

# INTERNATIONAL STANDARD

# ISO 4086

Third edition  
2001-10-15

---

---

## Road vehicles — 90 semi-trailer fifth wheel kingpin — Interchangeability

*Véhicules routiers — Pivot d'attelage de 90 pour semi-remorque —  
Interchangeabilité*



Reference number  
ISO 4086:2001(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.

The main task of technical committees is to prepare International Standards. 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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4086 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 15, *Interchangeability of components of commercial vehicles and buses*.

This third edition cancels and replaces the second edition (ISO 4086:1982), which has been technically revised.



# Road vehicles — 90 semi-trailer fifth wheel kingpin — Interchangeability

## 1 Scope

This International Standard specifies the characteristics of the 90 [89 mm (3,5") diameter] semi-trailer fifth wheel kingpin used for coupling extra-heavy-duty vehicles exceeding the limitations of weight generally laid down by official requirements.

It is applicable to fifth wheel kingpins intended for engaging 90 fifth wheels as defined in ISO 3842<sup>[1]</sup>.

This International Standard also specifies the dimensional characteristics required for mounting and interchangeability.

NOTE The dimensions of the 50 semi-trailer fifth wheel kingpin, normally used to couple semi-trailers to tractors in compliance with mass limitations usually set by compulsory regulations, are given in ISO 337<sup>[2]</sup>.

## 2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document 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 8716:—<sup>1)</sup>, *Road vehicles — Fifth wheel kingpins — Strength tests*

---

1) To be published. (Revision of ISO 8716:1988)

### 3 Basic functional dimensions of the kingpin

The fifth wheel kingpin functional dimensions for ensuring coupling with the fifth wheels defined in ISO 3842 shall be as shown in Figure 1.

