
Agricultural machinery — Safety —
Part 9:
Seed drills

Matériel agricole — Sécurité —
Partie 9: Semoirs



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Published in Switzerland

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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.

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 4254-9 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*.

This second edition cancels and replaces the first edition (ISO 4254-9:1992), which has been technically revised.

ISO 4254 consists of the following parts, under the general title *Agricultural machinery — Safety*:

- *Part 1: General requirements*
- *Part 3: Tractors* ¹⁾
- *Part 5: Power-driven soil working machines*
- *Part 6: Sprayers and liquid fertilizer distributors*
- *Part 7: Combine harvesters, forage harvesters and cotton harvesters*
- *Part 8: Solid fertilizer distributors*
- *Part 9: Seed drills*
- *Part 10: Rotary tedders and rakes*
- *Part 11: Pick-up balers*
- *Part 12: Rotary disc and drum mowers and flail-mowers*

Part 4, *Forestry winches*, has been revised and replaced by ISO 19472 ²⁾.

1) Under the general title *Tractors and machinery for agriculture and forestry — Technical means for ensuring safety*. To be replaced by ISO 26322 (all parts), *Tractors for agriculture and forestry — Safety*.

2) ISO 19472, *Machinery for forestry — Winches — Dimensions, performance and safety*.

Introduction

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

- a) Type-A standards (basic standards) give basic concepts, principle for design, and general aspects that can be applied to machinery;
- b) Type-B standards (generic safety standards) dealing 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-hand controls, interlocking devices, pressure sensitive devices, guards);
- c) Type-C standards (machinery safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This part of ISO 4254 is a type-C standard as stated in ISO 12100-1.

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.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this part of ISO 4254. These hazards are specific to seed drills.

Significant hazards that are common to all the agricultural machines (self-propelled, mounted, semi-mounted and trailed) are dealt with in ISO 4254-1.

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Agricultural machinery — Safety —

Part 9: Seed drills

1 Scope

This part of ISO 4254, used together with ISO 4254-1, specifies the safety requirements, and their verification for design and construction, of mounted, semi-mounted, trailed or self-propelled seed drills, including the seeding function of combined seed and fertilizer drills, used in agriculture and horticulture. In addition, it specifies the type of information on safe working practices (including residual risks) to be provided by the manufacturer.

When requirements of this part of ISO 4254 are different from those which are stated in ISO 4254-1 the requirements of this part of ISO 4254 take precedence over the requirements of ISO 4254-1.

This part of ISO 4254 deals with all the significant hazards (as listed in Annex A), hazardous situations and events relevant to seed drills, used as intended and under the conditions foreseen by the manufacturer, excepting the hazards arising from:

- external influences on electrical equipment;
- failure of energy supply;
- failure, malfunction of control system;
- break-up of parts rotating at high speed;
- equipment for loading seeds (and fertilizer).

This part of ISO 4254 is not applicable to seed drills with integrated and inseparable powered soil-working tools (see 3.2),

This part of ISO 4254 is not applicable to environmental hazards or electromagnetic compatibility; neither is it applicable to hazards related to maintenance or repairs carried out by professional service personnel.

NOTE Specific requirements related to road traffic regulations are not taken into account in this International Standard.

This part of ISO 4254 is not applicable to seed drills which are manufactured before the date of its publication.

2 Normative references

The following referenced documents are indispensable for the application 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 4254-1:2008, *Agricultural machinery — Safety — General requirements*

ISO/TR 11688-1:1995, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning*

ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology*

ISO 13852:1996, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100-1, ISO 4254-1 and the following apply.

3.1

seed drill

machine for sowing seeds in a continuous manner

NOTE Cereals are an example of seed sown in this manner.

3.2

seed drill with integrated and inseparable powered soil-working tools

seed drill as a single machine including the functions of seeding and of soil-working powered tools of which neither the seed drill nor the powered soil-working tools can be used separately

3.3

single seed drill

machine for sowing one seed at a time with equal space between each seed

NOTE 1 Sugar beet is an example of seed sown in this manner.

NOTE 2 Examples of such machines are given in Annex B.

3.4

combined seed and fertilizer drill

machine that simultaneously applies seed and fertilizer

4 Safety requirements and/or protective measures

4.1 General

Machinery shall comply with the safety requirements and/or protective measures of this clause. Unless specified otherwise in this part of ISO 4254, the machine shall comply with the requirements of ISO 4254-1.

The compliance with the safety requirements and/or protective measures shall be verified in accordance with Clause 5 of this part of ISO 4254.