International Standard 7237

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Road vehicles — Masses and dimensions of caravans — Terms and definitions

Véhicules routiers — Masses et dimensions des caravanes — Dénominations et définitions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7237 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in November 1980.

It has been approved by the member bodies of the following countries :

Austria	Iran	Romania
Belgium	Italy	South Africa, Rep. of
Brazil	Japan	Spain
Canada	Korea, Dem. P. Rep. of	Sweden
China	Korea, Rep. of	Switzerland
Egypt, Arab Rep. of	Netherlands	United Kingdom
France	New Zealand	USSR
Germany, F. R.	Poland	

No member body expressed disapproval of the document.

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Road vehicles — Masses and dimensions of caravans — Terms and definitions

1 Scope

This International Standard defines terms relating to masses and dimensions of caravans.

It does not deal with methods of measurement, the units used in reporting the results, the accuracy required or the order of magnitude of the masses and dimensions defined.

2 Field of application

The provisions of this International Standard apply to caravans as defined in ISO 3833.

3 References

ISO 612, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions.*

ISO 1103, *Road vehicles — Caravans and light trailors — Coupling ball — Dimensional characteristics.*

ISO 1176, *Road vehicles — Weights — Vocabulary.*

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

4 General

Unless otherwise stated, the definitions are applicable for a caravan new from the factory, in the following conditions :

a) the caravan is stationary and the supporting surface is horizontal; lengths and widths are measured in the horizontal plane, and heights in the vertical plane;

b) all wheels of the caravan, including the jockey wheel, rest on the supporting surface, and its interior floor is horizontal;

c) roof vents, doors, and windows are closed; retractable steps are retracted;

d) the longitudinal median plane of the caravan is that defined in ISO 612, clause 5;

e) the mass of the caravan, at the moment of measurement, is the maximum authorized total mass (see 5.1.4.2), the load being distributed according to the manufacturer's instructions;

f) the tyres are inflated to the pressure corresponding to the maximum authorized total mass (see 5.1.4.2) of the caravan.

5 Masses

5.1 Masses relative to the caravan alone

No.	Term	Definition
5.1.1	**unladen mass**	The mass of the caravan fully equipped for service in accordance with manufacturer's specification, but excluding optional extras.
5.1.2	**delivered mass**	The mass of the caravan including all equipment and optional extras as delivered to the first retail buyer.
5.1.3	**actual mass**	The mass of the caravan as loaded for a particular journey.
5.1.4	**maximum total mass**	
5.1.4.1	**maximum manufacturer's total mass**	The mass calculated by the manufacturer for specific operating conditions, taking into account such elements as strength of materials, tyre loading capacity, etc.
5.1.4.2	**maximum authorized total mass**	The mass calculated by the administrative authority for operating conditions laid down by the authority. NOTE — Contrary to the footnote to term 4.7.2 in ISO 1176, this mass includes the static load divided by g^* on the coupling ball.
5.1.4.3	**maximum user's total mass**	The mass equal to the maximum authorized total mass (5.1.4.2) or the authorized towed mass (see 5.2.3.2), whichever has the smaller value.
5.1.5	**payload**	
5.1.5.1	**manufacturer's maximum payload**	Product of g^* and the difference between the maximum manufacturer's total mass (5.1.4.1) and the unladen mass (5.1.1).
5.1.5.2	**maximum authorized payload**	Product of g^* and the difference between the maximum authorized total mass (5.1.4.2) and the unladen mass (5.1.1).
5.1.5.3	**user's maximum payload**	Product of g^* and the difference between the maximum user's total mass (5.1.4.3) and the delivered mass (5.1.2).
5.1.6	**load on the left wheel (on the right wheel)**	The load transmitted to the supporting surface by the wheel(s) located on the left side (right side) of the caravan.
5.1.7	**maximum authorized load on the axle**	The difference between the product of the maximum authorized total mass (5.1.4.2) and g^* and the static load at the coupling ball (see 5.1.8).
5.1.8	**static load at the coupling ball**	The vertical static load applied at the centre of the coupling ball cup in the coupling head of the caravan. This centre is coincident with the centre of the coupling ball on the towing motor vehicle.
5.1.9	**maximum permissible static load at the coupling head, for the caravan**	The maximum static load, laid down by the manufacturer of the caravan, and, in countries where it is necessary, authorized by the administrative authority, that is permissible for the caravan. NOTE — For the maximum static load on the coupling ball for the towing motor vehicle, see 5.2.4.

