
**Self-propelled agricultural
machinery — Assessment of stability —
Part 2:
Determination of static stability and
test procedures**

*Machines agricoles automotrices — Évaluation de la stabilité —
Partie 2: Détermination de la stabilité statique et modes
opératoires d'essai*

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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).

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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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*.

ISO 16231 consists of the following parts, under the general title *Self-propelled agricultural machinery — Assessment of stability*:

- *Part 1: Principles*
- *Part 2: Determination of static stability and test procedures*

Introduction

Self-propelled agricultural machinery with a ride-on operator (driver) can be exposed to the hazard of rolling or tipping over during the intended operation. A risk assessment is used to determine whether this hazard is to be considered in case of a specific machine and the protective measures to be used in order to avoid or minimize this hazard for the ride-on operator.

The risk assessment considers the operating conditions in which the machine is intended to be used, the physical properties of the machine, and the required skills to operate the machine as well as any other parameter which can have an impact on the risk for roll- or tip-over.

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Self-propelled agricultural machinery — Assessment of stability —

Part 2: Determination of static stability and test procedures

1 Scope

This part of ISO 16231 specifies a method to determine the centre of gravity of un-laden self-propelled machines, a method to determine the centre of gravity of laden machines and combinations with attachments, and methods to determine the static overturning angle.

NOTE Requirements related to self-protective structures and ROPS are to be dealt with in a separate International Standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 789-6, *Agricultural tractors — Test procedures — Part 6: Centre of gravity*

ISO 16231-1, *Self-propelled agricultural machinery — Assessment of stability — Part 1: Principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16231-1 and the following apply.

3.1

maximum operating slope

MOS

value indicating, for each type of self-propelled machine and each direction, the maximum slope in (%) on which the machine is intended to work according to good agricultural practice

3.2

slope compensation system

system to improve the functional performance of an agricultural machine working on slopes, without levelling the main body of the machine, such as a levelling of internal components, adjusting the kinematics of separating systems, or adjusting air flow or pattern or both

3.3

body levelling system

system to improve the function performance, drivers comfort, ability to work on slopes, and stability of an agricultural machine working on slopes, by means of levelling the main body of the machine in a longitudinal or transversal sense or a combination of both