

This is a preview of "ISO 11553-2:2007". [Click here to purchase the full version from the ANSI store.](#)

First edition
2007-03-01

Corrected version
2008-03-01

Safety of machinery — Laser processing machines —

Part 2: Safety requirements for hand-held laser processing devices

Sécurité des machines — Machines à laser —

Partie 2: Exigences de sécurité pour dispositifs de traitement laser portatifs

Reference number
ISO 11553-2:2007(E)



© ISO 2007

This is a preview of "ISO 11553-2:2007". [Click here to purchase the full version from the ANSI store.](#)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2007

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 either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 11553-2:2007". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Hazards	2
4.1 Inherent hazards	2
4.2 Hazards induced by external effects (interferences)	3
4.3 Further hazards related to the use of hand-held laser processing devices	4
5 Safety requirements and measures	4
5.1 General requirements	4
5.2 Risk assessment	5
5.3 Implementation of corrective measures	5
5.4 Design requirements	7
6 Verification of safety requirements and measures	11
6.1 General conformance	11
6.2 Control category classification	11
6.3 Laser classification	12
7 Information for the user	12
7.1 Additional requirements	12
7.2 Recommended inclusions	13
8 Labelling	14
Annex A (informative) Risk assessment examples	15
Annex B (informative) Types of hand-held laser processing machines	17
Bibliography	19

This is a preview of "ISO 11553-2:2007". [Click here to purchase the full version from the ANSI store.](#)

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 11553-2 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 9, *Electro-optical systems*.

This first edition, together with ISO 11553-1, cancels and replaces ISO 11553:1996, which has been technically revised.

ISO 11553 consists of the following parts, under the general title *Safety of machinery — Laser processing machines*:

- *Part 1: General safety requirements*
- *Part 2: Safety requirements for hand-held laser processing devices*

This corrected version of ISO 11553-2:2007 now carries the logo of the International Electrotechnical Commission (IEC) as well as that of ISO.

This is a preview of "ISO 11553-2:2007". [Click here to purchase the full version from the ANSI store.](#)

Introduction

This document is a type C standard as stated in ISO 12100-1:2003.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document. When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

It is applicable to machines using laser radiation to process materials. The purpose of this part of ISO 11553 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.