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NSAI Standards

Irish Standard
I.S. EN ISO 23125:2010

Machine tools - Safety - Turning machines (ISO 23125:2010)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 23125:2010/A1

April 2012

ICS 25.080.01

English Version

Machine tools - Safety - Turning machines - Amendment 1 (ISO 23125:2010/Amd 1:2012)

Machines-outils - Sécurité - Machines de tournage - Amendement 1 (ISO 23125:2010/Amd 1:2012)

Werkzeugmaschinen - Sicherheit - Drehmaschinen - Änderung 1 (ISO 23125:2010/Amd 1:2012)

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Foreword

This document (EN ISO 23125:2010/A1:2012) has been prepared by Technical Committee ISO/TC 39 "Machine tools" in collaboration with Technical Committee CEN/TC 143 “Machine tools - Safety” the secretariat of which is held by SNV.

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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 23125

May 2010

ICS 25.080.01

Supersedes EN 12415:2000, EN 12478:2000, EN 12840:2001, EN 13788:2001

English Version

Machine tools - Safety - Turning machines (ISO 23125:2010)

Machines-outils - Sécurité - Machines de tournage (ISO 23125:2010)

Werkzeugmaschinen - Sicherheit - Drehmaschinen (ISO 23125:2010)

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Annex ZA
(informative)

Relationship between this International Standard and the Essential Requirements of 2006/42/EC

This International Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC “Machinery safety”.

Once this International Standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative e clauses of this International Standard confers, within the limits of the scope of this International Standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives (e.g. 2004/108/EC “Electromagnetic compatibility”) may be applicable to the products falling within the scope of this International Standard.

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I.S. EN ISO 23125:2010

INTERNATIONAL STANDARD

ISO 23125

First edition
2010-05-01

Machine tools — Safety — Turning machines

Machines-outils — Sécurité — Machines de tournage

Reference number
ISO 23125:2010(E)

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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.

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ISO 23125 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 10, *Safety*, in collaboration with Technical Committee CEN/TC 143, *Machine tools — Safety*.

This first edition cancels and replaces:

EN 12415:2000+A1:2002, *Safety of machine tools — Small numerically controlled turning machines and turning centres*

EN 12478:2000, *Safety of machine tools — Large numerically controlled turning machines and turning centres*

EN 12840:2001, *Safety of machine-tools — Manually controlled turning machines with or without automatic control*

EN 13788:2001, *Machine tools — Safety — Multi-spindle automatic turning machines*

which have been technically revised.

The International Standards produced by ISO/TC 39/SC 10 in collaboration with CEN/TC 143 are particular to machine tools and complement the relevant A and B standards on the subject of general safety (see Introduction to ISO 12100-1 for a description of type-A, -B and -C standards).

This International 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).

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Introduction

This International Standard has been prepared to be a Harmonized Standard to provide one means of conforming to the Essential Safety Requirements of the Machinery Directive of the European Union and associated EFTA regulations.

This International Standard is a type-C standard as defined in ISO 12100-1.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered is indicated in the Scope of this International Standard. In addition, turning machines shall comply as appropriate with ISO 12100-1 and ISO 12100-2 for hazards which are not covered by this International Standard.

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 International Standards for machines that have been designed and built in accordance with the provisions of this type-C standard.

This International Standard replaces the “safety categories” defined in EN 954-1[1)] as resistance to faults and their subsequent behaviour in the fault condition, by introducing the “performance level” defined in ISO 13849-1:2006 in terms of probability of dangerous failure per hour.

The requirements of this International Standard concern designers, manufacturers, suppliers and importers of machines described in the Scope.

This International Standard also includes a list of informative items to be provided by the manufacturer to the user.

The requirements for a new mode of operation, Mode 3 “manual intervention machining mode” will be discussed in the future.

1) The application of EN 954-1:1996 in harmonized standards has been prolonged until 2011-12-31. After that date, “performance levels” are to be applied.

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Machine tools — Safety — Turning machines

1 Scope

This International Standard specifies the requirements and/or measures to eliminate the hazards or reduce the risks in the following groups of turning machines and turning centres, which are designed primarily to shape metal by cutting.

— **Group 1**: Manually controlled turning machines without numerical control.

— **Group 2**: Manually controlled turning machines with limited numerically controlled capability.

— **Group 3**: Numerically controlled turning machines and turning centres.

— **Group 4**: Single- or multi-spindle automatic turning machines.

NOTE 1 For detailed information on the machine groups, see the definitions in 3.4 and mandatory and optional modes of operation in 3.5.

NOTE 2 Requirements in this International Standard are, in general, applicable to all groups of turning machines. If requirements are applicable to some special group(s) of turning machines only, then the special group(s) of turning machine(s) is/are specified.

NOTE 3 Hazards arising from other metalworking processes (e.g. grinding and laser processing) are covered by other International Standards (see Bibliography).

This International Standard covers the significant hazards listed in Clause 4 and applies to ancillary devices (e.g. for workpieces, tools and work clamping devices, handling devices and chip handling equipment), which are integral to the machine.

This International Standard also applies to machines which are integrated into an automatic production line or turning cell inasmuch as the hazards and risks arising are comparable to those of machines working separately.

This International Standard also includes a minimum list of safety-relevant information which the manufacturer has to provide to the user. See also ISO 12100-1:2003, Figure 1, which illustrates the interaction of manufacturer's and user's responsibility for the operational safety.

The user's responsibility to identify specific hazards (e.g. fire and explosion) and reduce the associated risks can be critical (e.g. whether the central extraction system is working correctly).

Where additional processes (e.g. milling, grinding, etc.) are involved, this International Standard can be taken as a basis for safety requirements; for specific information see the Bibliography.

This International Standard applies to machines that are manufactured after the date of issue of this International Standard.

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