



SLOVENSKI STANDARD

SIST EN 17125:2019

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Hišne toplice/masažni bazen/biserne kopeli - Varnostne zahteve in preskusne metode

Domestic spas/whirlpool spas/hot tubs - Safety requirements and test methods

Warmsprudelbecken und Whirlpools für private Nutzung - Sicherheitstechnische Anforderungen und Prüfverfahren

Spas domestiques et les spas - (Les exigences de sécurité et méthodes d'essai

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Domestic spas/whirlpool spas/hot tubs - Safety requirements and test methods

Spas domestiques et les spas - Les exigences de sécurité et méthodes d'essai

Warmsprudelbecken und Whirlpools für private Nutzung - Sicherheitstechnische Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 3 September 2018.

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European foreword

This document (EN 17125:2018) has been prepared by Technical Committee CEN/TC 402 “Domestic Pools and Spas”, 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of an identical text or by endorsement, at the latest by June 2019 and conflicting national standards shall be withdrawn at the latest by June 2019.

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.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 17125:2018 (E)**Introduction**

This European Standard outlines the technical items of associated equipment necessary for a properly equipped spa or hot tub to ensure it is clean, healthy and safe to use.

This European Standard is a recommendation that supports a variety of legal Regulations and Codes of Practice in each country. This standard is designed to complement the required rules and regulations contained in European Regulations such as:

- Building Regulations;
- Health and Safety/Health Protection Regulations;
- Regulation (EC) No 1907/2006 (REACH);
- Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, see Directive 2011/65/EU;
- Water Supply Regulation(s) (e.g. Commission Directive (EU) 2015/1787);
- Waste Electrical and Electronic Equipment Regulations (WEEE), see Directive 2012/19/EU;
- or in European Standards, such as EN 60335-2-60.

It is recommended that the design of all domestic spas is based on the parameters indicated in this standard, to ensure they are manufactured and installed correctly and the end user is aware of the correct operation and maintenance to ensure they are safe and healthy to use.

It is recommended that manufacturers, distributors, importers and retailers have a clear working knowledge of the requirements contained within this standard.

During the production of this standard, it was found that in certain areas and for certain formulae, several quite valid variations were possible. Therefore, the standard does not preclude the use of alternative formulae or procedures, where a specialist design may require such. It should also be acknowledged that with advances in technology, new products and design innovations will of necessity be introduced and procedures are in place to provide for consideration of these within future amendments to this standard.

Irrespective of anything contained in this standard, responsibility for specific Health and Safety issues and compliance with relevant National legislation shall be taken into consideration in relation to any contract during design, construction and operation and will remain the responsibility of the parties involved.

1 Scope

This document specifies safety requirements and test methods for domestic spas/whirlpool spas/hot tubs (see 3.2) for indoor and/or outdoor use, covering the following:

- portable spas including inflatable spas;
- exercise spas (factory-built or field-engineered);
- Scandinavian hot tubs;
- field-engineered spas;
- any associated equipment.

This document also provides advice and guidance for installers and maintainers of domestic spas/whirlpool spas/hot tubs.

This document is not applicable to:

- any type of swimming pool (domestic or public);
- mini-pools according to EN 16927;
- public spas (public use according to EN 15288);
- paddling pools according to EN 71-8;
- spas specifically intended for physical/medical therapy;
- spas specifically intended for beauty therapy;
- flotation tanks and flotation pools; [SIST EN 17125:2019](https://standards.iteh.ai/catalog/standards/sist/10917bb2-2d79-4acd-bff1-6447/sist-en-17125-2019)
- bath tubs (including whirlpool baths); <https://standards.iteh.ai/catalog/standards/sist/10917bb2-2d79-4acd-bff1-6447/sist-en-17125-2019>
- natural spas (name used to describe a bathing area, which is filled with untreated geothermally heated water);
- birthing pools.

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 335, *Durability of wood and wood-based products — Use classes: definitions, application to solid wood and wood-based products*

EN 16582-1:2015, *Domestic swimming pools — Part 1: General requirements including safety and test methods*

EN 16713-2:2016, *Domestic swimming pools — Water systems — Part 2: Circulation systems — Requirements and test methods*

EN 16713-3:2016, *Domestic swimming pools — Water systems — Part 3: Water treatment - Requirements*

EN 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1)*

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EN 60335-2-60:2003, *Household and similar electrical appliances — Safety — Part 2-60: Particular requirements for whirlpool baths and whirlpool spas (IEC 60335-2-60:2002)*¹⁾

