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

**Part 3:  
General, mass and administrative  
exchange parameters**

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

*Partie 3: Paramètres d'échange généraux, de masse et administratifs*

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## 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](http://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](http://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](http://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*.

This second edition cancels and replaces the first edition (ISO 21308-3:2007), which has been technically revised.

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

- addition of new codes based on the experiences from the first edition;
- addition of [Annex B](#) 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](http://www.iso.org/members.html).

## Introduction

Truck chassis manufacturers deal with configuration 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 in advance with the bodywork manufacturer. The information must 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.

The ISO 21308 series specifies a generic system of codes for exchanging specific data between truck chassis manufacturers and bodywork manufacturers, providing a platform for efficient communication between the parties. It applies to commercial vehicles as defined in ISO 3833, having a maximum gross vehicle mass above 3 500 kg.

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

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

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

## Part 3: General, mass and administrative exchange parameters

### 1 Scope

This document provides codes for the exchange of general, mass and administrative information between truck chassis manufacturers and bodywork manufacturers.

The process of exchanging the above information can involve:

- chassis manufacturer;
- chassis importer;
- chassis dealer;
- one or more bodywork manufacturers;
- bodywork component suppliers, e.g. manufacturers of demountable bodies, cranes and loading equipment, tipping equipment.

### 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, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

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

ISO 7656, *Commercial road vehicles — Dimensional codes*

ISO 21308-1, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 1: General principles*

ISO 21308-2, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 2: Dimensional bodywork exchange parameters*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 612, ISO 1176, ISO 7656, ISO 21308-2 apply.

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

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

## 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
<b>pp</b>	Bodywork category	pp = <b>None or 00</b> for codes related to vehicle chassis (ISO 21308-2 and this document) pp = <b>01</b> for codes related to loader cranes (ISO 21308-5) pp = <b>02</b> for codes related to hook loaders (ISO 21308-6) pp = <b>03</b> for codes related to skip loaders (ISO 21308-7)
<b>M</b>	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
<b>ccc</b>	BEP code number	Code number given by the respective part of the ISO 21308 series
<b>.n</b>	Index number	.n is used to designate object number <i>n</i>
<b>.p</b>	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.
<b>.q</b>	Corner number	.q is used to designate contour corner index number
<b>.s</b>	Side designator	L or R
<b>.t</b>	Type designator	Optional coding to describe the object type (e.g. fuel tank)

NOTE Supplementary information and support tools of this document are available on the ISO Standards Maintenance Portal. This information can be found at the following URL: <https://standards.iso.org/iso/21308>.

### 4.2 Numbering

Each item has a unique BEP code consisting of the type letter (see [Table 1](#)) and a three-digit sequential number, starting from 001.

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



For chassis-frame-mounted objects, the same .n number shall be applied to a specific object, both for the general information on the object and the dimensional codes.

**EXAMPLE** Information of a fuel tank should be given the code G060.4 when referred to as a frame-mounted object number 4 according to ISO 21308-2. This applies even if there is only one fuel tank.

**NOTE** ISO 21308-2 also provides an option for coding the actual object; for example the letter F is used for fuel tank.

If the above method is not possible, the information on the relation between the general coding and the dimensional coding for a specific object should be provided.

### 4.3 Code assignment and description

[Subclauses 5.1](#) to [5.3](#) show the assignment of each BEP code together with a description of its applicability and limitations.

### 4.4 Priority

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

- A — Essential;
- B — Useful.

### 4.5 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.

### 4.6 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, web site or bodybuilder’s manual, etc.

**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.

### 4.7 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 B](#).

## 5 BEP code assignment and description

### 5.1 General codes

The information in [Table 2](#) should, where applicable, be supplemented by the chassis manufacturer's information for bodybuilders. All information may not be known from the beginning, so such codes may be specified later in the process.

