
**Road vehicles — Product data exchange
between chassis and bodywork
manufacturers (BEP) —**

**Part 2:
Dimensional bodywork exchange
parameters**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

*Véhicules routiers — Échange de données de produit entre les
fabricants de châssis et de carrosseries (BEP) —*

Partie 2: Paramètres dimensionnels d'échange de carrosserie

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>



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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 21308-2:2006

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>

© ISO 2006

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.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	2
4 Coding system	2
4.1 General.....	2
4.2 BEP code	2
4.3 Type of dimension	2
4.4 Numbering	3
4.5 Code assignment and description	4
4.6 Priority	4
4.7 Loading condition.....	4
4.8 Presented in	4
5 General dimensions.....	5
6 Chassis related dimensions	9
6.1 Axle and wheel related dimensions	9
6.2 Chassis frame related dimensions	23
6.3 Cab related dimensions	42
7 Bodywork related dimensions.....	45
7.1 Sub-frame related dimensions.....	45
7.2 Bodywork dimensions.....	51
Annex A (informative) Corresponding codes.....	56
Annex B (informative) Useful tools and related electronic documents	59
Bibliography	60
Index.....	61

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 2.

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

ISO 21308-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 6, *Terms and definitions of dimensions and masses*.

ISO 21308 consists of the following parts, under the general title *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP)*:

- Part 1: *General principles*
- Part 2: *Dimensional bodywork exchange parameters*
- Part 3: *General, mass and administrative exchange parameters*
- Part 4: *Mapping to STEP application protocol 239*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 21308-2:2006](https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006)

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>

Introduction

Truck chassis manufacturers deal with configurations of chassis in infinite numbers of possible combinations, and bodywork manufacturers produce highly customized superstructures on these chassis. Bodywork manufacturers build their superstructures on chassis of several different truck brands.

The production efficiency of a specific truck chassis and its body combinations can be greatly improved by achieving the correct technical and commercial information about the specific chassis communicated with the bodywork manufacturer in advance. The information has to be reliable and give the bodywork manufacturer confidence to prefabricate the body or the superstructure before the chassis is delivered. With uniform conditions, unambiguous dimensions and supplementary information can be established, transferred and correctly interpreted by the receiver. Increased information efficiency will improve the quality and reduce the lead times.

ISO 21308 specifies a system of codes to exchange specific data between chassis and bodywork manufacturers, providing a platform for efficient communication between the parties. The process of exchanging data in accordance with this part of ISO 21308 is irrelevant of IT sophistication degree. Any medium can be used, from fax or e-mail to a STEP protocol.

Exchanging codes in accordance with the ISO 21308 series of International Standards is useful in various situations, e.g. for design and manufacturing, technical specifications, technical drawings and leaflets.

This part of ISO 21308 uses the applicable definitions from the related ISO 612 and ISO 7656 and adds a number of dimensional codes, together with general, mass and administrative codes.

The codes provide the basic information level, and are also the basic input parameters for a data exchange system based on the STEP protocol.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 21308-2:2006

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>

Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) —

Part 2: Dimensional bodywork exchange parameters

1 Scope

This part of ISO 21308 provides a set of codes for the exchange of dimensional data between truck chassis manufacturers and bodywork manufacturers. It applies to commercial vehicles as defined in ISO 3833, having a maximum gross vehicle mass above 3 500 kg.

The process of exchanging the above information can involve:

- chassis manufacturer;
- chassis importer; iTeh STANDARD PREVIEW
(standards.iteh.ai)
- chassis dealer;
- one or more bodywork manufacturers; ISO 21308-2:2006
<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14dca7aa02/iso-21308-2-2006>
- bodywork component suppliers, e.g. manufacturers of demountable bodies, cranes and loading equipment, tipping equipment.

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 612:1978, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

ISO 1176, *Road vehicles — Masses — Vocabulary and codes*

ISO 3833, *Road vehicles — Types — Terms and definitions*

ISO 4130, *Road vehicles — Three-dimensional reference system and fiducial marks — Definitions*

ISO 7656:1993, *Commercial road vehicles — Dimensional codes*

ISO 21308-3¹⁾, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 3: General, mass and administrative parameters*

1) To be published.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 612, ISO 1176, ISO 7656, ISO 21308-3, and the following definitions apply.

3.1
BEP-code
code to identify a unique measurement on the truck, to make the information exchange between chassis manufacturers and bodywork manufacturers easier without any confusion with other systems

NOTE BEP is an abbreviation of Bodywork Exchange Parameter.

