



NSAI
Standards

Irish Standard
I.S. EN 15811:2014

Agricultural machinery - Fixed guards and interlocked guards with or without guard locking for moving transmission parts (ISO/TS 28923:2012 modified)

I.S. EN 15811:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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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):

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EUROPEAN STANDARD

EN 15811

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2014

ICS 65.060.01

Supersedes EN 15811:2009

English Version

**Agricultural machinery - Fixed guards and interlocked guards
with or without guard locking for moving transmission parts
(ISO/TS 28923:2012 modified)**

Matériel agricole - Protecteurs fixes et protecteurs avec
dispositif de verrouillage ou d'interverrouillage pour
éléments mobiles de transmission de puissance (ISO/TS
28923:2012 modifiée)

Landmaschinen - Feststehende trennende
Schutzeinrichtungen und trennende Schutzeinrichtungen
mit Verriegelung mit oder ohne Verriegelungseinrichtung für
bewegliche Teile der Kraftübertragung (ISO/TS
28923:2012, modifiziert)

This European Standard was approved by CEN on 18 October 2014.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 15811:2014) has been prepared by Technical Committee CEN/TC 144 “Tractors and machinery for agriculture and forestry”, the secretariat of which is held by AFNOR.

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 June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.

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

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 2006/42/EC.

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document.

This European Standard specifies safety requirements for fixed guards and interlocked guards with or without guard locking for moving parts of mechanical power transmission and should be used with EN ISO 4254-1:2013.

This European Standard is also applicable to “access doors” when used as a guard.

This document supersedes EN 15811:2009.

The following changes were introduced compared to EN 15811:2009:

- modification of the title to indicate the scope of the standard;
- reference to the procedure of risk assessment was introduced in Clause 4;
- requirements for interlocking guards with or without guard locking were added in 5.3;
- editorial modifications were made.

The following changes were introduced compared to ISO/TS 28923:2012:

- modification of the title to indicate the scope of the standard;
- reference to the procedure of risk assessment was introduced in Clause 4;
- editorial modifications were made;
- modification of Table A.1;
- addition of Annex ZA.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 15811:2014 (E)

Introduction

The structure of safety standards in the field of machinery is as follows.

- a) Type-A standards (basic safety standards) give basic concepts, principles for design, and general aspects that can be applied to machinery;
- b) Type-B standards (generic safety standards) deal with one or more safety aspect(s) or one or more type(s) of safeguards that can be used across a wide range of machinery:
 - type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
 - type-B2 standards on safeguards (e.g. two-hands controls, interlocking devices, pressure sensitive devices, guards);
- c) Type-C standards (machinery safety standards) deal with detailed safety requirements for a particular machine or group of machines.

This European Standard is a type-C standard as stated in EN ISO 12100.

When provisions of this type-C standard are different from those which are stated in type-A or type-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.

1 Scope

This European Standard specifies the safety requirements and their verification for the design and construction of fixed guards to be opened or removed by the use of a tool and interlocking guards with or without guard locking for moving parts of the power transmission on self-propelled ride-on machines and mounted, semi-mounted or trailed machines used in agriculture. In addition, it specifies the type of information on safe working practices (including residual risks) to be provided by the manufacturer.

It deals with the significant hazards (as listed in Annex A), hazardous situations and events relevant for fixed guards to be opened or removed by the use of a tool and interlocking movable guards of moving parts of power transmission used as intended and under the conditions reasonably foreseeable by the manufacturer (see Clause 4 and Clause 5).

It is not applicable to guards of moving parts of the power transmission of:

- agricultural and forestry tractors,
- aircraft and air cushion vehicles used in agriculture,
- lawn and garden equipment, or
- PTO drive shafts between agricultural and forestry tractors and mounted or towed implements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 4254-1:2013, *Agricultural machinery - Safety - Part 1: General requirements (ISO 4254-1:2013)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13857:2008, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and EN ISO 4254-1:2013 apply.

4 General

The exact choice of a guard for a particular machine shall be made on the basis of the risk assessment for that machine.

Selection of appropriate measures shall take into consideration the complete strategy for risk reduction specified in EN ISO 12100:2010, Clause 5, and shall consider both normal operation and service operations as specified in the operator's manual.

When guarding is shown to be an appropriate means for risk reduction, the selection of an appropriate guard for a particular type of machine or hazard zone, shall take into account that:

TECHNICAL SPECIFICATION

**ISO/TS
28923**

Second edition
2012-11-01

Agricultural machinery — Guards for moving parts of power transmission — Guard opening with tool

*Matériel agricole — Protecteurs pour éléments mobiles de
transmission de puissance — Protecteur à ouverture avec outil*



Reference number
ISO/TS 28923:2012(E)

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ISO/TS 28923:2012(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.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised or withdrawn. If the ISO/PAS or ISO/TS is confirmed or revised, it is reviewed again after a further three years, at which time it should preferably either be transformed into an International Standard or withdrawn.

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/TS 28923 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*.

This second edition of ISO/TS 28923 cancels and replaces the first edition (ISO/TS 28923:2007), which has been technically revised.

Introduction

This Technical Specification is a type-C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

Agricultural machinery — Guards for moving parts of power transmission — Guard opening with tool

1 Scope

This Technical Specification specifies the safety requirements and their verification for the design and construction of fixed guards to be opened by the use of a tool and interlocking movable guards for moving parts of the power transmission on self-propelled ride-on machines and mounted, semi-mounted or trailed machines used in agriculture. In addition, it specifies the type of information on safe working practices (including residual risks) to be provided by the manufacturer.

It deals with the significant hazards (as listed in Annex A), hazardous situations and events relevant for fixed guards to be opened by the use of a tool and interlocking movable guards of moving parts of power transmission used as intended and under the conditions foreseen by the manufacturer (see Clauses 4 and 5).

It is not applicable to guards of moving parts of the power transmission of

- agricultural and forestry tractors,
- aircraft and air cushion vehicles used in agriculture,
- lawn and garden equipment, or
- guards for PTO drive shafts between agricultural and forestry tractors and mounted or towed implements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4254-1:—¹⁾, *Agricultural machinery — Safety — Part 1: General requirements*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13857:2008, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper and lower limbs*

3 Terms and definitions

For the purpose of this document, the terms and definitions specified in ISO 12100:2010 and ISO 4254-1:— apply.

4 General

The exact choice of a guard for a particular machine shall be made on the basis of the risk assessment for that machine.

Selection of appropriate measures shall take into consideration the strategies for risk reduction specified in ISO 12100:2010, Clause 5, and shall consider both normal operation and service operations as specified in the operator's manual.

1) To be published. (Revision of ISO 4254-1:2008)

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