

**PÕLLUMAJANDUSMASINAD. OHUTUS. OSA 6: PRITSID JA  
VEDELVÄETISE LAOTUSSÜSTEEMID**

**Agricultural machinery - Safety - Part 6: Sprayers and  
liquid fertilizer distributors (ISO 4254-6:2020)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4254-6:2020 +A11:2021 sisaldab Euroopa standardi EN ISO 4254-6:2020 ja selle muudatuse A11:2021 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4254-6:2020 +A11:2021 consists of the English text of the European standard EN ISO 4254-6:2020 and its amendment A11:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.  Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.05.2020, muudatus A11 17.11.2021.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.  Date of Availability of the European standard is 20.05.2020, for A11 17.11.2021.
Muudatusega A11 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega <b>A11</b> <b>A11</b> .  Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A11 is indicated in the text by tags <b>A11</b> <b>A11</b> .  The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

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English Version

Agricultural machinery - Safety - Part 6: Sprayers and  
liquid fertilizer distributors (ISO 4254-6:2020)

Matériel agricole - Sécurité - Partie 6: Pulvérisateurs et  
distributeurs d'engrais liquides (ISO 4254-6:2020)

Landmaschinen - Sicherheit - Teil 6:  
Pflanzenschutzgeräte (ISO 4254-6:2020)

This European Standard was approved by CEN on 16 February 2020. Amendment A11 was approved by CEN on 29 September 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard and its amendment 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 and its Amendment A11 exist 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.

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

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

## European foreword

This document (EN ISO 4254-6:2020) has been prepared by Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry" in collaboration with 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 November 2020, and conflicting national standards shall be withdrawn at the latest by May 2021.

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 EN ISO 4254-6:2009.

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

- some excluded hazards have been deleted from the scope as they are covered by ISO 4254-1 or this revised edition;
- the general (stability) requirements have been deleted as they are covered by ISO 4254-1;
- the protection of the operator against hazardous substances in case of front mounted booms has been removed as this risk is relevant to all types of sprayers but appropriate requirements (in form of an international reference standard) are not yet available; however, the protection of the driver against spray when spraying is dealt with by the harmonized European standard EN 15695 (Agricultural tractors and self-propelled sprayers - Protection of the operator (driver) against hazardous substances - Part 1: Cab classification, requirements and test procedures and Part 2: Filters, requirements and test procedures) which is listed in the EU Official Journal under the Machinery Directive 2006/42EU;
- in 4.6.2, the requirements for chemical inductions bowls have been amended to cover foldable devices;
- in 4.7, requirements for protecting the operator in case of leakages have been added;
- a new subclause (4.12) to deal with the storage of personal protective equipment has been added;
- Clause 6 has been aligned with ISO 4254-1.

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(s).

For the relationship with EU Directive(s) see informative Annex ZA, which is an integral part of this document.

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, 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 the United Kingdom.

## **Endorsement notice**

The text of ISO 4254-6:2020 has been approved by CEN as EN ISO 4254-6:2020 without any modification.

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## **A11 Amendment A11 European foreword**

This document (EN ISO 4254-6:2020/A11:2021) has been prepared by Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry" the secretariat of which is held by DIN.

This Amendment to the European Standard EN ISO 4254-6:2020 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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 Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

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. **A11**

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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](http://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](http://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 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html)

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 6, *Equipment for crop protection*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 4254-6:2009), which has been technically revised and contains the following changes:

- some excluded hazards have been deleted from the scope as they are covered by ISO 4254-1 or this revised edition;
- the general (stability) requirements have been deleted as they are covered by ISO 4254-1;
- the protection of the operator against hazardous substances in case of front mounted booms has been removed as this risk is relevant to all types of sprayers but appropriate requirements (in form of an international reference standard) are not yet available;
- in 4.5.2, the requirements for chemical inductions bowls have been amended to cover foldable devices;
- in 4.7, requirements for protecting the operator in case of leakages have been added;
- a new subclause (4.12) to deal with the storage of personal protective equipment has been added;
- Clause 6 has been aligned with ISO 4254-1.



A list of all parts in the ISO 4254 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 [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

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

- a) type-A standards (basic 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 safety aspect or one type 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) deal with detailed safety requirements for a particular machine or group of machines.

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

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 (e.g. regulators, accident prevention organizations, market surveillance)

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 sprayers and liquid fertilizer distributors.

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.

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

# Agricultural machinery — Safety —

## Part 6:

## Sprayers and liquid fertilizer distributors

### 1 Scope

This document, 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 and self-propelled agricultural sprayers for use with plant protection products (PPP) and liquid fertilizer application, as placed on the market by the manufacturer and designed for a single operator only. 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 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.

This document, taken together with ISO 4254-1, deals with significant hazards, hazardous situations and events relevant to sprayers and liquid fertilizer distributors when they are used as intended and under the conditions foreseeable by the manufacturer (see Annex A), excepting the hazards arising from:

- protection of the driver against spray when spraying (see Foreword);
- automatically actuated height adjustment systems;
- the environment, other than noise;
- moving parts for power transmission except strength requirements for guards and barriers.

This document is not applicable to sprayers and liquid fertilizer distributors which are manufactured before the date of publication 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 5681, *Equipment for crop protection — Vocabulary*

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

ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs*