Meditsiiniliseks kasutamiseks ettenähtud kopsuventilaatorid. Erinõuded esmasele ohutusele ja olulistele toimimisnäitajatele. Osa 6: Koduseks raviks mõeldud ventilatoorsed abiseadmed

Lung ventilators for medical use - Particular requirements for basic safety and essential performance - Part 6: Home-care ventilatory support devices



#### FESTI STANDARDI FESSÕNA

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 10651-6:2009 sisaldab Euroopa standardi EN ISO 10651-6:2009 ingliskeelset teksti.

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The standard is available from Estonian standardisation organisation.

ICS 11.040.10

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# EUROPEAN STANDARD

# **EN ISO 10651-6**

# NORME EUROPÉENNE EUROPÄISCHE NORM

April 2009

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Supersedes EN ISO 10651-6:2004

#### **English Version**

Lung ventilators for medical use - Particular requirements for basic safety and essential performance - Part 6: Home-care ventilatory support devices (ISO 10651-6:2004)

Ventilateurs pulmonaires à usage médical - Exigences particulières pour la sécurité de base et les performances essentielles - Partie 6: Dispositifs d'assistance respiratoire à domicile (ISO 10651-6:2004)

Beatmungsgeräte für die medizinische Anwendung -Besondere Festlegungen für die grundlegende Sicherheit einschließlich der wesentlichen Leistungsmerkmale - Teil 6: Heimbeatmungsgeräte zur Atemunterstützung (ISO 10651-6:2004)

This European Standard was approved by CEN on 14 March 2009.

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

#### **Foreword**

The text of ISO 10651-6:2004 has been prepared by Technical Committee ISO/TC 121 "Anaesthetic and respiratory equipment" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10651-6:2009 by Technical Committee CEN/TC 215 "Respiratory and anaesthetic equipment" the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by March 2010.

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 ISO 10651-6:2004.

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For relationship with EC Directive, see informative Annex ZA, which is an integral part of this document.

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#### **Endorsement notice**

The text of ISO 10651-6:2004 has been approved by CEN as a EN ISO 10651-6:2009 without any modification.

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## Introduction

This part of ISO 10651 specifies requirements for ventilatory support devices mainly for home-care use but which could be used elsewhere (in healthcare facilities or other locations) for **patients** not dependent on ventilatory support, i.e. where the **ventilator** is not considered to be **life-supporting equipment**. These **ventilators** are frequently used in locations where driving power is not reliable. These **ventilators** often are supervised by non-healthcare personnel with varying levels of training.

This part of ISO 10651 is a Particular Standard based on IEC 60601-1:1988, including Amendments 1 (1991) and 2 (1995), hereafter referred to as the General Standard. The General Standard is the basic standard for the safety of all medical electrical equipment used by or under the supervision of qualified personnel in the general medical and patient environment; it also contains certain requirements for reliable operation to ensure safety.

The General Standard has associated Collateral Standards and Particular Standards. The Collateral Standards include requirements for specific technologies and/or hazards and apply to all applicable equipment, such as medical systems, EMC, radiation protection in diagnostic X-ray equipment, software, etc. The Particular Standards apply to specific equipment types, such as medical electron accelerators, high frequency surgical equipment, hospital beds, etc.

NOTE Definitions of Collateral Standard and Particular Standards can be found in IEC 60601-1:1988, 1.5 and A.2, respectively.

To facilitate the use of this part of ISO 10651, the following drafting conventions have been applied.

This part of ISO 10651 uses the same main clause titles and numbering as the General Standard, for ease of cross-referencing of the requirements. The changes to the text of the General Standard, as supplemented by the Collateral Standards, are specified by the use of the following words.

- "Replacement" means that the indicated clause or subclause of the General Standard is replaced completely by the text of this Particular Standard.
- "Addition" means that the relevant text of this Particular Standard is a new element (e.g. subclause, list item, note, table, figure) additional to the General Standard.
- "Amendment" means that an existing element of the General Standard is partially modified by deletion and/or addition as indicated by the text of this Particular Standard.

To avoid confusion with any amendments to the General Standard itself, a particular numbering has been employed for elements added by this part of ISO 10651: clauses, subclauses, tables and figures are numbered starting from 101; additional list items are lettered aa), bb), etc. and additional annexes are lettered AA, BB, etc.

In this part of ISO 10651, the following print types are used:

- requirements, compliance with which can be verified, and definitions: roman type;
- notes and examples: smaller roman type;
- description of type of document change, and test methods: *italic type*;
- terms defined in the General Standard IEC 60601-1:1988, Clause 2 and terms defined in this part of ISO 10651: bold type.

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part of i.

Tor ventilators inte. Throughout this part of ISO 10651, text for which a rationale is provided in Annex AA is indicated by an asterisk (\*).

Requirements for ventilators intended for anaesthetic applications are given in ISO 8835-5.

# Lung ventilators for medical use — Particular requirements for basic safety and essential performance —

### Part 6:

# Home-care ventilatory support devices

#### 1 Scope

IEC 60601-1:1988, Clause 1 applies, except as follows.

#### Amendment:

This part of ISO 10651 specifies the basic safety and essential performance requirements for home-care ventilatory support devices, intended mainly for use in home care but which could be used elsewhere (e.g. in healthcare facilities) for appropriate **patients** for whom the use of a home-care **ventilator** complying with ISO 10651-2 is not required.

The requirements of this part of ISO 10651 which replace or modify the requirements of IEC 60601-1:1988 and its Amendments 1 (1991) and 2 (1995) are intended to take precedence over the corresponding general requirements.

#### 2 Normative references

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.

ISO 32, Gas cylinders for medical use — Marking for identification of content

ISO 4135, Anaesthetic and respiratory equipment — Vocabulary

ISO 5356-1, Anaesthetic and respiratory equipment — Conical connectors — Part 1: Cones and sockets

ISO 5356-2, Anaesthetic and respiratory equipment — Conical connectors — Part 2: Screw-threaded weight-bearing connectors

ISO 5359, Low-pressure hose assemblies for use with medical gases

ISO 5362, Anaesthetic reservoir bags

ISO 5367, Breathing tubes intended for use with anaesthetic apparatus and ventilators

ISO 7396-1, Medical gas pipeline systems — Part 1: Pipelines for compressed medical gases and vacuum

ISO 14937, Sterilization of health care products — General requirements for characterization of a sterilizing agent and the development, validation and routine control of a sterilization process for medical devices, and Technical Corrigendum 1:2003

ISO 15001, Anaesthetic and respiratory equipment — Compatibility with oxygen

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ISO 15223:2000, Medical devices — Symbols to be used with medical device labels, labelling and information to be supplied

IEC 60079-4, Electrical apparatus for explosive gas atmospheres — Part 4: Method of test for ignition temperature

IEC 60601-1:1988, Medical electrical equipment — Part 1: General requirements for safety, and Amendment 1:1991 and Amendment 2:1995

IEC 60601-1-2:2001, Medical electrical equipment — Part 1-2: General requirements for safety — Collateral standard: Electromagnetic compatibility — Requirements and tests

IEC 60601-1-6, Medical electrical equipment — Part 1-6: General requirements for safety — Collateral standard: Usability (at present Commmittee draft)

IEC 60601-1-8:2003, Medical electrical equipment — Part 1-8: General requirements for safety — Collateral standard: Alarm systems — Requirements, tests and guidelines — General requirements and guidelines for alarm systems in medical electrical equipment and medical electrical systems

is ve. ed to be applied to patients who are dependent on this ventilation, it is considered to be life-supporting equipment.