle.....	27
10.2 Apparatus	27
10.3 Leaktightness of the obturator and of the tap upstream of the obturator(s) with the obturator in the closed position.....	27
10.3.1 Procedure	27
10.3.2 Requirements.....	27
10.4 Leaktightness downstream of the obturator	27
10.4.1 General.....	27
10.4.2 Procedure	27
10.4.3 Requirements.....	28
10.5 Leaktightness of manually operated diverters.....	28
10.5.1 General.....	28
10.5.2 Procedure	28
10.5.3 Procedure where an outlet(s) cannot be artificially closed – products for type 1 systems	28
10.5.4 Procedure where an outlet(s) cannot be artificially closed – products for type 2 systems	29
10.5.5 Requirements.....	29
10.6 Leaktightness and operation of diverters with automatic return (and semi-automatic type diverters).....	29
10.6.1 General.....	29
10.6.2 Procedure – products for Type 1 systems.....	29

10.6.3	Procedure – products for Type 2 systems	30
10.6.4	Requirements.....	31
11	Pressure resistance.....	33
11.1	Principle.....	33
11.2	Apparatus.....	33
11.3	Mechanical behaviour upstream of the obturator – obturator in the closed position.....	33
11.3.1	Procedure.....	33
11.3.2	Requirement.....	33
11.4	Mechanical behaviour downstream of the obturator – obturator in the open position.....	33
11.4.1	Procedure for products for type 1 systems.....	33
11.4.2	Procedure for products for type 2 systems.....	33
11.4.3	Requirement.....	34
12	Hydraulic performance	34
12.1	General	34
12.2	Determination of flow rate – products for type 1 systems	35
12.2.1	Principle.....	35
12.2.2	Apparatus	35
12.2.3	Procedure	35
12.2.4	Requirements.....	35
12.3	Determination of flow rate – products for type 2 systems	36
12.3.1	Principle.....	36
12.3.2	Apparatus	36
12.3.3	Procedure	37
12.3.4	Requirements.....	37
13	Mechanical strength/torsional resistance	38
13.1	Principle.....	38
13.2	Apparatus	38
13.3	Test piece.....	38
13.4	Procedure	38
13.5	Requirements.....	38
14	Mechanical endurance	38
14.1	General	38
14.2	Endurance test for on/off flow control devices operated by rotating the control handle.....	39
14.2.1	Principle.....	39
14.2.2	Apparatus.....	39
14.2.3	Procedure	39
14.2.4	Requirement.....	41
14.3	Endurance test for other on/off flow control devices	42
14.3.1	Principle.....	42
14.3.2	Apparatus.....	42
14.3.3	Procedure	42
14.3.4	Requirement.....	42
14.4	Endurance of manually operated diverters.....	42
14.4.1	Principle.....	42
14.4.2	Apparatus	43
14.4.3	Procedure	43
14.4.4	Requirement.....	43
14.5	Endurance of diverters with automatic return.....	43
14.5.1	Principle.....	43
14.5.2	Apparatus	43
14.5.3	Procedure	44

EN 200:2023 (E)

14.5.4 Requirement.....	44
14.6 Endurance test for swivel spouts	45
14.6.1 Principle.....	45
14.6.2 Apparatus	45
14.6.3 Procedure for single outlet type.....	45
14.6.4 Procedure for divided outlet type.....	45
14.6.5 Requirements.....	46
15 Acoustic characteristics — products for type 1 systems only	47
15.1 General.....	47
15.2 Procedure	47
15.2.1 Flow rate class of sanitary tapware products (with appropriate acoustic information) ...	47
15.2.2 Flow rate class of sanitary tapware products (without appropriate acoustic information)	47
15.3 Expression of results	47
15.3.1 Determination of acoustic group	48
15.3.2 Correspondence between flow rate classes and measurements.....	48
Annex A (informative) Pressure take-off tee	49
Annex B (informative) Minimum flow rates and test pressures according to application	52
Annex C (informative) Product components (detailed by other standards).....	53
Bibliography	54

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST EN 200:2024](https://standards.itih.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024)

<https://standards.itih.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

Figures

Figure 1 — Supply system of Type 1 with a pressure range of (0,05 to 1,0) MPa [(0,5 to 10) bar]	10
Figure 2 — Supply system of Type 2 with a pressure range of (0,01 to 1,0) MPa [(0,1 to 10) bar]	11
Figure 3 — Bib taps 1/2 and 3/4 - single hole taps	19
Figure 4 — Multi hole combination taps	20
Figure 5 — Supply connections for taps and remote outlets	20
Figure 6 — Pillar and bib taps	22
Figure 7 — Remote outlet	22
Figure 8 — Single hole combination tap/remote outlet	23
Figure 9 — Bath/shower combination tap/remote outlet	23
Figure 10 — Single hole taps	25
Figure 11 — Two-hole tap (fixed centres)	26
Figure 12 — Three-hole tap (adjustable centres)	26
Figure 13 — Clamping Arrangement for use with ceramic sanitaryware	26
Figure 14 — Apparatus for testing the leaktightness of automatic diverters for taps for supply system of Type 2	31
Figure 15 — Flow rate test apparatus for sanitary tapware for Type 2 systems	37
Figure 16 — Life test -closing torque vs time	41
Figure 17 — Endurance test rig for divided-outlet swivel spout	46
Figure A.1 — Pressure take-off tee (test rig Type 1 taps)	49
Figure A.2 — Schematic examples of pressure take-off tees (test rig Type 1 taps)	51

