
Agricultural machinery — Safety —
Part 8:
Solid fertilizer distributors

Matériel agricole — Sécurité —

Partie 8: Distributeurs d'engrais solides



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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.

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 on 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 the following URL: www.iso.org/iso/foreword.html.

ISO 4254-8 was prepared by the European Committee for Standardization (CEN) in collaboration with ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 4254-8:2009), which has been technically revised and includes the following changes:

- revision of the edition 2009 under the Vienna Agreement (whole document);
- alignment with ISO 4254-1:2003 (whole document);
- addition of terms and definitions ([3.5](#), [3.6](#));
- improved differentiation concerning the access for loading with and without load ([4.5](#));
- additional requirements concerning the removal of spreading devices ([4.8](#));
- addition of noise reduction requirements ([4.10](#));
- alignment of the list of significant hazards ([Annex A](#)).

A list of all the parts in the ISO 4254 series can be found on the ISO website.

Introduction

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organisations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e. g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

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

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

This document is a type-C standard as stated in 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.

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

- Type-A standards (basis standards) give basic concepts, principles for design, and general aspects that can be applied to machinery.
- Type-B standards (generic safety standards) deal with one or more safety aspects or one or more types 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).
- Type-C standards (machinery safety standards) deal with detailed safety requirements for a particular machine or group of machines.

Agricultural machinery — Safety —

Part 8: Solid fertilizer distributors

1 Scope

This document, intended to be used together with ISO 4254-1, specifies the safety requirements and their verification for the design and construction of mounted, semi-mounted, trailed or self-propelled fertilizer distributors for solid fertilizer application in agriculture and to be used by one operator only, e.g. full width solid fertilizer distributors, solid fertilizer broadcasters, distributors with oscillating tube and line-distributors, as well as solid fertilizer distributors driven by an auxiliary engine. In addition, it specifies the type of information on safe working practices (including residual risks) to be provided by the manufacturer.

This document deals with all the significant hazards (as listed in [Annex A](#)), hazardous situations and events relevant to solid fertilizer distributors, when they are used as intended and under the conditions foreseeable by the manufacturer (see [Clause 4](#)), excepting the hazards arising from:

- inadequate lighting of working area;
- inadequate visibility from drivers/operators position;
- inadequate seating;
- travelling functions (drive, braking etc.);
- rolling over;
- equipment for loading fertilizer into the machine;
- an auxiliary engine;
- moving parts for power transmission except for strength requirements for guards.

This document is neither applicable to maintenance or repairs carried out by professional service personnel nor to environmental hazards (except noise).

This document is not applicable to the following:

- combined seed and fertilizer drills which create a soil trench and deposit fertilizer in said trench;
- machines for distributing granulated pesticides;
- pedestrian controlled distributors;
- knapsack distributors.

This document is not applicable to solid fertilizer distributors which are manufactured before the date of its publication.

When requirements of this document are different from those which are stated in ISO 4254-1, the requirements of this document take precedence over the requirements of ISO 4254-1 for machines that have been designed and built according to the provisions of this document.

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 4254-1:2013, *Agricultural machinery — Safety — Part 1: General requirements*

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

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 hazard zones being reached by upper and lower limbs*

ISO 14120:2015, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

3 Terms and definitions

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

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

solid fertilizer distributor

machine which spreads fertilizer on the soil surface or in crop but not incorporated into the soil

3.2

full width solid fertilizer distributor

solid fertilizer distributor (3.1) which spreads fertilizer over the whole surface and has a working width which is approximately the same as the machine width

3.3

solid fertilizer broadcaster

solid fertilizer distributor (3.1) which propels fertilizer over the whole surface and has a working width which is essentially wider than the machine width

3.4

solid fertilizer line-distributor

solid fertilizer distributor (3.1) which spreads fertilizer in bands separated by bands without fertilizer and which has a working width which is roughly the same as the machine width

3.5

access with load

mounting the machine and carrying, for example, a bag in order to fill the hopper with material

Note 1 to entry: Access with load normally does not allow three point contact.

3.6

access without load

mounting the machine without carrying material as additional equipment is used for filling the hopper, for example, filling auger

Note 1 to entry: Access without load normally allows three point contact.