3.2
left and right side
left side in the driving direction and right side in the driving direction

3.3
driven axle
driven axle marked with an X in the drawings

3.4
non-driven axle
axle, such as steered or tag axle, marked with an O in the drawings

3.5
front edge
most forward point of the truck as delivered from the chassis manufacturer

NOTE Usually, the front edge is the bumper.

3.6
gross vehicle mass
GVM
gross vehicle weight
GVW
technical or legal gross vehicle mass (weight) according to the legislation or regulations for the applicable region

NOTE See also ISO 21308-3 and ISO 1176.

4 Coding system

4.1 General

Each dimension given in this part of ISO 21308 is assigned a code, composed of the items given below.

4.2 BEP code

A prefix "BEP", followed by a dash (-), shall be used to avoid confusion with other coding systems.

4.3 Type of dimension

Dimension codes are used to denote length, width and height measurements along the zero X-, Y- or Z-planes respectively, as defined in ISO 4130. They are also used to denote angle measurements.

A capital letter, which denotes the type of dimension, shall be given as follows:

- L – Length;
- W – Width;
- H – Height.

NOTE 1 The centre of the first front axle is chosen as a reference zero point for the length measurements. In some cases where it is convenient to use the rear axle as a reference, the first driven rear axle is used.

NOTE 2 The top of the chassis frame is chosen as the reference zero point for height measurements for objects connected to the chassis frame.

NOTE 3 The centre-line of the chassis is chosen as the reference zero point for width measurements.

NOTE 4 The height information, if dependent on the tyres, refers to the actual tyre equipment as described according to ISO 21308-3, if not otherwise stated.

If there is a need to differ between the dimension(s) on the right or left side, the BEP-code should be supplemented by R or L.

4.4 Numbering

4.4.1 General

Each item has a unique BEP-code consisting of the dimension type letter (see 4.3) and a three-digit sequential number, starting from 001.

The dimension codes for repeated vehicle items of the same kind on one vehicle, e.g. axles, cross-members, frame-mounted objects, etc. are differed by an added sequential number beginning with .1 counted from the front of the vehicle and rearwards.

For L codes, a positive value indicates that the item is located behind the axle. A negative value indicates that the item is located in front of the axle.

For H codes, a positive value indicates that the item is located above the top of the chassis frame. A negative value indicates that the item is located below the top of the chassis frame.

4.4.2 Numbering and type designation of frame-mounted objects

The same .n number shall be applied to a specific frame-mounted object in terms of L, H and W dimensions.

EXAMPLE Frame-mounted objects may be a fuel tank, referred to as BEP-L030.4, BEP-H030.4, and BEP-W.030.4, and a battery box, referred to as BEP-L030.5, BEP-H030.5, and BEP-W030.5.

For the frame-mounted objects, an optional coding (.t) may be added to describe the object type. The following abbreviation letters are reserved for the object types below:

- A – Air tank;
- B – Battery box;
- F – Fuel tank;
- H – Hydraulic tank;
- M – Exhaust muffler;

- S – Spare wheel;
- T – Tool box;
- U – Urea tank.

4.5 Code assignment and description

Clauses 5, 6, and 7 of this part of ISO 21308 show the assignment of each BEP-code together with a description of its applicability and limitations.

4.6 Priority

The column “Priority” shows the priority of the measurements, as follows:

- A – Essential;
- B – Useful.

4.7 Loading condition

The column “Loading” shows the load situation of the chassis, as follows:

- 1 – Unladen;
- 2 – Laden (design mass).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

NOTE A dash (-) means that the field is not applicable.

[ISO 21308-2:2006](https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006)

