

---

---

**Agricultural vehicles — Mechanical  
connections between towed and towing  
vehicles —**

**Part 1:  
Dimensions of hitch-hooks**

*Véhicules agricoles — Liaisons mécaniques entre véhicules remorqueurs  
et véhicules remorqués —*

*Partie 1: Dimensions des crochets d'attelage*



Reference number  
ISO 6489-1:2001(E)

© ISO 2001

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2001

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Printed in Switzerland

## 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 3.

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 part of ISO 6489 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 6489-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 4, *Tractors*.

This third edition cancels and replaces the second edition (ISO 6489-1:1991), which has been technically revised.

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

- *Part 1: Dimensions of hitch-hooks*
- *Part 2: Clevis-type dimensions*
- *Part 3: Tractor drawbar*
- *Part 4: Bolt-type dimensions*



# Agricultural vehicles — Mechanical connections between towed and towing vehicles —

## Part 1: Dimensions of hitch-hooks

### 1 Scope

This part of ISO 6489 specifies the dimensional requirements for hitch-hooks used in the attachment to agricultural towing vehicles of towed, non-balanced trailers and implements equipped with a ring specified in ISO 20019. Its purpose is to ensure the interchangeability of the mechanical connections on agricultural towing vehicles.

This part of ISO 6489-1 is applicable only in those cases where the vertical static load does not exceed 30 kN.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 6489. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 6489 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 500:—<sup>1)</sup>, *Agricultural tractors — Rear-mounted power take-offs — Types 1, 2, 3 and 4.*

ISO 20019:—<sup>2)</sup>, *Agricultural vehicles — Mechanical connections on towed vehicles — Dimensions for hitch rings.*

### 3 Dimensions

#### 3.1 General

The location of the keeper and the dimensions of the hitch-hook shall be in accordance with Figures 1 to 3. The keeper shall be contained within the maximum metal outline.

No part of the hitch-hook shall lie outside the radius marked R 67 max. between points X and Y (maximum metal condition) in Figure 1.

The manufacturer shall be responsible for both the design and manufacturing quality of the hitch-hook assembly. In order to prevent unintentional uncoupling from the hitch ring at the maximum design load, the distance between the hitch-hook tip and the keeper shall not exceed 10 mm.

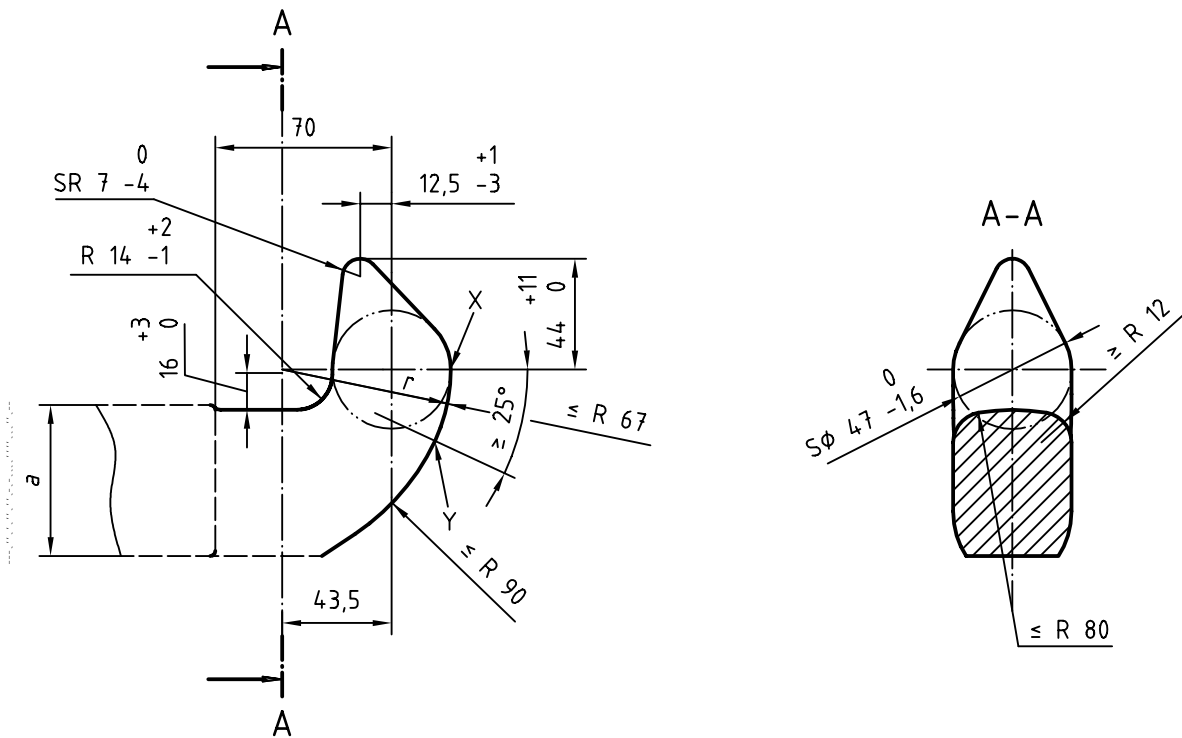
---

1) To be published. (Revision of ISO 500:1991)

2) To be published. (Revision of ISO 5692:1979)

The yaw requirement of 60° according to ISO 20019 may be exceeded when smaller tyres or wide-track settings, or both, are used on the towing vehicle. As this could result in interference, it should be indicated on a decal or decals on or near the assembly, and in the operator's manual.

