
**Tractors and machinery for
agriculture and forestry — Basic
types — Vocabulary**

*Tracteurs et matériels agricoles et forestiers — Principaux types
— Vocabulaire*

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Foreword

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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. 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 2, *Common tests*.

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Introduction

This International Standard provides definitions and terms for types of agricultural machinery and tractors used in agriculture and forestry. It establishes uniformity in definitions for ISO/TC 23 published standards.

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Tractors and machinery for agriculture and forestry — Basic types — Vocabulary

1 Scope

This International Standard provides terms and definitions for agricultural field equipment designed primarily for use in agricultural operations for the production of food and fibre.

NOTE Other terms commonly used for “agricultural field equipment” are “farm machinery”, “farm implements”, “implements of husbandry” and “agricultural machinery”.

This International Standard also applies to agricultural tractors used in forestry applications. Purpose-built forestry machines, as defined by ISO 6814, are not included.

2 Basic terms and definitions

2.1

machine

machinery

assembly, fitted with or intended to be fitted with a drive system consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application

Note 1 to entry: The terms “machinery” and “machine” also cover an assembly of machines which, in order to achieve the same end, are arranged and controlled so that they function as an integral whole.

[SOURCE: ISO 12100:2010, 3.1, modified — “and machine” has been added to Note 1; Note 2 is not included here.]

2.2

agricultural field equipment

agricultural tractors (3.1), *self-propelled machines* (3.2), implements, and combinations thereof designed primarily for agricultural field operations

2.3

agricultural vehicle

agricultural tractor (3.1), *self-propelled machinery* (3.2), trailer or interchangeable towed machinery which is primarily intended to be used in agriculture including occasional road travel

2.4

interchangeable towed machinery

machine which is designed to be towed by a tractor and changes or adds to its functions

Note 1 to entry: It may include a load platform designed and constructed to receive any tools and appliances needed for those purposes, and to store temporarily any materials produced or needed during work.

Note 2 to entry: Any vehicle intended to be towed by a tractor and permanently incorporating an implement or designed to process materials shall be considered interchangeable towed machinery if the ratio of the technically permissible gross mass to the unladen mass of that vehicle is less than 3,0.

2.5

maximum design ground speed

speed based on the nominal design capability of the machine with tyres offered as original equipment

Note 1 to entry: The tyre size will be the largest diameter drive tyres on tractors and *self-propelled machines* (3.2) but not necessarily on towed equipment.

2.6

maximum mass

mass stated by the *agricultural vehicle* (2.3) manufacturer to be technically permissible

2.7

technically permissible mass

sum of the maximum allowable equipment mass and allowable payload specified by the manufacturer

Note 1 to entry: This mass corresponds to the sum of the technically maximum possible axle loads and, in the case of a semi mounted trailer, the vertical static load.

2.8

unladen mass

mass of the *agricultural vehicle* (2.3) in running order, if applicable with full fuel, lubricant and coolant tanks and with a driver of a mass of 75 kg, but without passengers, optional accessories or load

3 Machine terms and definitions

When used in ISO/TC 23 standards, the following terms and definitions apply. One or more definitions may apply to a certain machine configuration. The list provided below is not comprehensive and therefore does not represent all the machine types that exist.

3.1

agricultural tractor

self-propelled *agricultural vehicle* (2.3) having at least two axles and wheels, or endless tracks, particularly designed to pull agricultural trailers and pull, push, carry and operate implements used for agricultural work (including forestry work), which may be provided with a detachable loading platform

Note 1 to entry: The *agricultural vehicle* (2.3) has a maximum design speed of not less than 6 km/h and may be equipped with one or more seats.

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3.1.1

standard agricultural tractor

agricultural tractor (3.1) having a minimum wheel track width of 1 150 mm or greater; an unladen mass, in running order, of 400 kg or greater; and a ground clearance of 1 000 mm or less

Note 1 to entry: In some special definitions, the width, mass, and or ground clearance may be smaller or greater.

Note 2 to entry: The front tyres are smaller than the rear tyres.

3.1.2

two-wheel drive tractor

agricultural tractor (3.1) with traction power provided only through the rear tyres

Note 1 to entry: The front tyres are smaller than the rear and typically use a profile type with no traction capability.

3.1.3

all-wheel drive tractor

agricultural tractor (3.1) with two axles or more, having power to all axles

Note 1 to entry: The drive of one or more axles may be disengageable.

3.1.3.1

four-wheel drive tractor with unequal sized wheels

all-wheel drive tractor (3.1.3) with primary power provided through the rear tyres and disengageable power through the front tyres

Note 1 to entry: The front tyres are generally larger in rolling radius than those of a two-wheel drive tractor and use a tyre profile that will transmit traction capability.

3.1.3.2**four-wheel drive tractor with equal sized wheels**

all-wheel drive tractor (3.1.3) with equal sized wheels and having power to both axles

3.1.3.3**all-wheel drive tractor with more than 2 axles**

all-wheel drive tractor (3.1.3) with more than two axles having power to all axles

3.1.4**standard track-laying tractor**

agricultural tractor (3.1) with the primary interface for traction using even multiples of belted or linked drive tracks

Note 1 to entry: Belted units in this definition may have a positive, friction, or combination positive-friction drive. Belts that fit over regular tractor tyres are not included in this definition.

3.1.5**articulated tractor**

agricultural tractor (3.1) that is steered by means of a centre pivot articulation system

3.1.6**small tractor**

agricultural tractor (3.1) having an unladen mass, in running order, of less than 400 kg

3.1.7**compact utility tractor**

agricultural tractor (3.1) equipped with a 540-rpm rear PTO and a three-point hitch designed for Category I implements only

Note 1 to entry: These tractors generally have a mass less than 1 800 kg; have less than 30 PTO kW, and are primarily designed and advertised for use with mowers and light-duty material handling equipment. The rear PTO and hitch categories are defined by ISO 500-1 and ISO 730, respectively.

3.1.8**extra wide tractor**

agricultural tractor (3.1) characterised by their large dimensions, primarily intended for working large areas of farmland

3.1.9**high speed tractor**

standard agricultural tractor (3.1.1) having a maximum design ground speed greater than 40 km/h

3.1.10**specialized tractor**

agricultural tractor (3.1) designed to operate in special field conditions (e.g. in vineyards, orchards, speciality row crops), and that requires unique design configurations (e.g. low clearance, high clearance, narrow profile) for functional operation

3.1.10.1**boat tractor**

agricultural tractor (3.1) supported by a boat body and propelled by the wheels of the tractor

3.1.10.2**high clearance tractor**

agricultural tractor (3.1) having clearance under the front and rear axles greater than the *standard agricultural tractor* (3.1.1)

Note 1 to entry: High-clearance tractors are typically designed for operation in vegetables, cotton, rice, tobacco or other speciality row crops requiring high clearance to avoid crop damage and are characterized by the addition of extended length axle spindles for front axles with rear axle modifications that provide an axle output significantly below the centreline of the rear axle trumpets. They are normally equipped with large diameter, narrow width tyres to minimize crop damage.