

INTERNATIONAL
STANDARD

ISO
3832

Third edition
2002-06-15

**Passenger cars — Luggage
compartments — Method of measuring
reference volume**

*Voitures particulières — Coffres à bagages — Méthode de mesure du
volume de référence*

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Reference number
ISO 3832:2002(E)

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Printed in Switzerland

Foreword

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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 3832 was prepared by Technical Committee ISO/TC 22, *Road Vehicles*, Subcommittee SC 6, *Terms and definitions of dimensions and masses*.

This third edition cancels and replaces the second edition (ISO 3832:1991), which has been technically revised.

Passenger cars — Luggage compartments — Method of measuring reference volume

1 Scope

This International Standard specifies a method of measuring the reference volume of the luggage compartments of passenger cars.

2 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

2.1

unit module

rectangular parallelepiped, with rounded edges of maximum radius 10 mm and of the dimensions and volume specified in Table 1

Table 1 — Unit modules

| Unit module | Length mm | Width mm | Height mm | Volume dm ³ |
|-------------|--------------|-------------|--------------|---------------------------|
| Type A | 400 ± 1 | 200 ± 1 | 100 ± 1 | 8 |
| Type B | 200 ± 1 | 100 ± 1 | 50 ± 1 | 1 |
| Type C1 | 200 ± 1 | 200 ± 1 | 100 ± 1 | 4 |
| Type C2 | 400 ± 1 | 100 ± 1 | 100 ± 1 | 4 |
| Type C3 | 400 ± 1 | 200 ± 1 | 50 ± 1 | 4 |

2.2

reference volume of luggage compartment

sum total of the volumes of unit modules that can be placed in a luggage compartment

See clause 3.

NOTE The reference volume, expressed in cubic decimetres, can be used for comparison of different passenger cars (see clause 5).

3 Procedures

3.1 Measurement of volume of closed luggage compartment without direct connection with passenger compartment

For vehicles with tailgates (hatchbacks), the parcel-shelf in its normal position defines the upper limit of the compartment, and the volume may be measured according to this procedure.

The luggage compartment shall contain all fittings installed in production by the car manufacturer (spare wheel, jack, etc.). Other features, either not installed or only optional, such as first-aid-kit or fire extinguisher, shall not be considered.

- a) Fill the luggage compartment with the number of unit modules representing the largest capacity using unit modules according to Table 1, as specified by the manufacturer. Piling up of unit modules shall not impede closing of the compartment.
- b) Calculate the reference volume of the luggage compartment in cubic decimetres by adding the total volumes of the unit modules placed in the luggage compartment in accordance with a).

3.2 Measurement of volume of luggage compartment open to passenger compartment

The luggage compartment shall contain all fittings installed in production by the car manufacturer (spare wheel, jack, etc.). Other features, either not installed or only optional, such as first-aid-kit or fire extinguisher, shall not be considered.

Where special features such as a folding or removable rear seat or backrest have been provided by the manufacturer to obtain maximum loading volume, the measurements shall be made with the following loading limits.

- Front loading limit: the rear side of the backrest of the seats situated immediately in front of the luggage compartment set at the normal driving or riding position as defined by the manufacturer, and/or the folded rear seats; the rear seats and/or backrest folded or removed, with the front loading limit above the backrest being a vertical plane tangential to the rear side of the front seat backrest and the load height limited by the roof head-lining.
- Upper loading limit: a plane parallel to the main load floor and tangential to the upper edge of the backrest of the seats situated immediately in front of the luggage compartment, head-restraints not included. The height of seat-backs with integral head-restraints is calculated according to the manufacturer's specifications.

- a) Fill the luggage compartment with the number of unit modules representing the largest capacity using unit modules according to Table 1, as specified by the manufacturer. Piling up of unit modules shall not impede closing of the compartment.
- b) Calculate the different reference volumes of the luggage compartment in cubic decimetres by adding the total volumes of the unit modules placed in the luggage compartment in each case in accordance with a).

4 Reference volume codes

Each reference volume of luggage compartment considered in this International Standard shall be assigned a code in accordance with Table 2.

Table 2 — Reference volume of luggage compartment codes

| Luggage compartment | Front loading limit ^a | Upper loading limit | Position of the seat and/or backrest | Volume code |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------|
| Closed without direct connection with passenger compartment | Rear side of the last seat-back (or closing panel behind the last seat) | Rear bonnet closed or parcel shelf in its normal position | — | ISO – V210 |
| Open to passenger compartment | Rear side of the second seat-back and/or the folded third seat (if present) | Plane parallel to the main load floor and tangential to the upper edge of the second seat-back ^b | Seats of the third row (if present) folded or removed | ISO – V211 |
| | Rear side of the front seat-back and/or the folded second seat | Plane parallel to the main load floor and tangential to the upper edge of the front seat-back ^b | Seats of the second and third row (if present) folded or removed | ISO – V212 |
| | Rear side of the third seat-back | Plane parallel to the main load floor and tangential to the upper edge of the third seat-back ^b | — | ISO – V213 |
| | Vertical plane tangential to the rear side of the front seat-back ^b | Roof headlining | Seats of the second and third row (if present) folded or removed | ISO – V214 |
| | Vertical plane tangential to the rear side of the second seat-back ^b | Roof headlining | Seats of the third row (if present) folded or removed | ISO – V215 |
| Closed without direct connection with passenger compartment | Rear side of the second seat-back (or closing panel behind the second seat) and/or the folded third seat (if present) | Parcel shelf in its normal position | Seats of the third row (if present) folded or removed | ISO – V220 |

^a Seat position is defined by the manufacturer.

^b Excluding head-restraints. Height of seat-back with integrated head-restraints according to manufacturer's specification.

5 Designation

In order to facilitate comparison between cars, the reference volume of luggage compartment measured in accordance with this International Standard shall be designated by the following elements, in the order given:

- denomination — luggage compartment volume;
- reference to this International Standard;
- reference volume code (see Table 2);
- numerical value of the volume [see 3.1 b) or 3.2 b)].

EXAMPLE A reference volume of luggage compartment of 235 dm^3 , open to the passenger compartment, with the upper loading limit being a plane parallel to the main load floor and tangential to the upper edge of the backrest and with the seats of the second row in their normal position, shall be designated as follows:

Luggage compartment volume ISO 3832-V211-235

When a reference volume of luggage compartment measured in accordance with this International Standard is given alone (e.g. in an individual specification), this volume shall be expressed in cubic decimetres followed by "in accordance with ISO 3832".

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