

DRAFT INTERNATIONAL STANDARD

ISO/DIS 21308-2

ISO/TC 22/SC 40

Secretariat: UNI

Voting begins on:
2019-07-04

Voting terminates on:
2019-09-26

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

Part 2: Dimensional bodywork exchange parameters

*Véhicules routiers — Échange de données de produit entre les fabricants de châssis et de carrosseries (BEP) —
Partie 2: Paramètres dimensionnels d'échange de carrosserie*

ICS: 43.080.01

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ca8c4d98-ed87-4c7c-913f-50b28181ed5e/iso-prf-21308-2>

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.



Reference number
ISO/DIS 21308-2:2019(E)

© ISO 2019

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ca8c4d98-ed87-4c7c-913f-50b28181ed5e/iso-prf-21308-2>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: 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 principles.....	2
4.1 BEP codes of truck chassis and bodywork.....	2
4.2 Units of BEP code values	4
4.3 Numbering	4
4.3.1 General	4
4.3.2 Numbering and type designation of frame-mounted objects.....	4
4.4 Code assignment and description.....	5
4.5 Priority	5
4.6 Loading condition	5
4.7 Presented in.....	5
4.8 Related XML coding.....	6
5 General dimensions	7
6 Chassis related dimensions.....	11
6.1 Axle and wheel related dimensions.....	11
6.2 Chassis frame related dimensions.....	28
6.3 Cab related dimensions.....	48
7 Bodywork related dimensions.....	52
7.1 Sub-frame related dimensions	52
7.2 Bodywork dimensions	59
Annex A (informative) Corresponding codes	64
A.1 Comparison of BEP codes and other coding systems.....	64
A.1.1 Length codes.....	64
A.1.2 Height codes	65
A.1.3 Width codes	66
Annex B (informative) Useful tools and related electronic documents.....	67
Annex C (normative) XML coding related to this document	68
C.1 XML data exchange according to ISO 21308-2	68
C.2 ISO 21308 Part 2 XML code (excerpt of iso21308-2.xsd).....	68
Bibliography	91

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22 *Road vehicles*, Subcommittee SC 40, *Specific aspects for light and heavy commercial vehicles, busses and trailers*, Working Group WG 2, *Bodywork Exchange Parameters for commercial vehicles (BEP)*.

This second edition cancels and replaces the first edition (ISO 21308-2:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Addition of several new codes based on the experiences from the first edition;
- Addition of Annex C showing specific XML coding for this part.

A list of all parts in the ISO 21308 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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.

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

The codes can be communicated via e.g. spreadsheet or XML, or a data exchange system based on the STEP protocol.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ca8c4d98-ed87-4c7e-913f-50b28181ed5e/iso-prf-21308-2>

Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 2: Dimensional bodywork exchange parameters

1 Scope

This document series describes a generic system for the exchange of 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;
- chassis dealer;
- one or more bodywork manufacturers; and
- bodywork component suppliers, e.g. manufacturers of demountable bodies, cranes and loading equipment, tipping equipment.

This document provides a set of codes for the exchange of dimensional data between truck chassis manufacturers and bodywork manufacturers.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 21308-1, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 1: General principles*

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

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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

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 1 to entry: 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

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 1 to entry: 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 1 to entry: See also ISO 21308-3 and ISO 1176.

4 Coding principles

4.1 BEP codes of truck chassis and bodywork

Each characteristic, related to truck chassis and bodywork, is assigned a code composed of the items given below. A prefix "BEP", followed by a dash (-), shall be used to avoid confusion with other coding systems.

BEP codes are formatted according to the principles in Table 1.

Table 1 — BEP coding principles

BEP-ppMccc.n.p.q.s.t		
Item	Assignment	Description
pp	Bodywork category	pp = None or 00 for codes related to vehicle chassis (ISO 21308-2 and ISO 21308-3) pp = 01 for codes related to loader cranes (ISO 21308-5) pp = 02 for codes related to hook loaders (ISO 21308-6) pp = 03 for codes related to skip loaders (ISO 21308-7)
M	Measure type	A capital letter, which denotes the type of code: H = Z direction, coordinate system in accordance with ISO 4130 L = X direction, coordinate system in accordance with ISO 4130 W = Y direction, coordinate system in accordance with ISO 4130 C = Coordinate (x,y) or (x,y,z) in the Cartesian coordinate system M = Mass (m), or mass point (m,x,y,z) F = Force (static or dynamic) T = Moment (static or dynamic) R = Radius V = Angle G = General A = Administrative
ccc	BEP code number	Code number given by the standard
.n	Index number	.n is used to designate object number n
.p	Entity number	.p is used to designate a certain set of object characteristics or entities (e.g. dimensions, coordinates, address information) Where both .n and .p are specified, they are given in the .n .p order.
.q	Corner number	.q is used to designate contour corner index number
.s	Side designator	L or R
.t	Type designator	Optional coding to describe the object type (e.g. fuel tank)

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.

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

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

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.

NOTE Dimensions, except for radius, can be positive or negative.

4.2 Units of BEP code values

The following units are preferred when reporting values related to BEP codes:

- dimensions (L, W, H, R) and coordinates (x,y,z) in millimetres (mm);
- masses in kilograms (kg);
- forces in Newtons (N), or kN;
- moments in Newtonmetres (Nm), or kNm;
- angles in degrees (°).

4.3 Numbering

4.3.1 General

Each item has a unique BEP-code consisting of the dimension type letter (see 4.2) 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.

NOTE 1 .n is used to designate object number n.

NOTE 2 In this part of ISO 21308, .p is used to designate a certain set of object characteristics or entities (e.g. dimensions, coordinates, address information).

NOTE 3 Where both .n and .p are specified, BEP codes are specified in the .n .p order.

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.

4.3.2 Numbering and type designation of frame-mounted objects

The same .p 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;
- C – Cap / Filler Cap
- F – Fuel tank;
- H – Hydraulic tank;
- M – Exhaust muffler;
- S – Spare wheel;
- T – Tool box;
- U – Urea tank;
- O – Other (Other objects, specified by the applicable G code in ISO 21308-3).

NOTE Letters may be combined (e.g. FC for Fuel tank filler cap).

4.4 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.

4.5 Priority

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

- A – Essential;
- B – Useful.

4.6 Loading condition

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

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

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

4.7 Presented in

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.

4.8 Related XML coding

Any XML implementation for the communication of BEP codes shall follow the requirements given in ISO 21308-1. The XML coding related to this document shall be written according to the indications in Annex C.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ca8c4d98-ed87-4c7c-913f-50b28181ed5e/iso-prf-21308-2>

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