4.8 Presented in

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>

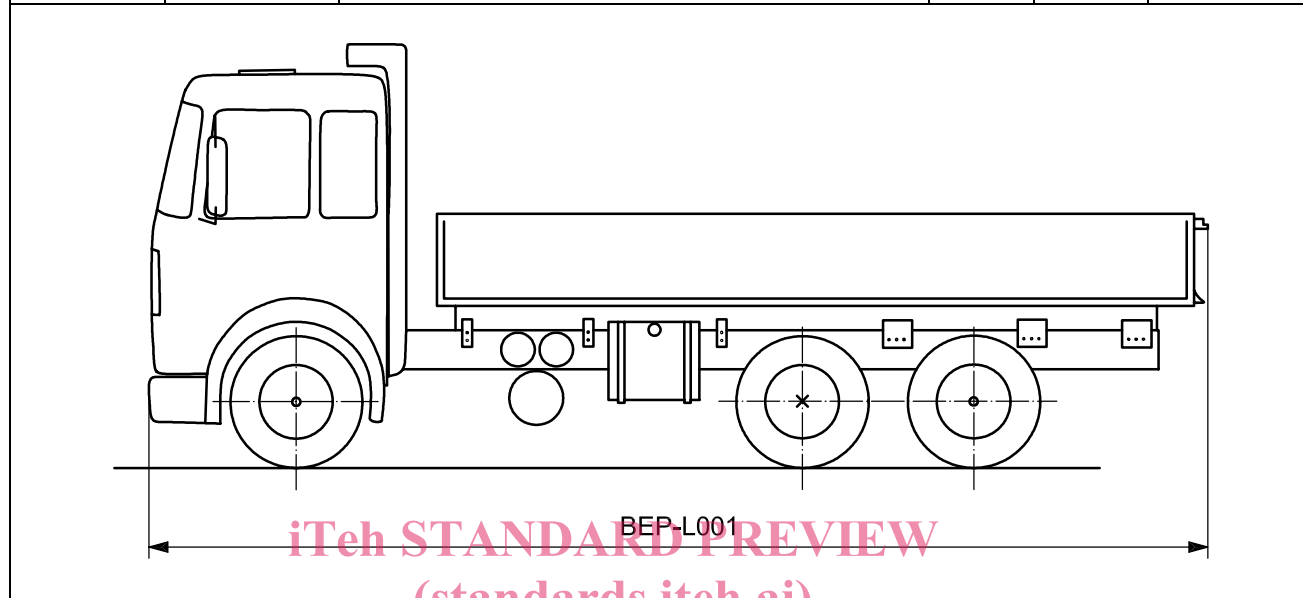
The column “Presented in” describes in which type of document the items can be presented, as follows:

- 2D – 2D drawing;
- 3D – 3D model;
- TD – Technical data sheet.

NOTE An empty field means that there is no specific recommendation for the presentation. It can be covered by any kind of document. A dash (-) means that the field is not applicable.

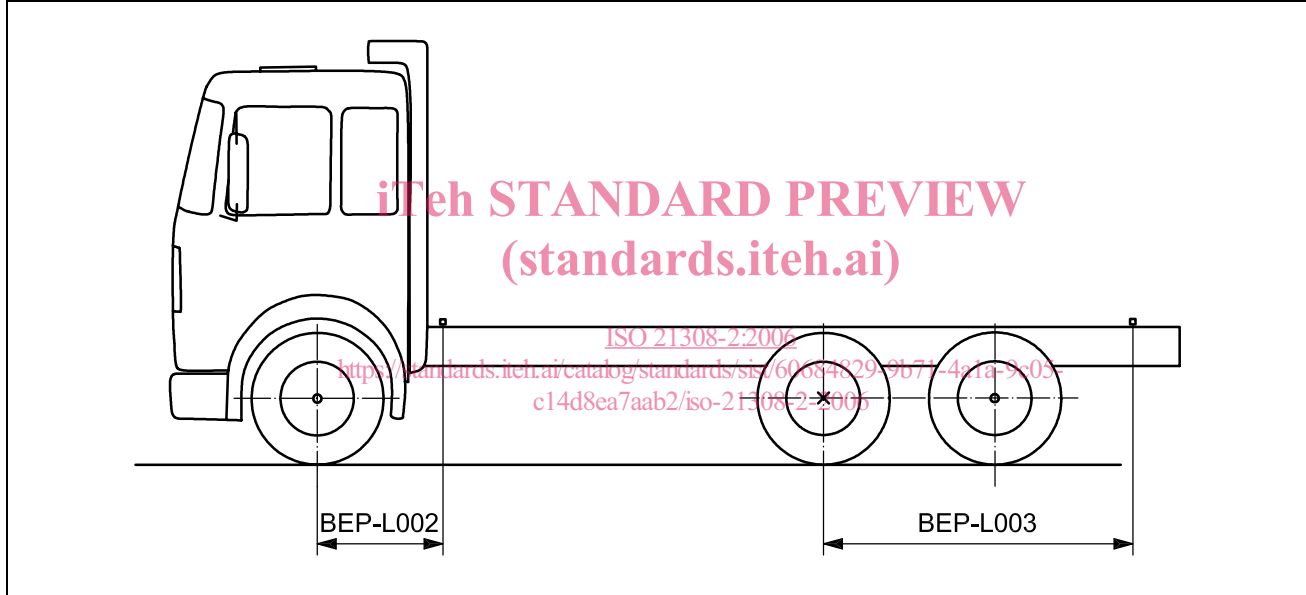
5 General dimensions

BEP-code	Assignment	Description	Priority	Loading	Presented in
BEP-L001	Overall length	Distance from front edge of vehicle to rear edge of vehicle, including accessories in both front and rear ends. NOTE See also ISO 612.	A	-	2D, 3D, TD

