



# SLOVENSKI STANDARD SIST EN 60335-2-53:1998

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Safety of household and similar electrical appliances -- Part 2-53: Particular requirements for sauna heating appliances

**iTeh STANDARD PREVIEW**

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-53: Besondere Anforderungen für elektrische Sauna-Heizgeräte

[SIST EN 60335-2-53:1998](#)

Sécurité des appareils électrodomestiques et analogues -- Partie 2-53: Règles particulières pour les appareils de chauffage de sauna

**Ta slovenski standard je istoveten z: EN 60335-2-53:1997**

**ICS:**

97.100.10      Ò^\ dā } ã | ^ } ã ā      Electric heaters

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EUROPEAN STANDARD

EN 60335-2-53

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 1997

ICS 97.100

Supersedes EN 60335-2-53:1991 and its amendment

Descriptors: Household electrical appliances, heaters, saunas, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

**Safety of household and similar electrical appliances**  
**Part 2: Particular requirements for sauna heating appliances**  
(IEC 60335-2-53:1997)

Sécurité des appareils  
électrodomestiques et analogues  
Partie 2: Règles particulières pour les  
appareils de chauffage de sauna  
(CEI 60335-2-53:1997)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke  
Teil 2: Besondere Anforderungen für  
elektrische Sauna-Heizgeräte  
(IEC 60335-2-53:1997)

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This European Standard was approved by CENELEC on 1997-07-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

# CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 61/1099/FDIS, future second edition of IEC 60335-2-53, prepared by the IEC Technical Committee 61 was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60335-2-53 on 1997-07-01.

The following dates are applicable:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 1998-05-01
- date on which national standards  
conflicting with the EN have to be withdrawn (dow) 2000-05-01

For products which have complied with EN 60335-2-53:1991 and its amendment A51:1996 before 2000-05-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2005-05-01.

This standard has to be used in conjunction with EN 60335-1, Safety of household and similar electrical appliances, Part 1: General requirements. It was established on the basis of the 1994 edition of that standard. Amendments and revisions of part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of part 1.

This part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for electric sauna heating appliances.

When a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

Subclauses and tables which are additional to those in part 1 are numbered starting with 101. Annexes which are additional to those in part 1 are lettered AA, BB, etc.

There are no special national conditions causing a deviation from this European Standard, other than those listed in annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in annex ZB to EN 60335-1.

NOTE - The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

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### Endorsement notice

The text of the International Standard IEC 60335-2-53:1997 was approved by CENELEC as a European Standard without any modification.

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NORME  
INTERNATIONALE

CEI  
IEC

INTERNATIONAL  
STANDARD

**60335-2-53**

Deuxième édition  
Second edition  
1997-08

**Sécurité des appareils électrodomestiques  
et analogues –**

**Partie 2:  
Règles particulières pour les appareils  
de chauffage de sauna**

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**Safety of household and similar electrical  
appliances**

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**Part 2:  
Particular requirements for sauna heating  
appliances**

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International Electrotechnical Commission  
Telefax: +41 22 919 0300

e-mail: [inmail@iec.ch](mailto:inmail@iec.ch)

3, rue de Varembe Geneva, Switzerland  
IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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*Pour prix, voir catalogue en vigueur  
For price, see current catalogue*

## CONTENTS

	Page
FOREWORD .....	5
Clause	
1 Scope.....	9
2 Definitions .....	11
3 General requirement.....	11
4 General conditions for the tests .....	11
5 Void .....	11
6 Classification.....	13
7 Marking and instructions.....	13
8 Protection against access to live parts .....	17
9 Starting of motor-operated appliances.....	17
10 Power input and current.....	17
11 Heating .....	17
12 Void .....	19
13 Leakage current and electric strength at operating temperature .....	19
14 Void .....	19
15 Moisture resistance .....	19
16 Leakage current and electric strength .....	19
17 Overload protection of transformers and associated circuits .....	19
18 Endurance.....	19
19 Abnormal operation .....	19
20 Stability and mechanical hazards .....	23
21 Mechanical strength .....	23
22 Construction.....	23
23 Internal wiring.....	25
24 Components.....	25
25 Supply connection and external flexible cords .....	25
26 Terminals for external conductors.....	27
27 Provision for earthing.....	27
28 Screws and connections .....	27
29 Creepage distances, clearances and distances through insulation.....	27
30 Resistance to heat, fire and tracking.....	27
31 Resistance to rusting.....	27
32 Radiation, toxicity and similar hazards .....	27
Annexes .....	29

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF HOUSEHOLD AND  
SIMILAR ELECTRICAL APPLIANCES -Part 2: Particular requirements  
for sauna heating appliances

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

It forms the second edition of IEC 60335-2-53 and replaces the first edition, published in 1988.

The text of this standard is based on the following documents:

FDIS	Report on voting
61/1099/FDIS	61/1277/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the third edition (1991) of that standard.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electric sauna heating appliances.

Where a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text in part 1 is to be adapted accordingly.