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

Tables

Table 1 — Conditions of use	9
Table 2 — Designation	15
Table 3 — Sequence of testing	17
Table 4 — Inlet dimensions sanitary tapware	18
Table 5 — Outlet dimensions	21
Table 6 — Mounting dimensions	24
Table 7 — Informative summary of leaktightness tests	32
Table 8 — Informative summary of pressure resistance tests	34
Table 9 — Informative summary of test conditions for on/off flow control devices	40
Table 10 — Informative summary of test conditions for diverters	44
Table 11 — Informative summary of test conditions for swivel spout	47
Table 12 — Acoustic group	48

EN 200:2023 (E)

Table 13 — Flow rate classes (EN ISO 3822-4)	48
Table A.1 — Dimensions of the pressure take-off tee	50
Table B.1 — Recommended flow rates for domestic use	52

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN 200:2024](#)

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

European foreword

This document (EN 200:2023) 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 June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

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

This document supersedes EN 200:2008.

In comparison with the previous edition, the following technical modifications have been made:

- all test of hydraulic performance, acoustic characteristics and leaktightness were completely revised;
- figures, tables and dimensions were revised;
- normative references were updated;
- editorial changes have been made throughout the entire document.

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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

EN 200:2023 (E)**Introduction**

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

This document 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.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN 200:2024](https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024)

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

1 Scope

This document 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) with a pressure range of (0,05 to 1,0) MPa [(0,5 to 10) bar];
 - 2) a supply system of Type 2 (see Figure 2) with a pressure range of (0,01 to 1,0) MPa [(0,1 to 10) bar];
- b) the dimensional, leak tightness, pressure resistance, hydraulic performance, mechanical strength, endurance, corrosion resistance of the surface of the product, sequence of testing and acoustic characteristics with which sanitary tapware products including their components (flexible hose, pullout spray) need to comply where applicable;
- c) test methods to verify the characteristics.

The tests described in this document are type tests (laboratory tests) and not quality control or factory production control (FPC) tests carried out during manufacture.

This document is applicable to draw-off taps (single taps and combination taps) for use with sanitary appliances installed in rooms used for personal hygiene (cloakrooms, bathrooms etc.) and for food preparation (kitchens), i.e. for use with baths, basins, bidets, showers and sinks.

This document applies to sanitary draw-off taps of nominal size 3/8", 1/2", 3/4" and 1" (PN 10).

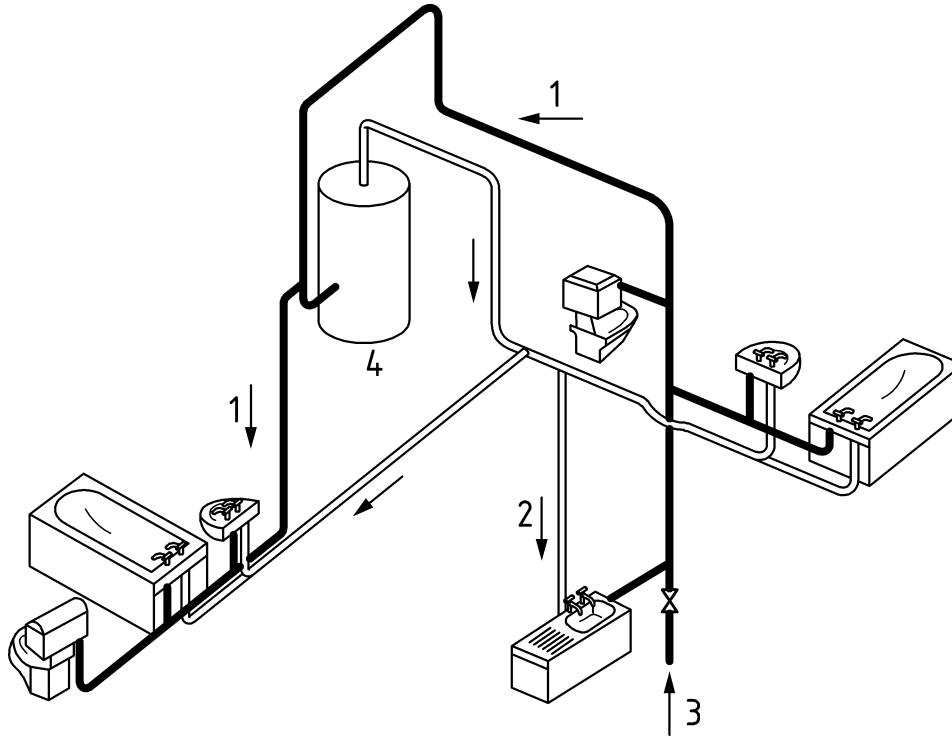
The conditions of use and classifications are given in Table 1.