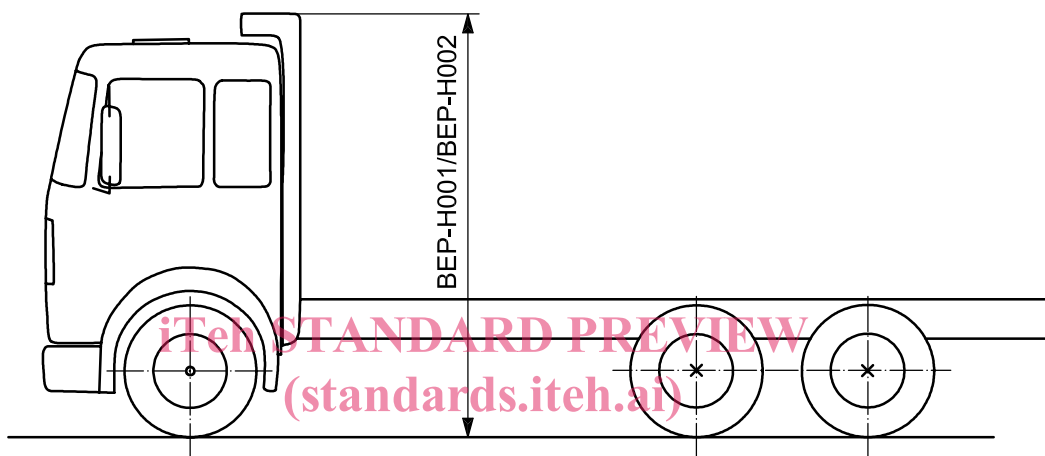


ISO 21308-2:2006
<https://standards.itih.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>

BEP-code	Assignment	Description	Priority	Loading	Presented in
BEP-L002	Front reference point for measuring	Distance from the centre of the first front axle to the front reference point for measuring. NOTE 1 Front reference point(s) for measuring is (are) defined by the chassis manufacturer. NOTE 2 If the reference points for right and left side member differ, then mark with .R or .L. NOTE 3 If the position of the reference point is in front of the axle, the value is negative.	A	-	2D, 3D, TD
BEP-L003	Rear reference point for measuring	Distance from the first driven rear axle to the rear reference point for measuring. NOTE 1 Rear reference point(s) for measuring is (are) defined by the chassis manufacturer. NOTE 2 If the reference points for right and left side member differ, then mark with .R or .L. NOTE 3 If the position of the reference point is in front of the axle, the value is negative.	A	-	2D, 3D, TD

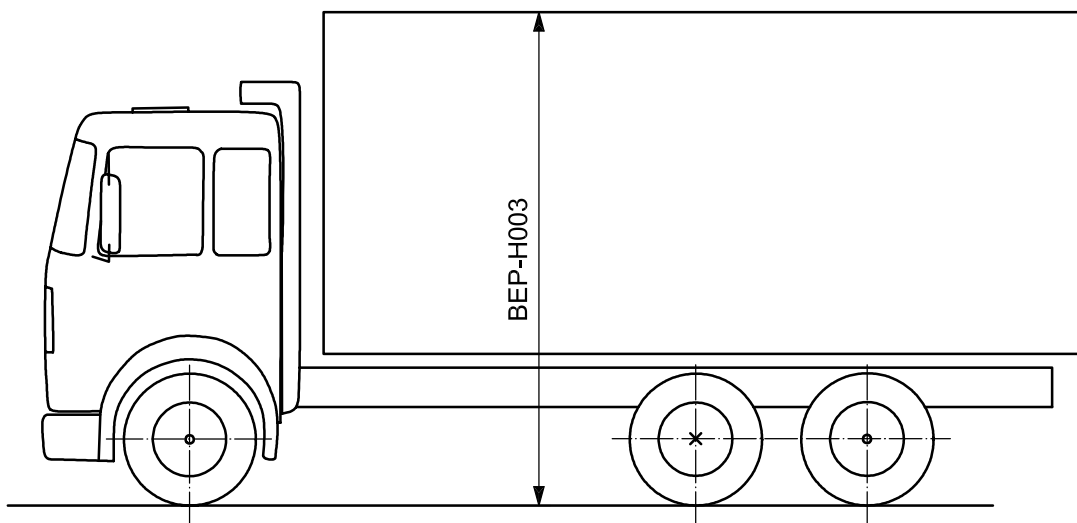


BEP-code	Assignment	Description	Priority	Loading	Presented in
BEP-H001	Maximum external height, unladen	Distance from ground to top of cab, including cab mounted parts, with the chassis unladen but in operating order. NOTE The roof hatch, if present, should be closed. All axles should be down. For pneumatic suspension, the highest driving position is assumed.	A	1	2D, 3D, TD
BEP-H002	Maximum external height, laden	Distance from ground to top of cab, including cab mounted parts, in laden condition. NOTE The chassis is laden up to "Technical gross vehicle mass". The roof hatch, if present, should be closed. All axles should be down. For pneumatic suspension, the highest driving position is assumed.	A	2	2D, 3D, TD

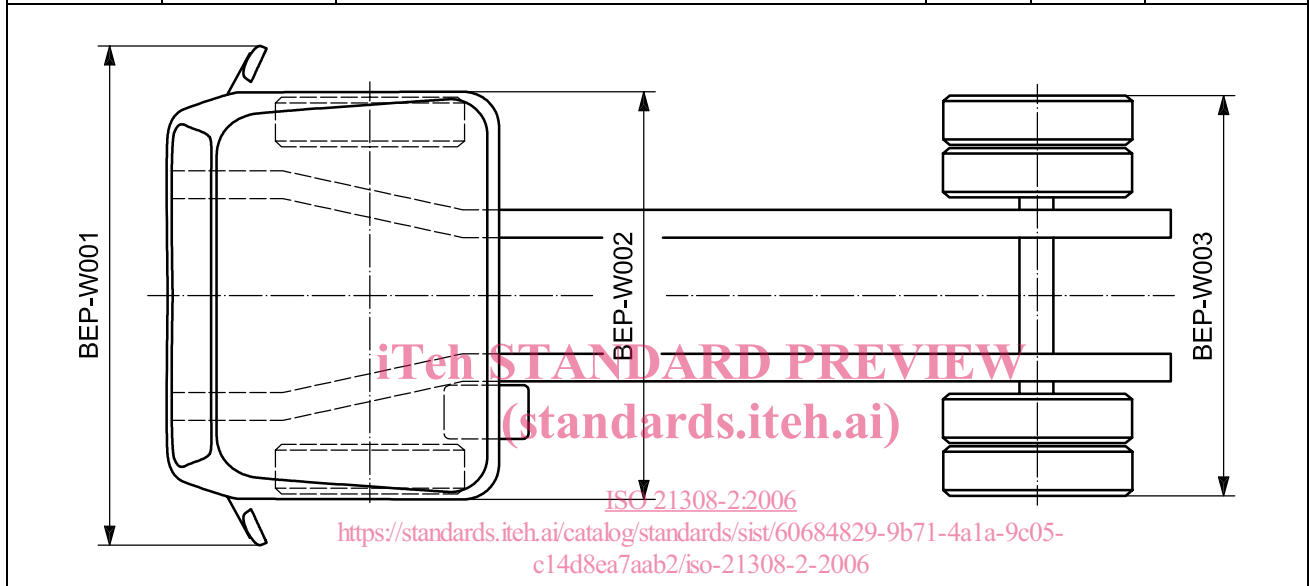


ISO 21308-2:2006

BEP-H003	Maximum overall height of vehicle, unladen	Distance from ground to the highest point of the vehicle including bodywork. NOTE For pneumatic suspension, the highest driving position is assumed.	A	1	2D, 3D, TD
----------	--	---	---	---	------------



BEP-code	Assignment	Description	Priority	Loading	Presented in
BEP-W001	Overall width of chassis with cab	Maximum external width of the vehicle chassis. NOTE Rear-view mirrors in outermost position, lights, elastic mud flaps, tyre bulges in the road area and snow chains are included in the width stated. The bodywork is not taken into account.	A	-	2D, 3D, TD
BEP-W002	Width across cab	External width of cab. NOTE Mudguards and rear-view mirrors are disregarded.	A	-	2D, 3D, TD
BEP-W003.n	Width across wheels on <i>n</i> -th axle	External width across the wheels on the <i>n</i> -th axle. NOTE Projecting axle hubs and tyre bulges are disregarded.	A	-	2D, 3D, TD



6 Chassis related dimensions

6.1 Axle and wheel related dimensions

BEP-code	Assignment	Description	Priority	Loading	Presented in
BEP-L010	Total wheel base	Distance between centre of first front axle to the centre of the last axle.	A	-	2D, 3D, TD

ISO 21308-2:2006

<https://standards.iteh.ai/catalog/standards/sist/60684829-9b71-4a1a-9c05-c14d8ea7aab2/iso-21308-2-2006>