SLOVENSKI STANDARD
SIST EN 14688:2015

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Sanitarna oprema - Umivalniki - Funkcionalne zahteve in preskusne metode

Sanitary appliances - Wash basins - Functional requirements and test methods

Sanitärausstattungsgegenstände - Waschbecken - Funktionsanforderungen und Prüfverfahren

Appareils sanitaires - Lavabos - Exigences fonctionnelles et méthodes d'essai

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ICS:

91.140.70	Sanitarne naprave	Sanitary installations

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EUROPEAN STANDARD

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Sanitary appliances - Wash basins - Functional requirements and test methods

Appareils sanitaires - Lavabos - Exigences fonctionnelles et méthodes d'essai

Sanitärausstattungsgegenstände - Waschbecken - Funktionsanforderungen und Prüfverfahren

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

European foreword

This document (EN 14688:2015) 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of an identical text or by endorsement, at the latest by January 2016 and conflicting national standards shall be withdrawn at the latest by April 2017.

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 14688:2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the EU Construction Products Regulation.

For relationship with EU Construction Products Regulation, see informative Annex ZA, which is an integral part of this document.

Since the latest edition of EN 14688, the most significant technical changes are the following:

a) introduction of the term “product type”;

b) introduction of the clause “Dangerous substances”;

c) modification of the marking of products;

d) replacement of the clause “Evaluation of conformity” by “Assessment and verification of constancy of performance - AVCP” and replacement of Annex ZA by a new one in accordance with provisions of Regulation 305/2011/EU.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the functional requirements and test methods for wash basins for domestic purposes.

NOTE 1 For the purposes of this standard the term “domestic purposes” includes use in hotels, accommodation for students, hospitals and similar buildings, except when special medical provisions are required.

NOTE 2 All drawings are examples only. The shape of the appliance is left to the discretion of the manufacturer.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 6506-1, *Metallic materials - Brinell hardness test - Part 1: Test method (ISO 6506-1)*

ISO 9352, *Plastics - Determination of resistance to wear by abrasive wheels*

3 Terms and definitions

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

3.1
wash basin
sanitary appliance primarily intended for washing the upper parts of the body, with one or more bowls, each with a waste outlet hole, with or without overflow and with or without taphole(s)

Note 1 to entry: The various types of wash basins are differentiated by the methods of mounting. The main types are given in the definitions that follow.

3.1.1
wall-hung wash basin
wash basin attached directly to a wall

Note 1 to entry: See Figures 1 and 2.

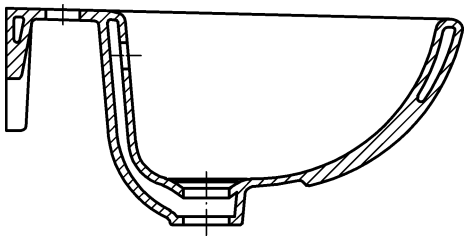


Figure 1 — Wall-hung wash basin with overflow

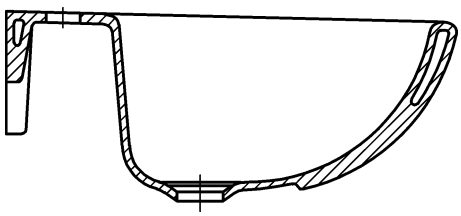


Figure 2 — Wall-hung wash basin without overflow

3.1.2
bracket-mounted wash basin
wash basin supported on brackets which are fixed to a wall

Note 1 to entry: See Figure 3.

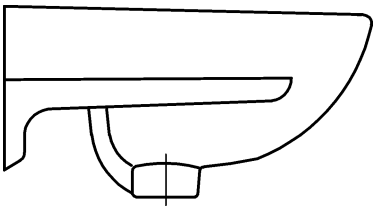


Figure 3 — Bracket-mounted wash basin

3.1.3
pedestal wash basin
wash basin supported by a floor mounted pedestal

Note 1 to entry: See Figure 4.

Figure 4 — Pedestal wash basin

3.1.4
vanity wash basin
wash basin installed into a vanity top

Note 1 to entry: See Figure 5.

