
**Gardening machinery — Powered
material-collecting systems — Safety**

*Matériel de jardinage — Systèmes motorisés de collecte
des matériaux — Sécurité*



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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 21628 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 13, *Powered lawn and garden equipment*.

Introduction

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

- a) type-A standards (basic safety 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 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 document 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 document. These hazards are specific to material collecting systems.

Gardening machinery — Powered material-collecting systems — Safety

1 Scope

This International Standard gives safety requirements and the means for their verification specific to the design and construction of powered material-collecting systems used in agriculture, gardening and area maintenance (e.g. landscaping). It is applicable to mounted, semi-mounted or trailed machines manufactured after the date of its publication.

It specifies means for eliminating or reducing mechanical hazards when the material-collecting system is used as intended.

It does not deal with environmental hazards, road safety, electromagnetic compatibility, power take-off (PTO), PTO drive shaft guarding or control requirements.

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 730-1, *Agricultural wheeled tractors — Rear-mounted three-point linkage — Part 1: Categories 1, 2, 3 and 4*

ISO 2332, *Agricultural tractors and machinery — Connection of implements via three-point linkage — Clearance zone around implement*

ISO 3600, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Operator's manuals — Content and presentation*

ISO 4413, *Hydraulic fluid power — General rules relating to systems*

ISO 11684, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles*

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

ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

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