



SLOVENSKI STANDARD

SIST EN 60601-2-6:2015

01-september-2015

Medicinska električna oprema - 2-6. del: Posebne zahteve za osnovno varnost in bistvene lastnosti opreme za mikrovalovno terapijo

Medical electrical equipment - Part 2-6: Particular requirements for the basic safety and essential performance of microwave therapy equipment

Medizinische elektrische Geräte - Teil 2-6: Besondere Festlegungen für die Sicherheit einschließlich der wesentlichen Leistungsmerkmale von Mikrowellen-Therapiegeräten

Appareils électromédicaux - Partie 2-6: Règles particulières de sécurité de base et de performances essentielles des appareils de thérapie à micro-ondes

<https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>

Ta slovenski standard je istoveten z: EN 60601-2-6:2015

ICS:

11.040.60 Terapevtska oprema Therapy equipment

SIST EN 60601-2-6:2015

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60601-2-6:2015](#)

<https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>

EUROPEAN STANDARD

EN 60601-2-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2015

ICS 11.040.60

English Version

Medical electrical equipment - Part 2-6: Particular requirements
for the basic safety and essential performance of microwave
therapy equipment
(IEC 60601-2-6:2012)

Appareils électromédicaux - Partie 2-6: Exigences
particulières pour la sécurité de base et les performances
essentielles des appareils de thérapie à micro-ondes
(IEC 60601-2-6:2012)

Medizinische elektrische Geräte - Teil 2-6: Besondere
Festlegungen für die Sicherheit einschließlich der
wesentlichen Leistungsmerkmale von Mikrowellen-
Therapiegeräten
(IEC 60601-2-6:2012)

This European Standard was approved by CENELEC on 2015-04-14. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 60601-2-6:2015 (E)

Foreword

The text of document 62D/985/FDIS, future edition 2 of IEC 60601-2-6, prepared by SC 62D, "Electromedical equipment", of IEC TC 62, "Electrical equipment in medical practice" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60601-2-6:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-01-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-04-14

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive see informative Annex ZZ, which is an integral part of this document.

SIST EN 60601-2-6:2015
Endorsement notice
<https://standards.iteh.ai/catalog/standards/sist/05258612-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>

The text of the International Standard IEC 60601-2-6:2012 was approved by CENELEC as a European Standard without any modification.

Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and within its scope the Standard covers all relevant essential requirements given in Annex I of EU Directive 93/42/EEC of 14 June 1993 concerning medical devices.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EU Directives can be applied to the products falling within the scope of this standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60601-2-6:2015](https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015)

<https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60601-2-6:2015](#)

<https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>



IEC 60601-2-6

Edition 2.0 2012-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Medical electrical equipment –
Part 2-6: Particular requirements for the basic safety and essential performance
of microwave therapy equipment

Appareils électromédicaux –
Partie 2-6: Exigences particulières pour la sécurité de base et les performances
essentiels des appareils de thérapie à micro-ondes

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

S

ICS 11.040.60

ISBN 978-2-88912-062-8

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
201.1 Scope, object and related standards	6
201.2 Normative references	7
201.3 Terms and definitions	7
201.4 General requirements.....	8
201.5 General requirements for testing of ME EQUIPMENT.....	8
201.6 Classification of ME EQUIPMENT and ME SYSTEMS	9
201.7 ME EQUIPMENT identification, marking and documents.....	9
201.8 Protection against electrical HAZARDS from ME EQUIPMENT	11
201.9 Protection against MECHANICAL HAZARDS of ME EQUIPMENT and ME SYSTEMS.....	11
201.10 Protection against unwanted and excessive radiation HAZARDS.....	11
201.11 Protection against excessive temperatures and other HAZARDS.....	12
201.12 Accuracy of controls and instruments and protection against hazardous outputs.....	12
201.13 HAZARDOUS SITUATIONS and fault conditions.....	14
201.14 PROGRAMMABLE ELECTRICAL MEDICAL SYSTEMS (PEMS)	14
201.15 Construction of ME EQUIPMENT.....	14
201.16 ME SYSTEMS	14
201.17 Electromagnetic compatibility of ME EQUIPMENT and ME SYSTEMS	14
202 Electromagnetic compatibility – Requirements and tests	14
Annexes	15
ANNEX C (informative) Guide to marking and labelling requirements for ME EQUIPMENT and ME SYSTEMS.....	16
Annex AA (informative) Particular guidance and rationale.....	17
Index of defined terms used in this particular standard.....	20
Table 201.101 – Additional ESSENTIAL PERFORMANCE requirements.....	8
Table 201.C.101 – Marking on the outside of MICROWAVE THERAPY EQUIPMENT or its parts	16
Table 201.C.102 – Marking on the inside of MICROWAVE THERAPY EQUIPMENT or its parts.....	16

