



SLOVENSKI STANDARD

SIST EN 12764:2005

01-maj-2005

Sanitarna oprema – Zahteve za masažne kadi

Sanitary appliances - Specification for whirlpool baths

Sanitärausstattungsgegenstände - Anforderungen an Whirlwannen

Appareils sanitaires - Spécification relative aux baignoires avec système de brassage d'eau

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Ta slovenski standard je istoveten z: **EN 12764:2004**

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ICS:

91.140.70	Sanitarne naprave	Sanitary installations
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English version

Sanitary appliances - Specification for whirlpool baths

Appareils sanitaires - Spécification relative aux bains à remous

Sanitärausstattungsgegenstände - Anforderungen an Whirlwannen

This European Standard was approved by CEN on 4 June 2004.

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 Central Secretariat 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 Central Secretariat 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.

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Foreword

This document (EN 12764:2004) 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of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by September 2006.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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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.

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1 Scope

This standard specifies requirements for whirlpool baths, having a rated voltage of not more than 250 V for single phase appliances and 480 V for other appliances, which are intended to be installed in indoor domestic situations and used in accordance with the manufacturer's instructions for personal hygiene. Such whirlpool baths are tested and supplied as a complete independent unit designed to be drained down after every use. They may be transported in several separate parts, for assembly on site, to facilitate delivery.

Safety aspects of Whirlpool baths (except use by young children and slow moving/weak elderly or disabled individuals) are covered by EN 60335-2-60.

Exclusions: this standard does not cover additional requirements for whirlpool baths intended for uses where specific medical provisions are required, or whirlpool baths for communal uses where they are not drained down after every use. Portable whirlpool devices are not covered by this standard.

For the purposes of this standard the term 'domestic situations' includes use in hotels, accommodation for students, hospitals and similar buildings.

Warning: Slow moving elderly or disabled persons should take care when using whirlpool baths. Young children should not be allowed to use whirlpool baths without supervision.

Note 1: It is unrealistic to expect manufacturers to provide a definition of what constitutes a 'slow moving elderly or disabled person', or 'young children'. The former is the responsibility of the individual or a career. The latter, is a parental responsibility.

Note 2: When EN 60335-2-60 is amended to cover use of whirlpool baths by slow moving elderly or disabled persons and young children the warning given above will be deleted from this standard.

2 Normative references

[SIST EN 12764:2005](#)

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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 60335-2-60, *Household and similar electrical appliances - Safety - Part 2-60: Particular requirements for whirlpool baths (IEC 60335-2-60:2002)* EN 232, *Baths: Connecting dimensions*

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

prEN 14516, *Baths for domestic purposes*

3 Terms and definitions

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

3.1

whirlpool bath:

completely assembled unit comprising of a bath, a water and/or air agitating device and associated electrical installation.

3.2

overflow level

level at which water in the bath will start to flow through any overflow pipe.

4 Design

4.1 Construction

The whirlpool bath shall form a fully integrated unit permanently installed in accordance with the manufacturer's instructions, such that it is possible to carry out the commissioning test described in Annex A without the need to install additional parts or components.

Note 1: Element parts, e.g. pump or blower, may be installed remote from the bath

Note 2: Portable whirlpool devices are not covered by this specification (see Clause 1).

4.2 Pump and/or blower installation

The weight of the pump and/or blower shall not be supported by any part of the system pipe-work.

4.3 Unit maintenance

The whirlpool bath shall be designed such that after installation in accordance with the manufacturer's instructions, all elements of the unit requiring regular maintenance (e.g. pump, blower, valves, electrical components) remain accessible.

4.4 Backflow prevention

A whirlpool bath intended to be filled by direct connection of its circulatory pipe-work to the water supplies shall be supplied with appropriate backflow prevention devices for installation at the point of connection in accordance with EN 1717.