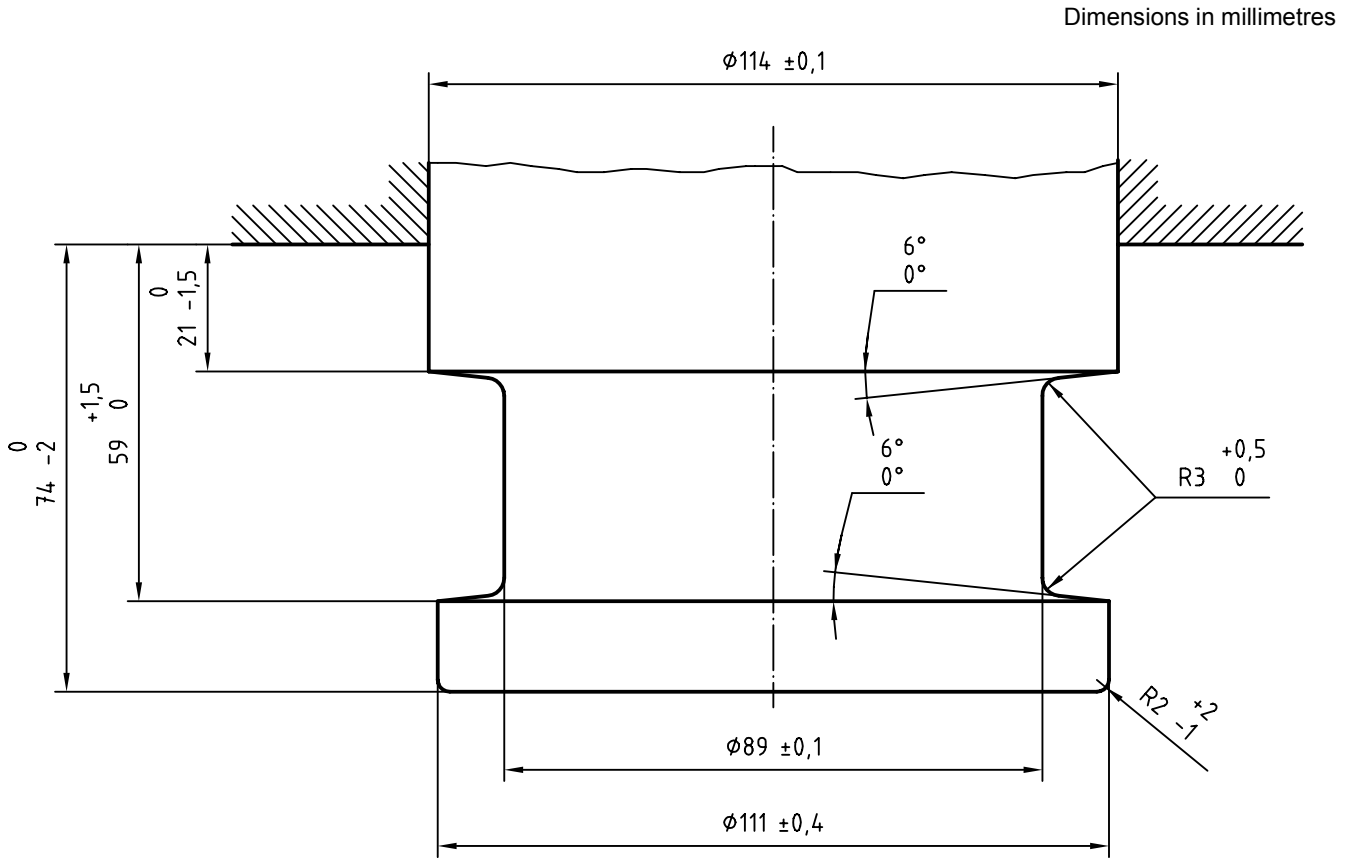
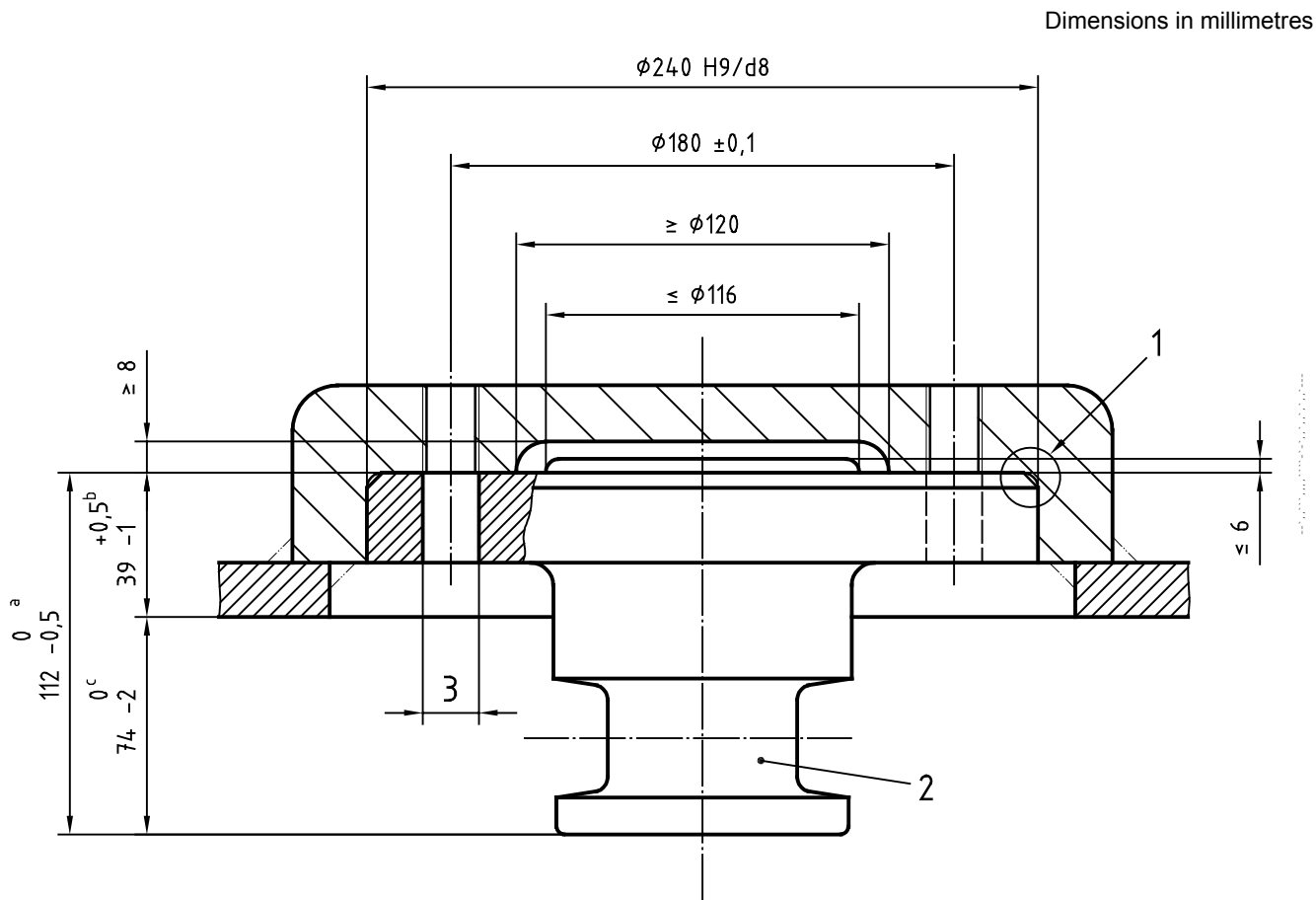


Figure 1 — Basic functional dimensions

#### 4 Dimensional characteristics for mounting and interchangeability

The fifth wheel kingpin interchangeability dimensions for mounting on the semi-trailer chassis shall be as shown in Figure 2 and Figure 3.