**Table 2 — General codes**

BEP code	Assignment	Description	Priority	Presented in
<b>BEP-G000</b>	Manufacturer administrative code set	Specifies the .p of the manufacturer. NOTE Administrative codes with the same .p apply to the vehicle in the actual project.		
<b>BEP-G001</b>	Vehicle type	Type of vehicle in terms of its intended use. EXAMPLE Swap body truck, concrete mixer chassis, car transporter, crane truck, demountable body.	A	TD
<b>BEP-G002</b>	Vehicle make and model	Brand name, model designation and manufacturing year.	A	TD
<b>BEP-G003</b>	Vehicle chassis information	Main characteristics of the chassis according to the chassis manufacturer. EXAMPLE Low, high	A	TD
<b>BEP-G004</b>	Chassis frame type	Manufacturer's chassis designation.	A	TD
<b>BEP-G005</b>	Cab type	Manufacturer's cab designation.	A	TD
<b>BEP-G010.n</b>	Type of bodywork	Brand name, model designation and manufacturing year.	A	TD
<b>BEP-G020</b>	Axle configuration	Specification of number of wheels, number of driven wheels and steered wheels according to the manufacturer's designation. EXAMPLE 6 x 2/4 can be the designation of a vehicle with a total of six wheels, where two are driven and four are steered. NOTE See also <a href="#">Annex A</a> .	A	TD
<b>BEP-G021.n</b>	Axle information	Main characteristics of the <i>n</i> -th axle. NOTE Driving, steering, lifting and combinations thereof, including bogies and tandems.	A	TD
<b>BEP-G022.n</b>	Axle type	Manufacturer's designation for the <i>n</i> -th axle.	A	TD
<b>BEP-G023.n</b>	Axle gear ratio	Manufacturer's gear ratio data for the <i>n</i> -th axle.	A	TD
<b>BEP-G030.n</b>	Brake type	Manufacturer's brake type designation for the <i>n</i> -th axle.	A	TD
<b>BEP-G031.n</b>	Rim and tyre size	Tyre and rim designation on the <i>n</i> -th axle. BEP-G031.s is used for spare wheel.	A	TD
<b>BEP-G032.n</b>	Suspension type	Manufacturer's suspension designation for the <i>n</i> -th axle. EXAMPLE Leaf, air, etc.	A	TD
<b>BEP-G040</b>	Engine type	Manufacturer's engine type designation.	A	TD
<b>BEP-G050</b>	Gearbox type	Manufacturer's gearbox type designation.	A	TD
<b>BEP-G051</b>	Gearbox gear ratio	Manufacturer's gearbox gear ratio data.	A	TD

Table 2 (continued)

BEP code	Assignment	Description	Priority	Presented in
BEP-G060.n	Fuel tank data	Type, material, volume, etc., of fuel tank with object number n.	A	TD
BEP-G061.n	Air tank data	Type, volume, etc., of air tank with object number n.	A	TD
BEP-G062.n	Hydraulic tank data	Type, material, volume, etc. of hydraulic tank with object number n. NOTE Tanks added by bodybuilder are included.	A	TD
BEP-G063.n	Hydraulic oil	Chassis manufacturer's or bodybuilder's specification.	A	TD
BEP-G064.n	Hydraulic pump type	Manufacturer's data for the n-th hydraulic pump. NOTE Data can include flow, working pressure, displacement, rotation and type, e.g. fixed or variable.	A	TD
BEP-G070	Exhaust system	Manufacturer's exhaust designation.	A	TD
BEP-G071	Air intake type	Manufacturer's air intake designation.	B	TD
BEP-G080	Electrical system	Manufacturer's specifications for the electrical system. EXAMPLE Voltage, groundage, etc.	A	TD
BEP-G081.n	Battery data	Type, capacity, etc. of battery with object number n. EXAMPLE BEP-G081.1: 24 V, 180 Ah.	A	TD
BEP-G082.n	Alternator type	Manufacturer's alternator designation and capacity. EXAMPLE BEP-G082.1: 24 V, 180 Ah.	A	TD
BEP-G083.n	Electrical interface for bodywork	Electrical interface for bodywork purposes.	A	TD
BEP-G084.n	Electrical interface for towed vehicle	Type of electrical connectors between towing and towed vehicle. EXAMPLE 24 V connector according to ISO 12098 and the ISO 7638 series.	A	TD
BEP-G085.n	Electronic interface for bodywork	Electronic interface for bodywork purposes.	A	TD
BEP-G086.n	Electronic interface for towed vehicle	Type of electronic transmission between towing and towed vehicle. EXAMPLE CAN communication according to the ISO 11992 series.	A	TD
BEP-G100.n	Hydraulic interface for bodywork	Hydraulic interface between the chassis and bodywork.	A	TD
BEP-G101.n	Hydraulic interface for bodywork on towed vehicle	Type of hydraulic connectors between towing and towed vehicle, for bodywork purposes. NOTE Male/female, size, etc.	A	TD
BEP-G110.n	Pneumatic interface for bodywork	Pneumatic interface between the chassis and bodywork.	A	TD
BEP-G111.n	Pneumatic interface for bodywork on towed vehicle	Type of pneumatic connectors between towing and towed vehicle, for bodywork purposes. NOTE Male/female, size, etc.	A	TD