## NOTES

- 1 The following print types are used:
- requirements: in roman type;
  - *test specifications: in italic type;*
  - notes: in small roman type.

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

- 2 Subclauses and tables which are additional to those in part 1 are numbered starting from 101.

The following additional differences exist in some countries:

- 6.1: Class 0I appliances are allowed (Japan).
- 11.3: The temperatures in front of the sauna heater are not measured (USA).
- 11.8: The temperature rise limits are different (USA).
- 13.2: Leakage current tests are only specified for sauna heaters having a supply cord (USA).
- 16.2: Leakage current tests are only specified for sauna heaters having a supply cord (USA).
- 19.1: The volume of the sauna room is determined differently (USA).
- 19.5: The test is also carried out on appliances intended to be permanently connected to fixed wiring (Norway).
- 19.101: The test is not applicable (USA).
- 22.101: A mass of four times that of the heater plus rocks is used (USA).
- 22.103: The requirement is not applicable (USA).
- 24.1.4: The 125 °C limit is not applicable (USA).
- 25.7: Different cords are used (USA).
- Annex AA: Tests for the sauna room are different (USA).



## SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –

### Part 2: Particular requirements for sauna heating appliances

#### 1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of electric **sauna heating appliances** having a **rated power input** not exceeding 20 kW, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

#### NOTES

- 1 **Sauna heating appliances** may be of the thermal storage type.
- 2 **Sauna heating appliances** may consist of more than one **sauna heater**, provided the heaters are intended to be installed adjacent to each other and are controlled by common controls and **protective devices**.

So far as is practicable, this standard deals with the common hazards presented by appliances which are encountered by all persons in and around the home.

This standard does not in general take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

#### NOTES

- 3 Attention is drawn to the fact that
  - for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
  - for appliances intended to be used in tropical countries, special requirements may be necessary;
  - in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities.
- 4 This standard does not apply to
  - appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
  - appliances intended to cause perspiration to only a part of the human body;
  - sweating baths where the head of the user remains outside the heated space;
  - tents and other collapsible sauna baths.

## 2 Definitions

This clause of part 1 is applicable except as follows:

### 2.2.9 Replacement:

**normal operation:** Appliances are operated under the following conditions:

**Sauna heating appliances** are installed in accordance with the instructions for installation in a sauna room as described in annex AA. The volume of the sauna room is the minimum value specified in the instructions.

The rock container is filled in accordance with the instructions for use. If the capacity of the rock container is adjustable, the container is filled with the most unfavourable quantity of rocks. If the rock container has a lid, the lid is positioned in accordance with the instructions for use.

**Prefabricated saunas** are installed in accordance with the instructions for installation.

2.101 **sauna heater:** Heater in which the heating elements and the fan, if any, are mounted in an enclosure and having a container which is filled with rocks or similar materials.

2.102 **sauna heating appliance:** Appliance comprising a **sauna heater**, controls, **protective devices** and the control board.

2.103 **prefabricated sauna:** Assembly comprising a sauna room and a **sauna heating appliance**.

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## 3 General requirement

This clause of part 1 is applicable.

## 4 General conditions for the tests

This clause of part 1 is applicable except as follows:

### 4.2 Addition:

*If the appliance comprises more than one **sauna heater**, these are tested together.*

*The appliance has to be submitted with a sufficient quantity of appropriate rocks.*

4.101 *Unless otherwise specified, if a ventilating fan operates independently of the heating element, the tests are carried out with or without the fan in operation, whichever is more unfavourable.*

## 5 Void

## 6 Classification

This clause of part 1 is applicable except as follows:

### 6.1 Replacement:

Appliances shall be of **class I, class II or class III**.

*Compliance is checked by inspection and by the relevant tests.*

### 6.2 Addition:

**Sauna heaters**, controls and **protective devices** intended to be mounted inside the sauna room, shall be at least IPX4.

For **prefabricated saunas**, all electrical components shall be at least IPX4.

## 7 Marking and instructions

This clause of part 1 is applicable except as follows:

### 7.1 Addition:

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**Sauna heaters** shall be marked with the substance of the following:

See instructions for additional important information.

They shall also be marked with:

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- the minimum distance between the top of the heater and the ceiling of the sauna room;
- the minimum distance between the bottom of the heater and the floor of the sauna room, unless this distance is determined by the construction of the heater;
- the minimum horizontal distance between the heater and any combustible material of the sauna room, including a protective rail, unless these distances are determined by the construction of the heater;
- the maximum depth and minimum width of the recess for **sauna heaters** intended to be installed in a recess.

**Sauna heaters** shall be marked with the following warning within a frame.

WARNING – Covering causes fire risk

The inside wall of **prefabricated saunas** shall be marked near the **sauna heater** with the following warning within a frame.

WARNING – Covering the heater causes fire risk

The **sauna heater** shall be marked with the following warning within a frame.

WARNING – Inadequately filled rock container causes fire risk

NOTE – This warning is not required if the **sauna heater** complies with clause 11 without rocks in the container.