EN ISO 4628-2, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering (ISO 4628-2)*

EN ISO 4628-3, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 3: Assessment of degree of rusting (ISO 4628-3)*

EN ISO 9227:2017, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2017)*

EN ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1)*

CEN/TS 16165:2016, *Determination of slip resistance of pedestrian surfaces — Methods of evaluation*

ISO 20712-1, *Water safety signs and beach safety flags — Part 1: Specifications for water safety signs used in workplaces and public areas*

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 <http://www.electropedia.org/>

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1**domestic use**

use of a pool/spa/hot tub designated solely for the owner's/proprietor's/operator's family and guests including the use connected with renting dwellings for family use

Note 1 to entry: This definition is taken from the Business Plan of CEN/TC 402.

3.2**spa****hot tub****whirlpool**

vessel containing temperature-controlled water in a closed system not integrated with a swimming pool, which is designated for sitting in or lying on a supported structure with water treatment

Note 1 to entry: In different parts of the World, the terms “spa”, “hot tub” and “whirlpool” can be used interchangeably or in combination to describe the wide range of products in the market place such as spas listed in the scope of this standard.

Note 2 to entry: Some spas may include hydro-massage jets (see 3.20).

1) This document is impacted by the amendments EN 60335-2-60:2003/A1:2005, EN 60335-2-60:2003/A2:2008, EN 60335-2-60:2003/A11:2010 and EN 60335-2-60:2003/A12:2010.

3.3

exercise spa

swim spa

fitness spa

variant of a spa in which the design and construction includes specific features and equipment to allow recreational physical activity in situ, with a ratio of at least 1 m³ (1 000 l) per indicated space for activities

Note 1 to entry: Exercise spas may:

- include peripheral jetted seats or loungers intended for water therapy;
- may be a separate distinct portion of a combination spa/exercise spa and may have separate controls.

Note 2 to entry: Recreational physical activities can be rowing, running, swimming, walking, cycling or any other exercise *in situ*.

3.4

portable spa

transportable spa

spa (either self-contained or non-self-contained) not intended for permanent and fixed installation, which can be located for indoor or outdoor use and can be relocated, if required

Note 1 to entry: The transportability is unconnected to the weight of the appliance, with or without water.

3.5

inflatable spa

type of portable (electric) spa that is free-standing and which contains an inflatable main structure that forms the vessel for the heated water and which is capable of being deflated for storage

Note 1 to entry: Inflatable spas are not designed or intended to be permanently installed in the ground and are supplied with cord-connected equipment packages that integrate pumps, heaters, and blowers and or jets for heating, circulation, filtration, and maintenance.

3.6

permanently installed spa

factory-built or field-engineered spa designed to remain in its intended location

3.7

Scandinavian hot tub

spa for single use of water, where the water temperature is increased from an external heat source and which is sited outdoors

3.8

flotation tank

enclosed bathing area, usually for one-person, containing water saturated with magnesium sulphate (Epsom salt), or natural salts

3.9

self-contained spa

factory-built spa in which all controls and equipment are located within or affixed to the spa structure and integral parts of the product, not permanently fixed or built into the surroundings and may be permanently wired or cord connected

EN 17125:2018 (E)**3.10****non-self-contained spa**

factory-built or field engineered spa in which some or all of the equipment is not an integral part of the product, and may be permanently wired or cord connected

Note 1 to entry: Non-self-contained spas may employ separate components such as an individual filter, pump, heater and controls, or they may employ assembled combinations of various components.

3.11**field engineered spa**

non-self-contained permanently installed spa custom designed to fit a specific location, being assembled or constructed at the final installation location

EXAMPLE In the ground or concrete structure.

3.12**heater**

device to heat the spa water

EXAMPLE Including, but not limited to, electric, combustion, solar, heat pump, etc.

3.13**cover**

device that is placed over the spa shell or floats on the water surface to reduce heat loss and/or dirt and debris getting into the water when not in use

3.14**safety cover**

variant of a cover with features/designs that prevent unauthorised access to the spa

3.15**safety protection device**

product to prevent people gaining unauthorised access to the spa

EXAMPLE Including, but not limited to, safety cover, fence, barrier, lockable shelter.

