
**Agricultural vehicles — Mechanical
connections between towed and towing
vehicles — Dimensions of ball-type
coupling device (80 mm)**

*Véhicules agricoles — Liaisons mécaniques entre véhicules
remorqueurs et véhicules remorqués — Dimensions des dispositifs
d'attelage de type à boule (80 mm)*



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Foreword

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ISO 24347 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 4, *Tractors*.

Introduction

The aim of this International Standard is to ensure the interchangeability of the mechanical connections on agricultural towing vehicles.

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Agricultural vehicles — Mechanical connections between towed and towing vehicles — Dimensions of ball-type coupling device (80 mm)

1 Scope

This International Standard specifies the dimensions and location of a ball-type coupling device of 80 mm nominal diameter, whose male part fitted to an agricultural towing vehicle and female part fitted to a towed, non-balanced vehicle provides mechanical connection between the two vehicles, where the downwards vertical static load does not exceed 40 kN.

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 500-1:2004, *Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3 — Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone*, corrected by ISO 500-1:2004/cor.1:2005

ISO 500-2:2004, *Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3 — Part 2: Narrow-track tractors, dimensions for master shield and clearance zone*

ISO 5673-2:2005, *Agricultural tractors and machinery — Power take-off drive shafts and power-input connection — Part 2: Specification for use of PTO drive shafts, and position and clearance of PTO drive line and PIC for various attachments*

3 Dimensions and marking

3.1 Dimensions (see Figures 1 to 4)

3.1.1 The dimensions of the ball-type coupling device shall be in accordance with Figures 1 and 2. The keeper shall be contained within the maximum metal outline.

3.1.2 The minimum clearance zone for the keeper (see Figure 4) is defined by the required movement of the trailer shank according to 3.1.4 and the dimensioning of the shank as shown in Figure 2. It shall be considered in all rotational degrees of freedom.

3.1.3 The manufacturer of the ball-type coupling device is responsible for both the design and the manufacturing quality of the ball-type coupling device such that unintentional uncoupling of the female part from the male part when subject to the maximum design load shall be prevented. The distance between the keeper and the ball centre shall be (65 ± 1) mm (see Figure 3).

3.1.4 With the specified ball-type trailer shank fixed to the tractor attachment, the shank shall be free to turn so that the angles formed with the horizontal situated in the tractor's plane of symmetry and passing through the coupling point have the following minimum values.

— **Angle of yaw:** rotation around a vertical axis passing through the coupling point — minimum value of 60° on both sides.