

Irish Standard Recommendation S.R. CEN ISO/TR 22100-1:2021

Safety of machinery - Relationship with ISO 12100 - Part 1: How ISO 12100 relates to type-B and type-C standards (ISO/TR 22100-1:2021)

 $\ensuremath{\mathbb C}$ CEN 2021 $\hfill No copying without NSAI permission except as permitted by copyright law.$

S.R. CEN ISO/TR 22100-1:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on: CEN ISO/TR 22100-1:2021 *Published:* 2021-02-10

This document was published under the authority of the NSAI and comes into effect on:

2021-02-28

ICS number:

13.110

NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

S.R. CEN ISO/TR 22100-1:2021 is the adopted Irish version of the European Document CEN ISO/TR 22100-1:2021, Safety of machinery - Relationship with ISO 12100 - Part 1: How ISO 12100 relates to type-B and type-C standards (ISO/TR 22100-1:2021)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

TECHNICAL REPORT

CEN ISO/TR 22100-1

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

February 2021

ICS 13.110

Supersedes CEN ISO/TR 22100-1:2017

English Version

Safety of machinery - Relationship with ISO 12100 - Part 1: How ISO 12100 relates to type-B and type-C standards (ISO/TR 22100-1:2021)

Sécurité des machines - Relation avec l'ISO 12100 -Partie 1: Relation entre l'ISO 12100 et les normes de type B et type C (ISO/TR 22100-1:2021) Sicherheit von Maschinen - Beziehung zu ISO 12100 -Teil 1: Wie ISO 12100 und Typ-B- und Typ-C-Normen zusammenhängen (ISO/TR 22100-1:2021)

This Technical Report was approved by CEN on 26 January 2021. It has been drawn up by the Technical Committee CEN/TC 114.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2021 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. CEN ISO/TR 22100-1:2021 E

This is a free page sample. Access the full version online. S.R. CEN ISO/TR 22100-1:2021

CEN ISO/TR 22100-1:2021 (E)

Contents	Page
European foreword	

European foreword

This document (CEN ISO/TR 22100-1:2021) has been prepared by Technical Committee ISO/TC 199 "Safety of machinery" in collaboration with Technical Committee CEN/TC 114 "Safety of machinery" the secretariat of which is held by DIN.

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

This document supersedes CEN ISO/TR 22100-1:2017.

Endorsement notice

The text of ISO/TR 22100-1:2021 has been approved by CEN as CEN ISO/TR 22100-1:2021 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left blank

TECHNICAL REPORT



Second edition 2021-01

Safety of machinery — Relationship with ISO 12100 -

Part 1: How ISO 12100 relates to type-B and type-C standards

Sécurité des machines — Relation avec l'ISO 12100 — Partie 1: Relation entre l'ISO 12100 et les normes de type B et type C



Reference number ISO/TR 22100-1:2021(E) ISO/TR 22100-1:2021(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Page

Contents

Fore	word		iv
Intro	oductio	n	v
1	Scop	e	
2	Normative references		1
3	Terms and definitions		
4	Gene	eral structure of the system of machinery safety standards	2
5	Syste 5.1 5.2 5.3	Pm of type-A, type-B and type-C standardsType-A standard (ISO 12100)Type-B standards5.2.1General5.2.2Type-B1 standards5.2.3Type-B2 standardsType-C standards5.3.1General5.3.2Content provided by type-C standards5.3.3Deviations in a type-C standard from a type-B standard	2 2 6 6 6 6 6 6 6 7 7 7
6	Prac mac 6.1 6.2	tical application of ISO 12100, type-B and type-C standards in order to design a nine to achieve a level of tolerable risk by adequate risk reduction General Application of an appropriate type-C standard 6.2.1 General 6.2.2 Steps to be followed	7
7	Navi	gating appropriate type-B machinery safety standards	
Ann	ex A (in	formative) Iterative process of risk assessment and risk reduction	12
Ann	ex B (in	formative) Types of ISO documents	
Bibl	iograpl	ıy	14

This is a free page sample. Access the full version online. S.R. CEN ISO/TR 22100-1:2021

ISO/TR 22100-1:2021(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www. iso. org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 199, Safety of machinery.

This second edition cancels and replaces the first edition (ISO/TR 22100-1:2015), which has been technically revised.

The main changes compared to the previous edition are as follows.

- the wording "..., hazardous situation(s) or hazardous event(s)" has been deleted from <u>5.3.2</u> (NOTE and last paragraph) and <u>6.2.2</u> (subheading "Step 4B"and the following two paragraphs as well as Step 4C, fifth paragraph), eight times, in total;
- in <u>6.2.1</u>, second paragraph, second sentence "this part of ISO 22100" has been corrected to "that type-C standard";
- the sentence given in <u>6.2.2</u>, Step 4C, as paragraph below the Note has also been inserted as new penultimate paragraph to Step 4B.

A list of all parts in the ISO/TR 22100 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <u>www.iso.org/members.html</u>.

Introduction

This document is written to assist the designer/manufacturer of machinery and related components in understanding and navigating the different types of ISO machinery safety standards. It presents the different ISO deliverables (see <u>Annex B</u>) and explains the type-A, type-B and type-C structure of machinery safety standards and their interrelationship with regard to the practical design of machinery subjected to adequate risk reduction to achieve tolerable risk.

This document can be helpful for standard writing committees (type-B and type-C), too. However, it does not provide specification of the general content that is expected to be included in the different types of machinery safety standards. This specification is given in ISO Guide 78.

This document includes a visual representation of many ISO machinery safety standards to assist in improving understanding of the interrelationships and linkages between these documents.

This is a free page sample. Access the full version online. S.R. CEN ISO/TR 22100-1:2021

Safety of machinery — Relationship with ISO 12100 —

Part 1: How ISO 12100 relates to type-B and type-C standards

1 Scope

This document provides assistance to the designer/manufacturer of machinery and related components as to how the system of existing type-A, type-B and type-C machinery safety standards should be applied in order to design a machine to achieve a level of tolerable risk by adequate risk reduction.

This document explains the general principles of ISO 12100 and how this type-A standard is used for practical cases in conjunction with type-B and type-C machinery safety standards.

This document provides assistance to standards-writing committees on how ISO 12100 and type-B and type-C standards relate and explains their function in the risk assessment and risk reduction process according to ISO 12100.

This document includes an overview of existing categories of type-B standards to assist standards readers and writers to navigate the many standards.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12100:2010, Safety of machinery — General principles for design — Risk assessment and risk reduction

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <u>https://www.iso.org/obp</u>

— IEC Electropedia: available at http://www.electropedia.org/

3.1

adequate risk reduction

risk reduction that is at least in accordance with legal requirements, taking into consideration the current state of the art

[SOURCE: ISO 12100:2010, 3.18, modified — Note 1 to entry has been removed.]

3.2

tolerable risk

level of risk that is accepted in a given context based on the current values of society

Note 1 to entry: The terms "acceptable risk" and "tolerable risk" are considered to be synonymous.

[SOURCE: ISO/IEC Guide 51:2014, 3.15, modified — In Note 1 to entry, the words "For the purpose of this Guide" have been deleted.]



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation