



SLOVENSKI STANDARD SIST EN ISO 11990:2003

01-september-2003

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SIST EN ISO 11990:2000

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Optics and optical instruments - Lasers and laser-related equipment - Determination of laser resistance of tracheal tube shafts (ISO 11990:2003)

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Optik und optische Instrumente - Laser und Laseranlagen - Bestimmung der Laserresistenz des Schafts von Trachealtuben (ISO 11990:2003)

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Optique et instruments d'optique - Lasers et équipements associés aux lasers - Détermination de la résistance au laser des tubes trachéaux (ISO 11990:2003)

Ta slovenski standard je istoveten z: EN ISO 11990:2003

ICS:

11.040.10	Anestezijska, respiratorna in reanimacijska oprema	Anaesthetic, respiratory and reanimation equipment
31.260	Optoelektronika, laserska oprema	Optoelectronics. Laser equipment

SIST EN ISO 11990:2003

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11990

April 2003

ICS 31.260

Supersedes EN ISO 11990:1999

English version

**Optics and optical instruments - Lasers and laser-related
equipment - Determination of laser resistance of tracheal tube
shafts (ISO 11990:2003)**

Optique et instruments d'optique - Lasers et équipements
associés aux lasers - Détermination de la résistance au
laser des tubes trachéaux (ISO 11990:2003)

Optik und optische Instrumente - Laser und Laseranlagen -
Bestimmung der Laserresistenz des Schafts von
Trachealtuben (ISO 11990:2003)

This European Standard was approved by CEN on 21 February 2003.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 11990:2003 (E)

CORRECTED 2003-07-02

Foreword

This document (EN ISO 11990:2003) has been prepared by Technical Committee ISO/TC 172 "Optics and optical instruments" in collaboration with Technical Committee CEN/TC 123 "Lasers and laser-related equipment", the secretariat of which is held by DIN.

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 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

This document supersedes EN ISO 11990:1999.

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 ZB, 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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Endorsement notice

The text of ISO 11990:2003 has been approved by CEN as EN ISO 11990:2003 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

Annex ZA
(normative)

**Normative references to international publications
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 11146	1999	Laser and laser-related equipment - Test methods for laser beam parameters - Beam widths, divergence angle and beam propagation factor	EN ISO 11146	1999

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Annex ZB
(informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

This European Standard 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 93/42/EEC.

WARNING Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

The following clauses of this standard are likely to support requirements of Directive 93/42/EEC.

Compliance with these clauses of this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

Table ZB.1— Correspondence between this European Standard and EU Directives

Clause/subclause of this European Standard	Corresponding Essential Requirement of Directive 93/42/EEC	Comments
The whole standard	§§ 1.1; 1.2; 1.3; II.7.1; II.7.3; II.9.2; II.9.3; II.12.7.5	The test method only

INTERNATIONAL
STANDARD

ISO
11990

Second edition
2003-04-01

**Optics and optical instruments — Lasers
and laser-related equipment —
Determination of laser resistance of
tracheal tube shafts**

*Optique et instruments d'optique — Lasers et équipements associés aux
lasers — Détermination de la résistance au laser des tubes trachéaux*

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Reference number
ISO 11990:2003(E)

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ISO 11990:2003(E)**Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 11990 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 9, *Electro-optical systems*.

This second edition cancels and replaces the first edition (ISO 11990:1999), Clause 12 of which has been technically revised.

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Introduction

Surgery in the airway in which a laser is used brings together an oxygen-enriched atmosphere, fuel and high energy that can combine to create a fire. In the early to middle 1980s, the increasing use of such lasers was followed by airway fires and the subsequent development of tracheal tubes designed specifically to be resistant to laser ignition and damage. Unfortunately, some of these tubes were not sufficiently resistant under operating room conditions, and airway fires continued to occur. These events lead to the development of the test method described in this International Standard, in order to assist the clinician in determining which tracheal tube shaft is most laser-resistant for a defined set of conditions.

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