

INTERNATIONAL
STANDARD

ISO
6489-3

First edition
1992-12-15

**Agricultural vehicles — Mechanical
connections on towing vehicles —**

Part 3:
Tractor drawbar

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*Véhicules agricoles — Liaisons mécaniques sur véhicules
remorquants —
Partie 3: Barre d'attelage du tracteur*



Reference number
ISO 6489-3:1992(E)

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.

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.

International Standard ISO 6489-3 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 4, *Tractors*.

This first edition of ISO 6489-3 together with ISO 500:1991 and replace ISO 500:1979; this 1979 edition has been split, rear-mounted PTO requirements remaining in ISO 500 and tractor drawbar requirements being transferred to and amplified in the new ISO 6489.

ISO 6489 consists of the following parts, under the general title *Agricultural vehicles — Mechanical connections on towing vehicles*:

- Part 1: Hook type
- Part 2: Clevis type — Dimensions
- Part 3: Tractor drawbar

Annex A forms an integral part of this part of ISO 6489.

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Agricultural vehicles — Mechanical connections on towing vehicles —

Part 3: Tractor drawbar

1 Scope

This part of ISO 6489 specifies the dimensional requirements, location and vertical static loads for drawbars on agricultural tractors.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 6489. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 6489 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 500:1991, *Agricultural tractors — Rear-mounted power take-off — Types 1, 2 and 3.*

ISO 730-1:1990, *Agricultural wheeled tractors — Rear-mounted three-point linkage — Part 1: Categories 1, 2 and 3.*

3 Dimensions and location

The tractor drawbar dimensions are related to the three categories specified in ISO 730-1.

The hitch end of the tractor drawbar shall normally be designed as a clevis.

When the drawbar is positioned in the longitudinal mid-plane of the tractor, the relationship between the location of the power take-off (PTO) as defined in ISO 500 and the drawbar shall comply with figure 1 and table 1.

For special applications, other drawbar locations may be used (see annex A).

It shall be possible to secure swinging drawbars in the longitudinal mid-plane position.

4 Vertical static loads

The static load according to table 1 is the minimum load the tractor drawbar shall be able to withstand or conversely the maximum static load which equipment may impose upon the tractor drawbar.

The dynamic loads imposed upon the tractor drawbar and equipment hitch will be considerably higher than the static load ratings. These loads are also subject to consideration being given to the capacity of tyres and to other aspects of tractor specifications and the conditions relating to its use.

For special applications, other vertical static loads may be used (see annex A).

NOTE 1 Requirements for tractor drawbars may be subject to legal provisions by governmental authorities.

Dimensions in millimetres

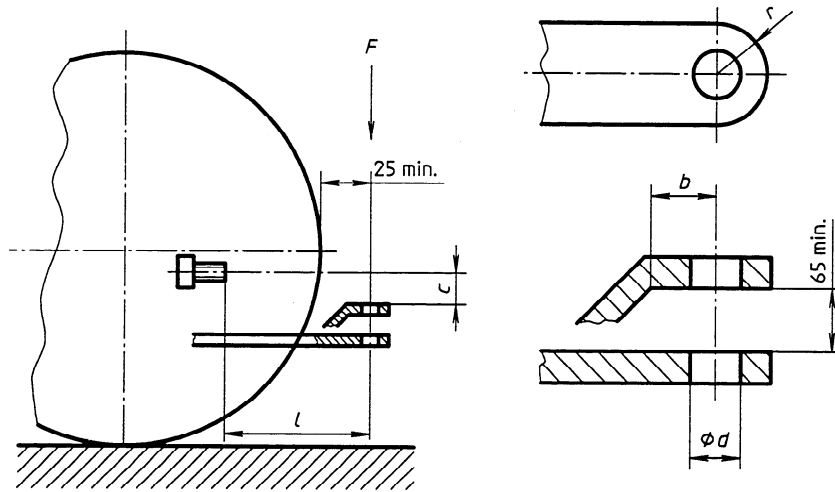


Figure 1 — Location and dimensions of drawbar

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Table 1 — Drawbar dimensions, location and vertical load

Dimensions in millimetres

Category according to ISO 730-1	Clevis dimensions		Clevis envelope	Location		Vertical load (see clause 4) <i>F</i> kN
	<i>d</i> ₀ ⁺¹	<i>b</i> min.	<i>r</i> ¹⁾ max.	<i>c</i> ²⁾ min.	<i>l</i> ±10	
1	33	60	70	200	400	8
2	33	60	70	220	400	12
3	33	70	80	250	500	15

1) The clevis may have any configuration within the envelope defined by radius *r* (see figure 1).
2) For special applications, the top portion of the clevis may be removed to maintain dimension *c*.

Annex A (normative)

Drawbar locations for special applications

For special applications, other drawbar locations and related vertical loads can be used, for example

— a “short” position, intended to connect non-PTO-driven equipment which applies a high vertical load to the drawbar; or

— an “extended” position, intended for a special PTO drive-shaft condition where equal angularity of the drive-shaft joints cannot be obtained using the normal position.

In such cases the drawbar length and the vertical loads given in table A.1 shall be used.

Table A.1 — Drawbar locations for special applications

Dimensions in millimetres

Category according to ISO 730-1	Location (see figure 1) l ± 10		Vertical load (see clause 4) F kN	
	Short position ¹⁾	Extended position	Short position	Extended position
1	250	500	15	6,5
2	250	550	22,5	8
3	350	650	27	10

1) 25 mm minimum dimension shown in figure 1 does not apply.

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Descriptors: agricultural machinery, agricultural tractors, towing attachments, drawbars, specifications, loads (forces), dimensions, position (location).

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