



SLOVENSKI STANDARD
SIST EN 12626:1998

01-november-1998

Varnost strojev - Laserski obdelovalni stroji - Varnostne zahteve (modificiran ISO 11553:1996)

Safety of machinery - Laser processing machines - Safety requirements (ISO 11553:1996 modified)

Sicherheit von Maschinen - Laserbearbeitungsmaschinen - Sicherheitsanforderungen (ISO 11553:1996 modifiziert)

Sécurité des machines - Machines à laser - Prescriptions de sécurité (ISO 11553:1996 modifiée)

ITIH STANDARD PREVIEW
(standards.iteh.ai)
<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

Ta slovenski standard je istoveten z: EN 12626:1997

ICS:

31.260

Optoelektronika, laserska
oprema

Optoelectronics. Laser
equipment

SIST EN 12626:1998

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12626:1998

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

EUROPEAN STANDARD

EN 12626

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 1997

ICS 31.260

Descriptors: See ISO document

English version

**Safety of machinery - Laser processing machines -
Safety requirements (ISO 11553:1996 modified)**

Sécurité des machines - Machines à laser -
Prescriptions de sécurité (ISO 11553:1996
modifiée)

Sicherheit von Maschinen -
Laserbearbeitungsmaschinen -
Sicherheitsanforderungen (ISO 11553:1996
modifiziert)

ITIH STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12626:1998

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

This European Standard was approved by CEN on 1997-01-16. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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

CEN

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 123 "Laser 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 August 1997, and conflicting national standards shall be withdrawn at the latest by August 1997.

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(s)

For relationship with EU Directive(s), see informative Annex ZC, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

[SIST EN 12626:1998](https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998)

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

Endorsement notice

The text of the International Standard ISO 11553:1996 was approved by CEN as a European Standard with agreed common modifications as given below.

- ad 5.3.2: The design of control systems shall comply with prEN 954-1.
- ad 5.3.2.2: Unexpected start-up shall be prevented by compliance with prEN 1037 and for the emergency stop equipment EN 418 shall apply.
- ad 5.3.2.3: Interlocking systems shall comply with prEN 1088.
- ad 5.3.2.5: The overall risks present in machine incorporating the laser shall be considered and the principles given in EN 292-2 clause 4.1.4 shall be applied where access to the danger zone is need for setting etc. Where there is a conflict the requirements of EN 292-2 clause 4.1.4 should take precedence.

Normative references to International Standards are replaced by reference to European Standards through Annex ZA (normative).

Normative references to European Standards given in this endorsement notice are listed in Annex ZB (normative).



Introduction to the European Standard

The Machinery Safety Directive issued by the Council of the EEC outlines essential and mandatory requirements that must be met in order to ensure that machinery is safe. In response, CEN/CENELEC initiated a programme to produce safety standards for machines and their applications. This International Standard is one in that series.

It has been prepared as a harmonized standard to provide a means of conforming with the Essential safety requirements of the Machinery Directive and associated EFTA Regulations.

The extent to which hazards are covered is indicated in the scope. Machinery should comply as appropriate with EN 292 for hazards which are not covered by this International Standard.

It is applicable to machines using laser radiation to process materials. The purpose of this International Standard is to prevent injuries to persons

- by listing potential hazards generated by machines containing lasers;
- by specifying safety measures and verifications necessary for reducing the risk caused by specific hazardous conditions;
- by providing references to pertinent standards;
- by specifying the information which is to be supplied to the users so that they can establish proper procedures and precautions.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12626:1998
<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

This standard should be considered as a B-type standard as defined in 3.2 of EN 414:1992 and is intended to give guidance to the writers of C-type standards and to designers and others where there is no C-type standard.

European Annex ZA (normative)
Normative references to international publications
with their corresponding 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 11252	1993	Lasers and laser related equipment - Laser device - Minimum requirements for documentation	EN 31252	1994
ISO/TR 12100-1	1992	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology methodology	EN 292-1	1991
ISO/TR 12100-2	1992	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications	EN 292-2	1991
IEC 204-1 (mod)	1992	Electrical equipment of industrial machines - Part 1: General requirements	EN 60204-1	1992
IEC 825-1	1993	Safety of laser products - Part 1: Equipment classification, requirements and user's guide	EN 60825-1	1994

European Annex ZB (normative)
Normative references

The endorsement notice of 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.

- | | |
|-----------------|--|
| EN 418:1992 | Safety of machinery - Emergency stop equipment, functional aspects - Principles for design |
| prEN 954-1:1992 | Safety of machinery - Safety related parts of control systems - Part 1: General principles for design |
| prEN 1037:1993 | Safety of machinery - Isolation and energy dissipation - Prevention of unexpected start-up |
| prEN 1088:1993 | Safety of machinery - Interlocking devices with and without guard locking - General principles and provisions for design |

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 12626:1998](https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998)

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

European Annex ZC (informative)

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 following EU Directive(s):

Machinery Directive 89/392/EEC,
its amendments 91/368/EEC and 93/44/EEC

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

Warning: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12626:1998

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

INTERNATIONAL
STANDARD

ISO
11553

First edition
1996-09-01

**Safety of machinery — Laser processing
machines — Safety requirements**

iTeh STANDARD PREVIEW

Sécurité des machines — Machines à laser — Prescriptions de sécurité
(standards.iteh.ai)

SIST EN 12626:1998

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>



Reference number
ISO 11553:1996(E)

Contents

	Page
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Hazards	2
4.1 Inherent hazards	2
4.2 Hazards created by external effects (interferences)	3
4.3 Hazards covered by this International Standard	3
5 Safety requirements and measures	3
5.1 General requirements	3
5.2 Risk assessment	3
5.3 Implementation of corrective measures	3
6 Verification of safety requirements and measures	6
7 Information for user	6
8 Labelling	7

[SIST EN 12626:1998](https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998)
<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb-52ba2d7e9e03/sist-en-12626-1998>

Annexes	
A Guards	8
B Potential hazards	9
C Protection against other hazards	11
D Bibliography	12

© ISO 1996

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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.

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.

International Standard ISO 11553 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 9, *Electro-optical systems*, in collaboration with CEN/TC 123, *Lasers and laser related equipment*, and was correlated with IEC/TC 76.

Annex A forms an integral part of this International Standard. Annexes B, C and D are for information only.

iTeh STANDARD PREVIEW

(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/e7a028d1-7941-440c-88cb->