Note 2 to entry: The bowl(s) may be mounted in different ways:

a) the rim of the wash basin rests on the vanity top (inset wash basin);

b) the front of the basin protrudes beyond the front edge of the vanity top (semi-recessed wash basin);

c) the rim of the wash basin butts against the underside of the vanity top (wash basin mounted beneath a vanity top);

d) the bottom of the wash basin rests on the vanity top (vessel wash basin).

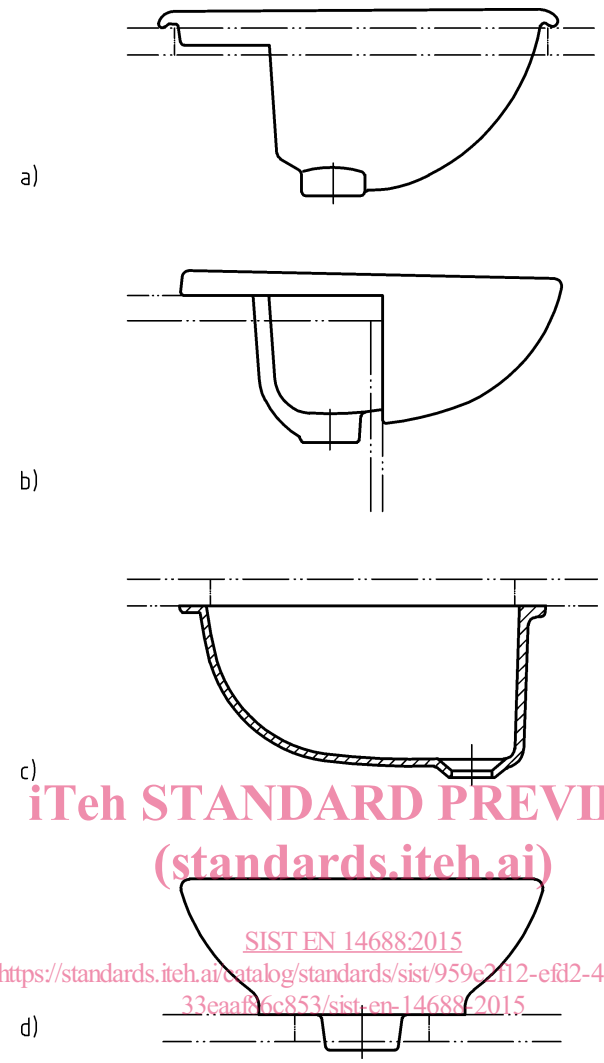


Figure 5 — Vanity top wash basins

3.1.5
corner wash basin
wash basin intended to be installed in a 90° wall corner and to be attached to both walls

3.2
handrinse basin
wash basin with a width of ≤ 530 mm, intended for hand washing only

3.3
multi-layer wash basin
wash basin consisting of two or more layers of material

3.4
product type
construction product with a set of representative performance levels or classes in relation to its Essential Characteristics, produced using a given combination of raw materials or other elements in a specific production process

4 Requirements

4.1 Load resistance

When tested in accordance with 5.2, wall-hung wash basins shall not crack, be broken or show permanent distortion.

4.2 Draining of water

When tested in accordance with 5.3, all water shall drain away.

4.3 Resistance to temperature changes

When wash basins are tested in accordance with 5.4, they shall not show defects, such as cracks or delamination which influences the intended use.

Experience has shown that wash basins made of glazed ceramics, stainless steel, enamelled steel and glass comply with this requirement.

4.4 Resistance to chemicals and staining agents

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

When tested in accordance with 5.5, wash basins shall not show any permanent surface deterioration, such as stains or deterioration not removable with water or abrasive agent.

Experience has shown that wash basins made of glazed ceramics, stainless steel and enamelled steel comply with this requirement.

4.5 Surface stability

This requirement is applicable only to multi-layer wash basins to ensure the stability of the top layer.

When tested in accordance with 5.6, any scratch shall not exceed 0,1 mm and/or the total depth of the top layer whichever is the least.

When tested in accordance with 5.7, the top layer of the test specimen shall not be abraded through.

Experience has shown that wash basins made of glazed ceramics and enamelled steel comply with these requirements.

4.6 Cleanability

When tested in accordance with 5.8, wash basins shall have smooth and readily cleansed non-absorbent functional surfaces which are free from acute internal corners which would be difficult to clean, i.e. surfaces intended to or likely to come into contact with water during use.