3.16**pump**

mechanical device, usually powered by an electric motor, that provides hydraulic flow and pressure for the purpose of filtration, heating, circulation of spa water and/or hydro massage

3.17**water treatment**

way(method) to ensure water quality through physical and chemical actions

[SOURCE: EN 16713-3:2016, 3.1, modified by adding "method"]

3.18**means of access**

design feature to facilitate entry to and/or exit from the spa

[SOURCE: EN 16582-1:2015, 3.22, modified term spa]

3.18.1**ingress**

means of entering the spa

3.18.2**egress**

means of exiting the spa

3.19**shelter****enclosure**

structure placed over the spa to aid privacy and/or protect the bathers from inclement weather

Note 1 to entry: Some shelters are safety devices, when lockable or secured by other means.

3.20**hydro-massage jets**

directional fitting installed in the shell of the spa which returns pressurised (and usually aerated) water into the spa, to provide a type of massage based on the therapeutic use of heated water

3.21**grip**

holding of the hand around the entire circumference of a support

Note 1 to entry: See Figure 1.

[SOURCE: EN 1176-1:2017, 3.16, modified]

Note 2 to entry: See Table 4.

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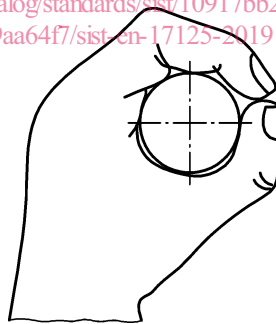


Figure 1 — Grip

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3.22

grasp

holding of the hand around part of the circumference of a support

Note 1 to entry: See Figure 2.

[SOURCE: EN 1176-1:2017, 3.17, modified]

Note 2 to entry: See Table 4.

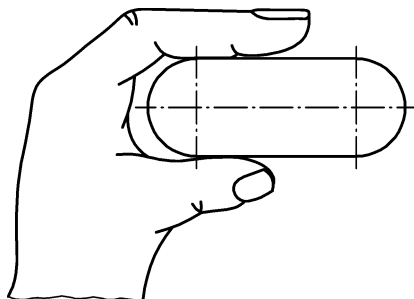


Figure 2 — Grasp

3.23

inground spa

spa designed to be installed in the ground, with structural elements that ensure intrinsic resistance to internal and external pressures

3.24

aboveground spa

spa designed to be placed on the ground or any suitable flat horizontal surface, with structural elements that ensures intrinsic resistance to internal pressures

3.25

recessed spa

spa designed to be installed in the ground, in a masonry structure or equivalent that ensures resistance to internal and external pressures, if required

3.26

freeboard

vertical distance between the water surface and the spa deck level

4 Requirements and test methods

4.1 Water leakage

Self-contained spas shall be designed not to leak water.

Non-self-contained spas may inherently leak some water in which case they shall comply with EN 16582-1:2015, 4.3.

Wooden Scandinavian hot tubs may exceed the limits in EN 16582-1:2015, 4.3.

The manufacturer/retailer shall provide suitable information about water leakage in the point of purchase information (see Clause 5) and user's manual (see Clause 6). Spas shall be constructed/manufactured/designed to ensure water losses are minimized and do not create a hazard (e.g. electrical and slip hazard).

Water loss caused by evaporation and bathers is not included.

4.2 Minimum performance requirements for structural materials

4.2.1 General

The requirements of this clause do not apply to non-structural elements of the spa, including, but not limited to, elements with solely decorative function.

The structural design and materials shall be in accordance with accepted structural engineering practices. Selection of materials for the construction of the spa shall be conducted under consideration of external influences, including, but not limited to, temperature, UV, chemicals, when appropriate, that may influence the structural integrity of the material.

Any combination of different materials in direct contact with each other shall be compatible and not negatively affect each other's properties or structural integrity.

The parameters according to 4.12 (water treatment and chemicals standards) shall be met. In addition, there shall be no influence on the water quality according to 4.12, if the material comes into contact with the spa water.

Examples of materials typically used for spa construction and lining are given, but not limited to, those shown in Table 1.

Table 1 — Examples Materials typically used for spa construction and spa lining/finishes

| Material | Spa construction | Spa lining/finishes |
|--|--------------------------------|---------------------|
| Acrylic | √ | √ |
| PVC-P | √ | √ |
| PVC reinforced membrane | √ | √ |
| Concrete | √ | √ |
| Polystyrene (PS) foam formstone | √ | — |
| Glass reinforced plastic (GRP) | √ | √ |
| Composite construction | √ | — |
| Polyurethane (composite material) | √ | — |
| Aluminium | √ | √ |
| Stainless steel | √ | √ |
| Steel panels/support frames | √ | — |
| Glass | Complete or min. one side/wall | √ |
| Wood | √ | √ |
| Brick wall construction (expanded polystyrene, etc.) | √ | — |
| Natural stone | — | √ |
| Tiles | — | √ |