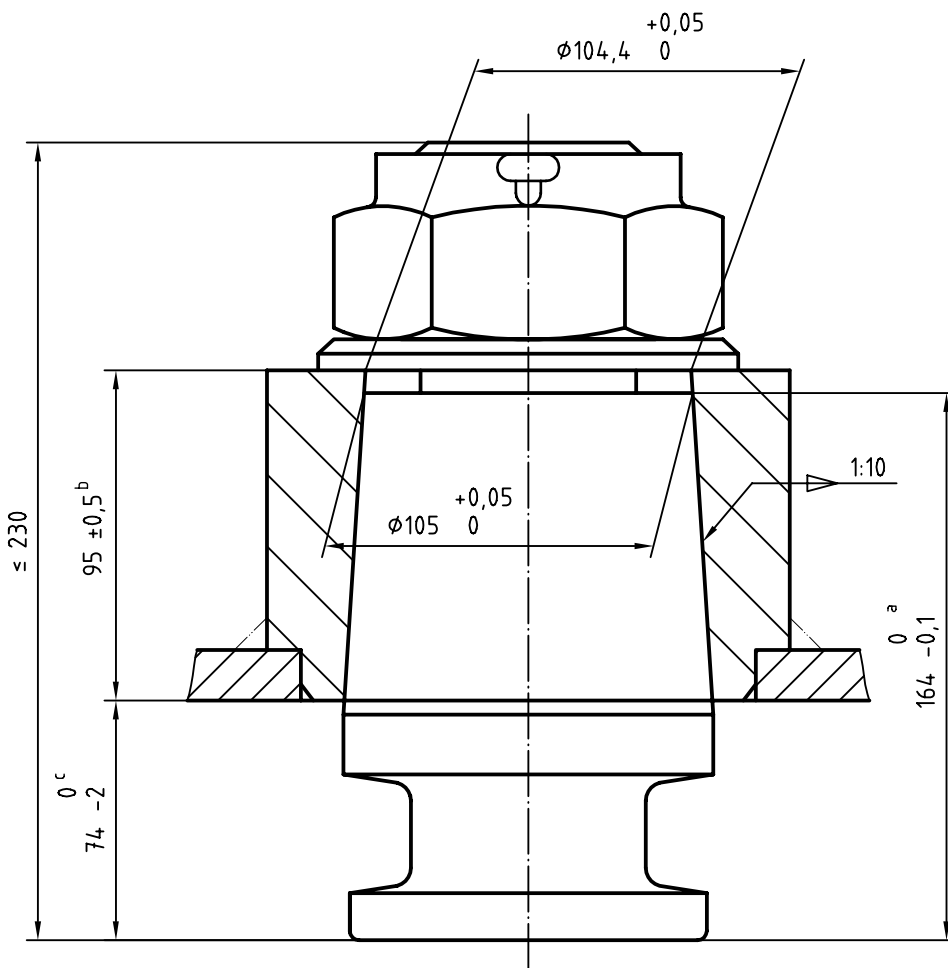


#### Key

- 1 Retention plate R2  $\begin{smallmatrix} +0,5 \\ -1 \end{smallmatrix}$ ; kingpin  $3 \times 45^\circ$
- 2 Further dimensions (see Figure 1)
- 3 8 holes  $\phi 21$  mm (for bolt M20)

- a Corresponds to the pivot dimension.
- b To be checked before mounting a new part.
- c Control dimension for built-in new kingpin (to be checked after mounting).

Figure 2 — Mounting dimensions for type A kingpin



- a Corresponds to the pivot dimension.
- b Dimension to be checked before mounting a new part.
- c Control dimension for built-in new kingpin (to be checked after mounting).

**Figure 3 — Mounting dimensions for type B kingpin**

## 5 Test requirements

The 90 fifth wheel kingpins shall be tested according to ISO 8716.



## Bibliography

- [1] ISO 3842, *Road vehicles — Fifth wheels — Interchangeability*
- [2] ISO 337, *Road vehicles — 50 semi-trailer fifth wheel coupling pin — Basic and mounting/interchangeability dimensions*

---

---

**ICS 43.040.70**

Price based on 5 pages

© ISO 2001 – All rights reserved