Experience has shown that wash basins manufactured from plastics materials, enamelled steel/cast iron, stainless steel, glazed ceramics and glass, designed and constructed without acute internal corners, satisfy this requirement.

4.7 Protection against overflowing

4.7.1 Wash basins with overflow

Every wash basin shall be protected against overflowing.

When tested in accordance with 5.9, the flow rate of a single overflow shall not be less than the values given in Table 1.

Table 1 — Flow rates of overflow

Overflow class	Overflow rate l/s
CL 25	0,25
CL 20	0,20
CL 15	0,15
CL 10	0,10
CL 00	See 4.7.2.

In two-bowl wash basins, it is permitted to have only one overflow, if the overflowing from one bowl to the other is ensured.

4.7.2 Wash basins without overflow

A wash basin with a non-closable outlet or a floor gully may also be used as a protection against overflowing. In this case the wash basin is considered to be class CL 00.

4.8 Durability

Products conforming with the requirements of 4.1 to 4.7 are deemed to be durable.

5 Test methods

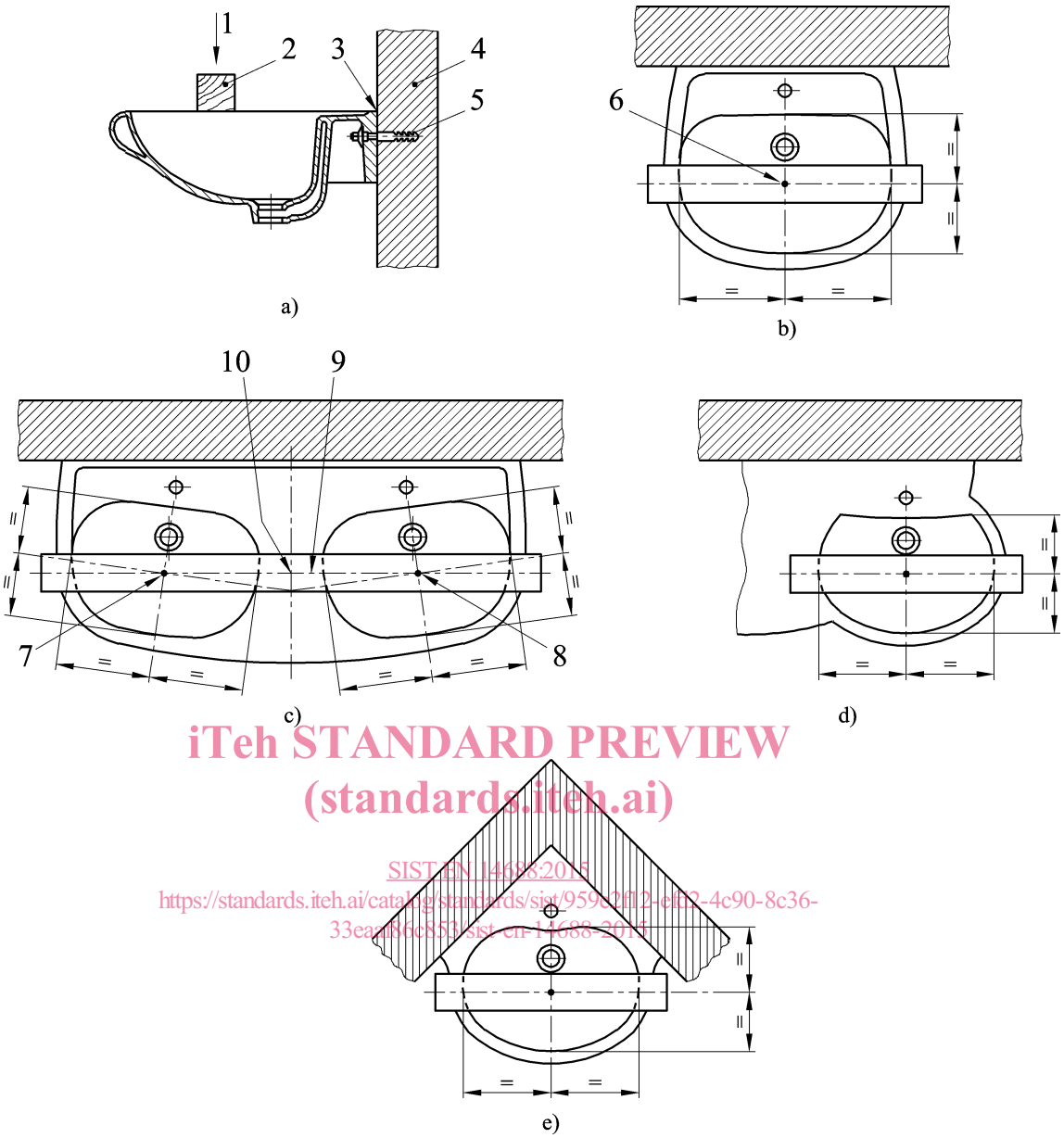
5.1 General

All tests may be carried out on the same sample wash basin.

5.2 Load resistance

— Install the wash basin to be tested in a horizontal position in accordance with the manufacturer's instructions onto smooth surface(s) with a layer of mortar or other facing material used for pointing between the back of wash basin and the smooth surface.

— Gradually apply a force of (1,50 ± 0,01) kN on top of a wooden beam with a cross section of 100 mm x 100 mm positioned in accordance with Figure 6. Allow the force to remain in position for a period of 1 h.



Key

a) installation of wash basins

b) testing a “standard-type” wash basin

c) testing a two-bowl wash basin

d) testing a non-symmetrical wash basin

e) testing a corner wash basin

1 force (1,50 ± 0,01) kN

2 wooden beam with cross-section 100 mm x 100 mm of adequate length

3 compensation layer

4 wall

5 threaded rod, nut and flexible washer (maximum torque 5 Nm)

6 geometric centre of bowl

7 geometric centre of the left bowl

8 geometric centre of the right bowl

9 centre of the contact area from exterior edge of wash basin through the geometric centre(s) of the bowl(s)

10 load point

Figure 6 — Test arrangements

