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PREDSTANDARD**

**oSIST prEN ISO 4254-10:2006**

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**Kmetijski stroji – Varnost – 10. del: Vrtavkasti obračalniki in zgrabljalniki  
(ISO/DIS 4254-10:2005)**

**(istoveten prEN ISO 4254-10:2005)**

Agricultural machinery - Safety - Part 10: Rotary tedders and rakes (ISO/DIS 4254-10:2005)

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English Version

## Agricultural machinery - Safety - Part 10: Rotary tedders and rakes (ISO/DIS 4254-10:2005)

Matériel agricole - Sécurité - Partie 10: Faneuses et andaineuses rotatives (ISO/DIS 4254-10:2005)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 144.

If this draft becomes a European Standard, 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.

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

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## Foreword

This document (prEN ISO 4254-10:2005) has been prepared by Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 23 "Tractors and machinery for agriculture and forestry".

This document is currently submitted to the parallel Enquiry.

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).

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### Agricultural machinery — Safety —

#### Part 10: Rotary tedders and rakes

*Matériel agricole — Sécurité —*

*Partie 10: Faneuses et andaineuses rotatives*

ICS 65.060.50

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This draft International Standard is a draft standard developed within the European Committee for Standardization (CEN) and processed under the CEN-lead mode of collaboration as defined in the Vienna Agreement. The document has been transmitted by CEN to ISO for circulation for ISO member body voting in parallel with CEN enquiry. Comments received from ISO member bodies, including those from non-CEN members, will be considered by the appropriate CEN technical body. Should this DIS be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

**To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.**

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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 4254-10 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 7, *Equipment for harvesting and conservation* and by Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry* in collaboration.

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

- *Part 1: General requirements*
- *Part 2: Anhydrous ammonia applicators*
- *Part 3: Tractors*
- *Part 5: Power-driven soil-working equipment*
- *Part 6: Equipment for crop protection*
- *Part 7: Combine harvesters, forage and cotton harvesters*
- *Part 9: Equipment for sowing, planting and distributing fertilisers*
- *Part 10: Rotary tedders and rakes*

Part 3, *Tractors*, is to be revised under a separate number, part 4, *Forestry winches*, is to be revised and published as ISO 19472, *Machinery for forestry – Winches – Terms and definitions, performance and safety* and part 6 is to be revised and published under the title *Sprayers and liquid fertilizer distributors*.



## Introduction

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

- a) type-A standards (basis safety standards) giving basic concepts, principle for design, and general aspects that can be applied to machinery;
- b) type-B standards (generic safety standards) dealing 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-hands 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 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. [ISO 4254-10:2010](https://standards.iteh.ai/catalog/standards/sist/183a9c63-5495-4685-8dc0-39115/sist/iso-4254-10-2010)

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 10: Rotary tedders and rakes

## 1 Scope

This part of ISO 4254 used together with ISO 4254-1:2005, specifies the safety requirements and their verification for the design and construction of the different types of rotary tedders, rotary rakes, rotary tedder / rotary rake combinations, with one or several rotors, mounted, semi-mounted, trailed or self-propelled, with powered tines as used by one person (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 standard are different from those which are stated in ISO 4254-1:2005, the requirements of this standard take precedence over the requirements of ISO 4254-1:2005 for machines that have been designed and built according to the provisions of this standard.

This part of ISO 4254 deals with all the significant hazards, hazardous situations and events excepting environmental hazards and hazards arising from road safety, electromagnetic compatibility or vibrations relevant to rotary tedders and rakes, when they are used as intended and under the conditions foreseen by the manufacturer (see Clause 4).

NOTE ISO 14982 specifies test methods and acceptance criteria for evaluating the electromagnetic compatibility of all kind of mobile agricultural machinery.

This part of ISO 4254 does not apply to:

- machines with ground driven tines;
- machines with ground wheel driven tines;
- parallel bar rakes;
- chain or endless belt type rakes;
- pedestrian controlled tedders and rakes;
- machines equipped with a pick-up device.

This part of ISO 4254 is not applicable to rotary tedders and rakes which are manufactured before the date of publication of this International Standard by ISO.

## 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 3600:1996, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Operator's manual – Content and presentation.*

ISO 3864-1:2002, *Graphical symbols - Safety colours and safety signs - Part 1 : design principles for safety in workplaces and public areas.*

ISO 4254-1, *Agricultural machinery – Safety – General requirements.*

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

ISO 12100-2:2003, *Safety of machinery - Basic concepts , general principles for design - Part 2: Technical principles.*

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 part of ISO 4254, the following terms and definitions apply together with the definitions given in ISO 12100-1:2003 and ISO 4254-1:2005.

Examples of machine types addressed by this part of ISO 4254 are shown in Annex A.

**3.1  
tedder**  
machine designed as to lift or raise and spread mechanically the forage that has been cut and is laying on the ground to accelerate its drying

**3.2  
rake**  
machine designed to group together the forage that has been cut and is laying on the ground in continuous lines, or swath, in order to facilitate any further activity

**3.3  
rotary multihead type tedder**  
tedder composed with at least two rotors, arm forms turning around a slightly inclined axis compared to the vertical line. Each arm is provided with flexible tines

**3.4  
rotary rake**  
rake composed with one or several rotors on vertical axis equipped with tines constituting combs whose inclination may vary during their rotation

**3.5  
tedder - rake**  
machine designed to produce alternative operations of throwing lightly and windrowing relative to a setting of the position of tines and to the application of directional deflectors