



SLOVENSKI STANDARD

SIST EN 15200:2009

01-januar-2009

Sanitarne naprave - Multifunkcijske tuš kabine

Sanitary appliances - Multifunction shower cabinets

Sanitärausstattungsgegenstände - Multifunktionsduschkabinen

Appareils sanitaires - Cabines de douche multifonctions

Ta slovenski standard je istoveten z: EN 15200:2007

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ICS:

91.140.70 Sanitarne naprave Sanitary installations

SIST EN 15200:2009

en,fr,de

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EUROPEAN STANDARD

EN 15200

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2007

ICS 91.140.70

English Version

Sanitary appliances - Multifunction shower cabinets

Appareils sanitaires - Cabines de douche multifonctions

Sanitärausstattungsgegenstände -
Multifunktionsduschkabinen

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

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Foreword

This document (EN 15200:2007) has been prepared by Technical Committee CEN/TC 163 “Sanitary appliances”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by November 2007, and conflicting national standards shall be withdrawn at the latest by November 2007.

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 United Kingdom.

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EN 15200:2007 (E)**1 Scope**

This standard specifies requirements and test methods for multifunction shower cabinets (subsequently referred to as unit(s)), used for domestic purposes.

This standard does not apply to shower cabinets and shower enclosures.

NOTE For the purposes of this standard the term "domestic purposes" includes use in hotels, accommodation for students and similar buildings, except when special provisions e. g. medical, are required.

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 198:1987, *Specification for finished baths for domestic purposes made of acrylic material*

EN 200, *Sanitary tapware - Single taps and combination taps (PN 10) - General technical specification*

EN 232, *Baths — Connecting dimensions*

EN 251, *Shower trays — Connecting dimensions*

EN 274-1, *Waste fittings for sanitary appliances - Part 1: Requirements*

EN 817, *Sanitary tapware — Mechanical mixers (PN 10) – General technical specifications*

EN 1111, *Sanitary tapware — Thermostatic mixing valves (PN 10) – General technical specification*

EN 1112, *Shower outlets for (PN 10) sanitary tapware*

EN 1113, *Shower hoses for (PN 10) sanitary tapware*

EN 1286, *Sanitary tapware - Low pressure mechanical mixing valves - General technical specification*

EN 1287, *Sanitary tapware - Low pressure thermostatic mixing valves - General technical specifications*

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

EN 12373-1, *Aluminium and aluminium alloys - Anodizing - Part 1: Method for specifying decorative and protective anodic oxidation coatings on aluminium*

EN 12764, *Sanitary appliances — Specification for whirlpool baths*

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 13904, *Low resistance shower outlets for sanitary tapware*

EN 13905, *Low resistance shower hoses for sanitary tapware*

EN 14428:2004, *Shower enclosures — Functional requirements and test methods*

EN 20105-A02, *Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour (ISO 105-A02:1993)*

EN 60335-2-105, *Household and similar electrical appliances - Safety - Part 2-105: Particular requirements for multifunction shower cabinets (IEC 60335-2-105:2004)*

EN 60730-2-8, *Automatic electrical controls for household and similar use — Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements (IEC 60730-2-8:2000, modified)*

EN ISO 2409, *Paints and varnishes - Cross-cut test (ISO 2409:1992)*

EN ISO 4892-2:2006, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2:2006)*

ISO 4586-2:2004, *High-pressure decorative laminates -- Sheets made from thermosetting resins -- Part 2: Determination of properties*

ISO 7892:1988, *Vertical building elements — Impact resistance tests – Impact bodies and general test procedures*

3 Terms and Definitions

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

3.1

multifunction shower cabinet

prefabricated but not necessarily pre-assembled independent unit, comprised of a base (shower tray or bath), rigid enclosed wall(s), with or without a roof and an entry, capable of being closed to provide a watertight compartment incorporating a showering function (mixing valve, shower head etc.) and at least one other function (e.g. steam bath, hydraulic massage, UV radiation)

3.2

shower cabinet

prefabricated but not necessarily pre-assembled independent unit, comprised of a base (shower tray or bath), rigid enclosed wall(s), with or without a roof and an entry, capable of being closed to provide a watertight compartment that incorporates a showering function (mixing valve, shower head etc.)

3.3

shower enclosure

arrangement of fixed or hinged panel(s) and/or door(s) erected on or around a drained shower place, shower tray or bath in conjunction with one or more walls of a building to provide a water retaining area for showering

4 Installation and maintenance

4.1 General

The units shall be supplied with detailed instructions for assembly, installation and connection to electrical and water supplies and a drainage system in accordance with the relevant national regulations, European or International Standards.

NOTE 1 National regulations may require additional measures.

NOTE 2 Multifunction shower cabinets can be fixed to the building to provide stability.

4.2 Protection of drinking water quality

Appropriate backflow prevention devices complying with EN 1717 shall be provided.

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NOTE National regulations may require additional measures.

4.3 Maintenance

The manufacturer shall supply instructions for maintenance. All components of the unit requiring regular maintenance and/or replacement shall be accessible after installation.

5 Requirements**5.1 Electrical and safety**

Multifunction shower cabinets shall comply with EN 60335-2-105.

5.2 Dimensional deviations

Dimensions of the unit shall not deviate from the size quoted by the manufacturer by more than the values given in Table 1.

Table 1 — Permitted deviations

Dimension	Permitted deviation mm
Length, width \leq 1 000 mm	± 5
Length, width $>$ 1 000 mm	+5 -10
Height	0 -10

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5.3 Base**5.3.1 General**

Base testing shall be carried out with the unit installed as recommended by the manufacturer.

5.3.2 Water Drainage

When tested in accordance with 6.1, all water shall empty from the base of the unit unless prevented by surface tension.

5.3.3 Connecting dimensions

Dimensions of the waste outlet and overflow holes shall comply with the requirements given in EN 232 or EN 251 as applicable.

Other dimensions are permissible if the manufacturer provides or recommends suitable fittings.

5.3.4 Resistance to temperature changes

When tested in accordance with 6.2, the base shall show no evidence of distortion or other defects that will impair the unit's function and these deflection shall not exceed 4 mm.

Experience has proven that bases made of any plastic material passing the tests in accordance with EN 198:1987, A.3, comply with this requirement.

5.3.5 Mechanical resistance

5.3.5.1 Deflection under load

When tested in accordance with 6.3, deflections of the base shall not be greater than the values given in Table 2 or in Table 3.

Table 2 — Permitted deflections of bath type base

Test method	Deflection of rim mm	Deflection of bottom mm	Residual deflection mm
A	1	2	-
B	2	3	-
C	4	-	0,3

Table 3 — Permitted deflections of shower tray type base

Test method	Deflection mm	Residual deflection mm
A	2	0,3
B	4	0,3

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Experience has proven that bases made of any plastic material passing the tests in accordance with EN 198:1987, A.6, comply with this requirement.

5.3.5.2 Resistance to impact

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When tested in accordance with 6.4, the bottom and rim of the base shall not show any evidence of distortion or other defects which will impair appearance and/or functioning.

Bases made of enamelled steel and cast iron are excluded from this test. In addition, experience has proven that bases made of any plastic material passing the tests in accordance with EN 198:1987, A.5, comply with this requirement.

5.3.5.3 Mechanical resistance of base surface

When the functional surface of the base is tested in accordance with 6.5, any scratch shall not exceed 0,1 mm or the total thickness of the top layer if this one has a thickness less than 0,1 mm.

5.4 Walls

All materials used for walls of units shall comply with the requirements of EN 14428:2004, 4.3.

5.5 Common requirements applying to base, walls and roof

5.5.1 Chemical resistance

When used as intended, any functional surface shall be resistant to household chemicals and cleansing agents recommended by the manufacturer (see clause 8).

When tested in accordance with 6.6, functional surfaces shall not show any permanent deterioration, such as stains or any other deterioration not removable with water or an abrasive agent.

EN 15200:2007 (E)**5.5.2 Water absorption**

When tested in accordance with 6.7, any functional surface shall have a water absorption less than or equal to 0,2 mg/cm².

5.5.3 Steam resistance

When a steam function is provided, the unit shall be tested in accordance with 6.8. The unit shall not show any distortion or other defects which will impair the appearance and/or how the unit functions.

5.5.4 Resistance to wet and dry cycling

When tested in accordance with 6.9, the functional surface of any material used shall not show any changes in appearance such as blisters, crazing and cracks.

5.5.5 Colour fastness**5.5.5.1 Resistance to UV light**

When tested in accordance with the requirements of the xenon arc lamp method of EN ISO 4892-2 for 250 h, test B with the following adjustments:

- a) irradiance 50 W/m² in the range of wave length from 290 nm to 400 nm for indoor application;
- b) black panel temperature 65 °C;
- c) relative humidity 50 %;
- d) test specimens cut from the sheet supplied to the manufacturer;
- e) spray cycle 18 min; and
- f) dry cycle 102 min.

The colour change noted on the surface of any material used which is visible after installation shall be recorded in terms of grey scale for assessing colour change as specified in EN 20105-A02. The fastness rating shall be not less than grade 3.

The xenon lamp shall only be used when its age is within the limit stated by its manufacturer to be the useful life of the lamp, or, where the useful life is not stated, is taken to be between 10 h and 600 h.

5.5.5.2 Resistance to hot water

When tested in accordance with 6.10, the colour change on the surface of any material used that is visible after installation shall be recorded in terms of grey scale for assessing colour change as specified in EN 20105-A02.

The fastness rating shall be not less than grade 3.

5.5.6 Resistance to scratching

All functional surface, when tested in accordance with 6.11, shall have a scratch resistance of not less than 0,3 N.

5.6 Corrosion resistance

All components shall be manufactured from corrosion-resistant materials or they shall be protected against corrosion.