— Record any failure to comply with 4.1. Distortions at the points of direct loading shall not constitute a failure.

5.3 Draining of water

— Install the wash basin horizontally in accordance with the manufacturer's installation instructions. The wash basin shall be cleaned with cleansing agents recommended by the manufacturer and afterwards shall be rubbed dry.

— Pour not less than 1 l water evenly around the upper inside edge of the bowl(s).

— Visually examine whether the water has drained to the waste outlet hole(s). Water remaining due to surface tension is permitted.

5.4 Resistance to temperature changes

5.4.1 Test apparatus

5.4.1.1 A hot water supply, capable of delivering water at a temperature of (70 ± 2)°C at the outlet of the discharge pipe.

5.4.1.2 A cold water supply, capable of delivering water at a temperature of (15 ± 2)°C at the outlet of the discharge pipe.

5.4.1.3 A discharge pipe with an internal diameter of 10 mm for delivering the hot and the cold water.

5.4.1.4 Means of supporting the wash basin to be tested in a horizontal position.

No stress shall be exerted on the wash basin.

5.4.1.5 A thermometer, capable of measuring temperatures between 0 °C and 100 °C with an accuracy of ± 1 °C at the measured temperature.

5.4.1.6 A flow meter, capable of measuring a flow rate of (0,1 ± 0,01) l/s.

5.4.2 Procedure

a) The waste outlet hole shall be open during the test.

b) The water supply shall be arranged as described below:

   1) the water impinges on the bottom of bowl at any point on a diameter of (110 ± 5) mm around the waste outlet hole;

   2) the outlet of the discharge pipe is to be positioned (80 ± 5) mm above the point of impingement.

c) Discharge hot water for a period of (90 ± 1) s at a flow rate of (0,1 ± 0,01) l/s.

d) Stop the flow for a period of (30 ± 1) s.

e) Discharge cold water for a period of (90 ± 1) s at a flow rate of (0,1 ± 0,01) l/s.

f) Stop the flow rate for a period of (30 ± 1) s.

g) Repeat this procedure 1 000 times without interruption.

h) The internal surface(s) of the bowl(s) shall be wiped dry.

i) Verify that the requirements of 4.3 are satisfied by visual inspection with the naked eye, at a distance of 600 mm and illumination by cool neon light of 150 lx, measured at the surface of the wash basin.