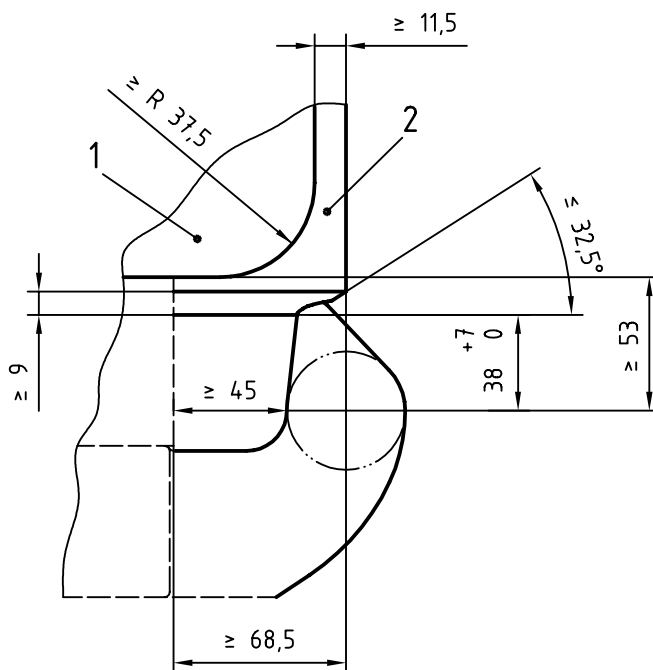
Dimensions in millimetres



a Not controlled.

Figure 1 — Hitch-hook dimensions

Dimensions in millimetres

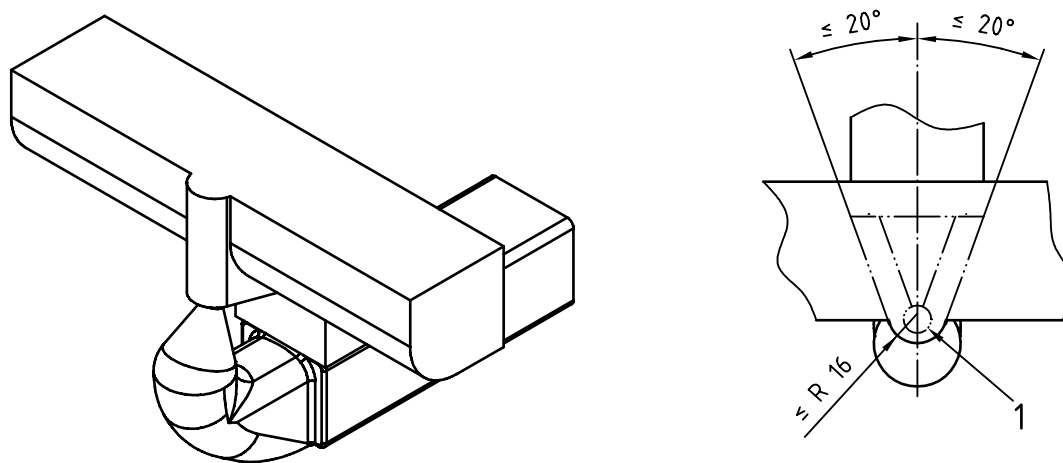


**Key**

- 1 Maximum metal transverse member
- 2 Maximum metal central member

**Figure 2 — Keeper limiting-surface dimensions (maximum metal)**

Dimensions in millimetres



**Key**

- 1 Tip clearance for hook (if required)

**Figure 3 — Keeper dimensions**

### 3.2 Location

The hitch-hook shall be located as shown in Figure 4, mounted in the plane of the tractor's longitudinal axis. The centre of the hitch-hook sphere shall be located at the distance indicated, rearwards from the end of the power take-off (PTO) shaft, as high as possible, and without any part of the hitch-hook or its construction (e.g. keeper-plate) entering the clearance zone specified for the PTO in ISO 500.

At its lowest position, the point of the hitch-hook shall be no more than 150 mm above ground level.

Dimensions in millimetres

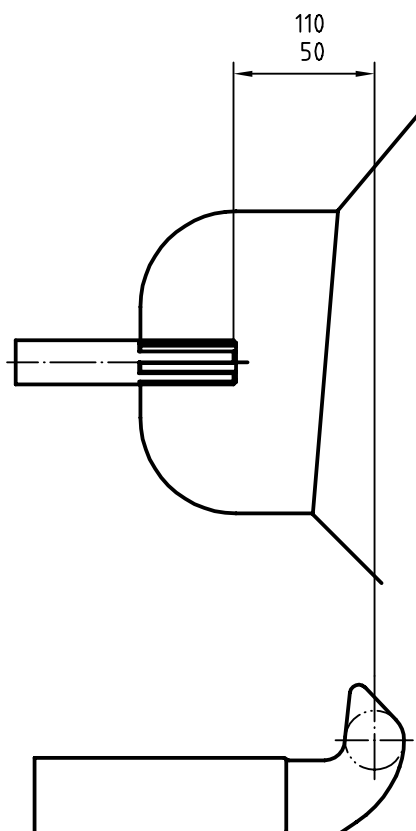


Figure 4 — Hitch-hook — Relation to PTO





---

---

**ICS 65.060.10**

Price based on 4 pages

© ISO 2001 – All rights reserved