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEDICAL ELECTRICAL EQUIPMENT –

Part 2-6: Particular requirements for the basic safety and essential performance of microwave therapy equipment

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International standard IEC 60601-2-6 has been prepared by subcommittee 62D: Electromedical equipment, of IEC technical committee 62: Electrical equipment in medical practice.

This second edition cancels and replaces the first edition of IEC 60601-2-6, published in 1984. This edition constitutes a technical revision and has been aligned to the third edition of IEC 60601-1:2005+A1:2012.

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

FDIS	Report on voting
62D/985/FDIS	62D/1008/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this standard, the following print types are used:

- Requirements and definitions: roman type.
- *Test specifications: italic type.*
- Informative material appearing outside of tables, such as notes, examples and references: in smaller type. Normative text of tables is also in a smaller type.
- TERMS DEFINED IN CLAUSE 3 OF THE GENERAL STANDARD, IN THIS PARTICULAR STANDARD OR AS NOTED: SMALL CAPITALS.

In referring to the structure of this standard, the term

- “clause” means one of the seventeen numbered divisions within the table of contents, inclusive of all subdivisions (e.g. Clause 7 includes subclauses 7.1, 7.2, etc.);
- “subclause” means a numbered subdivision of a clause (e.g. 7.1, 7.2 and 7.2.1 are all subclauses of Clause 7).

References to clauses within this standard are preceded by the term “Clause” followed by the clause number. References to subclauses within this particular standard are by number only.

In this standard, the conjunctive “or” is used as an “inclusive or” so a statement is true if any combination of the conditions is true.

The verbal forms used in this standard conform to usage described in Annex H of the ISO/IEC Directives, Part 2. For the purposes of this standard, the auxiliary verb:

- “shall” means that compliance with a requirement or a test is mandatory for compliance with this standard;
- “should” means that compliance with a requirement or a test is recommended but is not mandatory for compliance with this standard;
- “may” is used to describe a permissible way to achieve compliance with a requirement or test.

An asterisk (*) as the first character of a title or at the beginning of a paragraph or table title indicates that there is guidance or rationale related to that item in Annex AA.

A list of all parts of the IEC 60601 series, published under the general title *Medical electrical equipment*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended

INTRODUCTION

The minimum safety requirements specified in this particular standard are considered to provide for a practical degree of safety in the operation of microwave therapy equipment.

This particular standard amends and supplements IEC 60601-1 (third edition, 2005 and amendment 1,2012): *Medical electrical equipment – Part 1: General requirements for safety and essential performance*, hereinafter referred to as the general standard (see 201.1.4).

The requirements are followed by specifications for the relevant tests.

A "Particular guidance and rationale" section giving some explanatory notes, where appropriate, about the more important requirements is included in Annex AA.

Clauses or subclauses for which there are explanatory notes in Annex AA are marked with an asterisk (*).

It is considered that a knowledge of the reasons for these requirements will not only facilitate the proper application of the standard but will, in due course, expedite any revision necessitated by changes in clinical practice or as a result of developments in technology. However, this annex does not form part of the requirements of this standard.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60601-2-6:2015](https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015)

<https://standards.iteh.ai/catalog/standards/sist/03258b12-db95-48c1-9fe0-6023e2c29650/sist-en-60601-2-6-2015>