4.5 Safety

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Whirlpool baths shall comply with the requirements of the Low Voltage Directive 73/23/EEC. Compliance with EN 60335-2-60 is one way of satisfying this requirement.

5 Requirements

5.1 General

Whirlpool baths shall comply with the requirements EN 232 unless the manufacturer provides a special waste and/or suction/overflow fitting, and they shall be subjected to the sequence of tests specified in 5.2 to 5.6.

Where a European Standard exists for the performance of baths manufactured from specific materials, whirlpool baths made from such materials shall also comply with the requirements of that standard.

5.2 Resistance to temperature

When tested in accordance with 6.1 there shall be no leakage or other damage.

When those parts of whirlpool baths which are intended by the manufacturer to function at temperatures in excess of 60°C are tested in accordance with 6.1 at those higher temperatures, there shall be no leakage or other damage.

5.3 Resistance to hair entrapment

Whirlpool baths shall comply with the relevant Clause of EN 60335-2- 60.

5.4 Hygiene

5.4.1 Water retention

Whirlpool baths shall comply with the relevant Clause of EN 60335-2-60.

5.4.2 Cleanability

Whirlpool baths shall comply with the relevant Clause of prEN 14516.

5.4.3 Durability of cleanability

Whirlpool baths shall comply with the relevant Clause of prEN 14516.

5.5 Resistance to pressure

When tested in accordance with 6.2, there shall be no leakage or other damage.

5.6 Resistance to leakage

When tested in accordance with 6.3, there shall be no leakage or other damage.

6 Test method

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6.1 Temperature test

6.1.1 Apparatus

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- A supply of water at 60 ± 0.5 °C or at a higher temperature if specified by the manufacturer.
- A temperature measuring device accurate to within 1°C at the measured value.

6.1.2 Test specimen

A whirlpool bath, completely assembled and connected to a power source in accordance with the manufacturer's instructions, in a controlled environment at a temperature > 15°C.

6.1.3 Procedure

- With the rim of the bath level, fill the bath to the overflow level with water at an entry temperature of 60 ± 0.5 °C or at a higher temperature if specified by the manufacturer.
- Switch the whirlpool system on.
- Open all air controls and operate the system for a period of $10 \pm 1_0$ min.
- Visually inspect all pipes, joints and fittings.
- Switch the whirlpool system off.

6.1.4 Expression of results

Record any water leakage or other damage.

6.2 Maximum pressure test

6.2.1 Apparatus

- A pressure gauge capable of reading pressure to an accuracy of within 2% of the measured value.
- A supply of water at 45 ± 5 °C.

6.2.2 Test specimen

A whirlpool bath completely assembled and connected to a power source in accordance with the manufacturer's instructions and previously tested in accordance with 6.1.

6.2.3 Procedure

- With all nozzle outlets open and rim of the bath level, fill the bath with water at an entry temperature of 45 ± 5 °C to a level above the highest jet which allows operation of the whirlpool system.
- Connect the pressure gauge into the delivery side of the pipe system.
- Switch the whirlpool system on.
- Block each nozzle outlet into the bath until all are closed, recording the pressure gauge reading after each closure.
- Record the maximum operating pressure and drain the bath.
- Re-fill the bath with water at an entry temperature of 45 ± 5 °C and re-create the maximum operating pressure. Run the system for period of $10 \pm 1_0$ min.
- Visually inspect all pipes, joints and fittings during and after the test.
- Switch the whirlpool system off.

6.2.4 Expression of results

Record any water leakage or other damage.

6.3 Leakage test

6.3.1 Apparatus

A supply of water.

6.3.2 Test specimen

A whirlpool bath, completely assembled and connected to a power source in accordance with the manufacturer's instructions and previously tested in accordance with 6.1 and 6.2.

6.3.3 Procedure

- With the rim of the bath level, fill the bath with water to a level above the highest nozzle which allows operation of the system.
- Operate all the functions of the whirlpool system and run the system for a period of $10 \pm 5_0$ min.