Table 1 — Conditions of use

Water supply system	Operating range of taps	
	Limits	Recommended
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]
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> ^a (0,02 to 0,1) MPa [(0,2 to 1,0) bar]
Temperature	≤ 70 °C	≤ 65 °C

^a Low pressure sanitary tapware 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 acoustic performance is not a requirement of the installation.

EN 200:2023 (E)

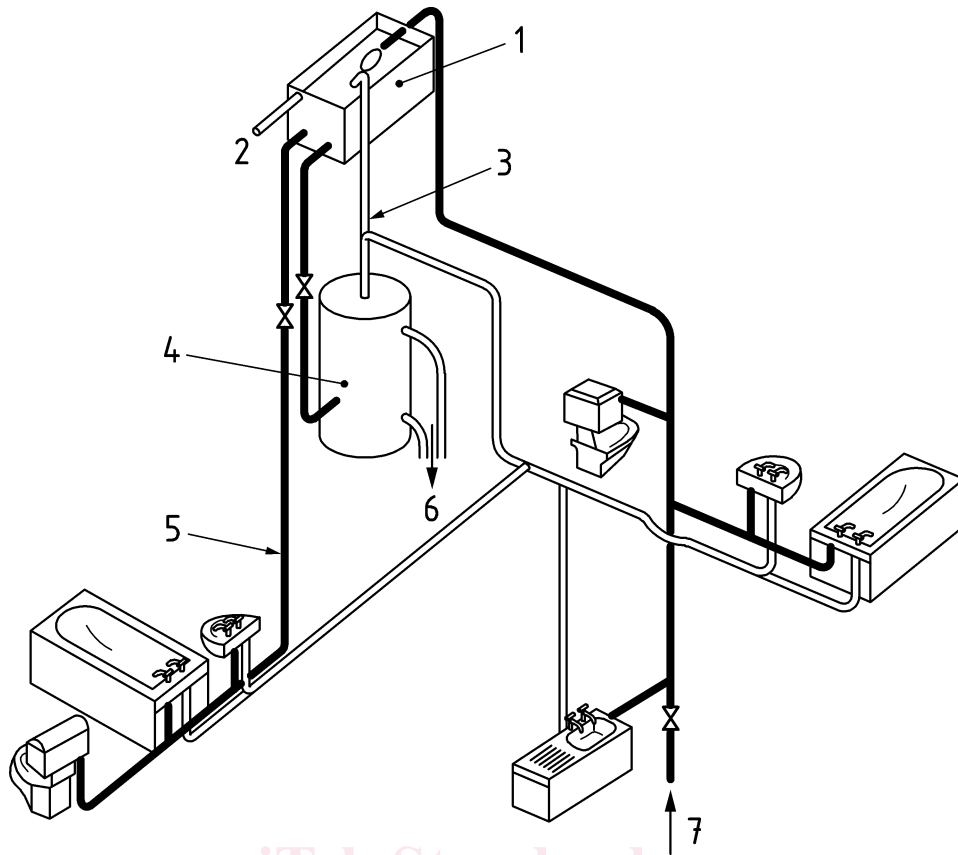
**Key**

- 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]

[SIST EN 200:2024](https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024)

<https://standards.iteh.ai/catalog/standards/sist/bc1175c3-db6f-4dbd-99d7-01eadd0d4dc2/sist-en-200-2024>

**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]

NOTE Components which are part or can be delivered with sanitary tapware products are listed in Annex C.

Final materials included in the product are not covered by this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 aerators*

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

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 200:2023 (E)

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

EN 13618, *Flexible hose assemblies in drinking water installations — Functional requirements and test methods*

EN 13959, *Anti-pollution check valves — DN 6 to DN 250 inclusive family E, type A, B, C and D*

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)*

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)*

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)*

EN ISO 3822-4, *Acoustics — Laboratory tests on noise emission from appliances and equipment used in water supply installations — Part 4: Mounting and operating conditions for special appliances*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1 sanitary tapware aerator

device which is fitted at the outlet of a sanitary tapware product to impact the flow rate and stream appearance of the water stream

Note 1 to entry: A distinction is made between stream appearance:

- a) aerators without air intake, (known as “laminar” stream);
- b) aerators with air intake;
- c) spray models (numerous single jets).

Note 2 to entry: See EN 246.

3.2 anti-pollution device

devices to prevent pollution by backflow of potable water

Note 1 to entry: Reference EN 1717 for anti-pollution devices and their specific use.