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

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

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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.

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 21308-3 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*

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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.

ISO 21308 specifies a system of codes for exchanging specific data between chassis and bodywork manufacturers, providing a platform for efficient communication between the parties. The process of exchanging data according to 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 according to ISO 21308 is useful in various situations, e.g. for design and manufacturing, technical specifications, technical drawings and leaflets.

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.

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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 part of ISO 21308 provides codes for the exchange of general, mass and administrative information. 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

- the chassis manufacturer,
- the chassis importer,
- the chassis dealer,
- one or more bodywork manufacturers, and
- 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, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

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

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*

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

ISO 7656, *Commercial road vehicles — Dimensional codes*

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, definitions given in ISO 612, ISO 1176, ISO 7656, ISO 21308-2, and the following 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
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 1176.

4 Coding system

Each dimension given in this International Standard is assigned a code, composed of the items given below.

4.1 BEP code

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

4.2 Type of code

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

- **G** – General data;
- **M** – Mass data;
- **A** – Administrative data.

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

4.3 Numbering

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

4.4 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.

4.5 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, 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.

5 BEP code assignment and description

5.1 General codes

The information in Table 1 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 1 — General codes

BEP code	Assignment	Description	Priority	Loading	Presented in
BEP-G001	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
BEP-G002	Vehicle make and model	Brand name, model designation and manufacturing year.	A	-	TD
BEP-G003	Vehicle chassis information	Main characteristics of the chassis according to the chassis manufacturer. EXAMPLE Low, high	A	-	TD
BEP-G004	Chassis frame type	Manufacturer's chassis designation.	A	-	TD
BEP-G005	Cab type	Manufacturer's cab designation.	A	-	TD
BEP-G010.n	Type of bodywork	Brand name, model designation and manufacturing year.	A	-	TD
BEP-G020	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 may be the designation of a vehicle with a total of six wheels, where two are driven and four are steered. NOTE See also Annex A (informative).	A	-	TD
BEP-G021.n	Axle information	Main characteristics of the n-th axle. NOTE Driving, steering, lifting and combinations thereof, including bogies and tandems.	A	-	TD
BEP-G022.n	Axle type	Manufacturer's designation for the n-th axle.	A	-	TD
BEP-G023.n	Axle gear ratio	Manufacturer's gear ratio data for the n-th axle.	A	-	TD
BEP-G030.n	Brake type	Manufacturer's brake type designation for the n-th axle.	A	-	TD
BEP-G031.n	Rim and tyre size	Tyre and rim designation on the n-th axle. NOTE BEP-G031.s is used for spare wheel.	A	-	TD
BEP-G032.n	Suspension type	Manufacturer's suspension designation for the n-th axle. EXAMPLE Leaf, air, etc.	A	-	TD
BEP-G040	Engine type	Manufacturer's engine type designation.	A	-	TD
BEP-G050	Gearbox type	Manufacturer's gearbox type designation.	A	-	TD
BEP-G051	Gearbox gear ratio	Manufacturer's gearbox gear ratio data.	A	-	TD

Table 1 (continued)

BEP code	Assignment	Description	Priority	Loading	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 may 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. NOTE 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.	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, ISO 7638.	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 ISO 11992.	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