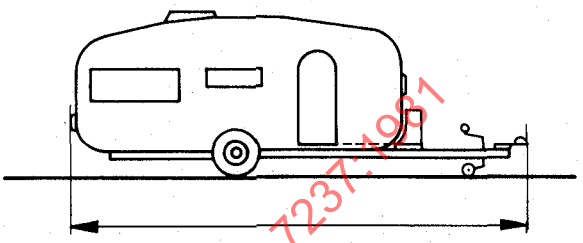
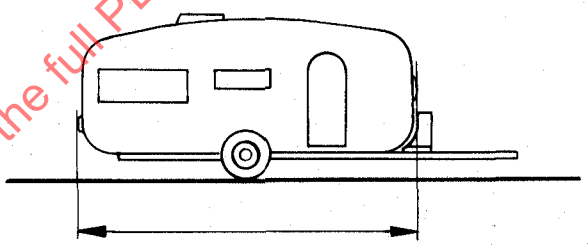
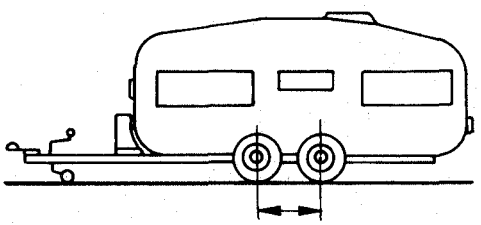
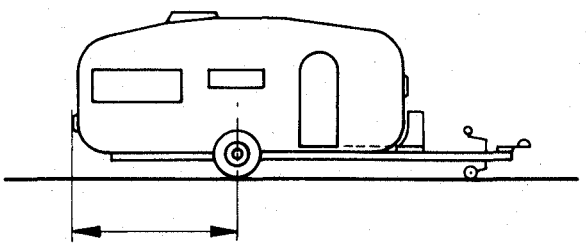
5.2 Masses relative to the combination of motor vehicle and caravan

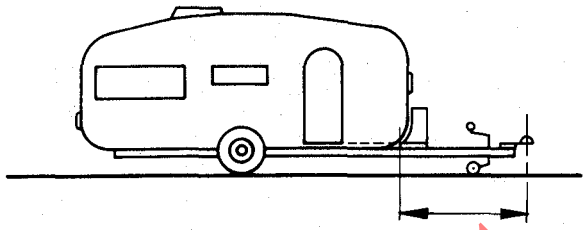
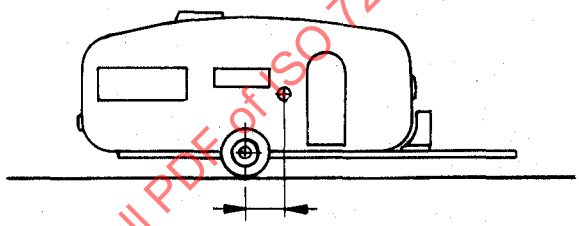
No.	Term	Definition
5.2.1	**actual combined mass**	The sum of the actual mass of the caravan (5.1.3) and its towing motor vehicle.
5.2.2	**maximum authorized actual combined mass, for a motor vehicle**	The sum of the maximum authorized mass of the motor vehicle (see ISO 1176) and the mass obtained by dividing the maximum authorized load on the axle (5.1.7) by g^* unless the administrative authority fixes a lower limit.
5.2.3	**towed mass (by a motor vehicle)**	See ISO 1176.
5.2.3.1	**manufacturer's towed mass**	See ISO 1176.
5.2.3.2	**authorized towed mass**	See ISO 1176.
5.2.4	**maximum permissible static load on the coupling ball, for the towing motor vehicle**	The maximum static load (5.1.8), on the coupling ball of the motor vehicle, declared by the manufacturer of that vehicle, and which the motor vehicle is designed to support.

* g is the standard acceleration due to gravity.

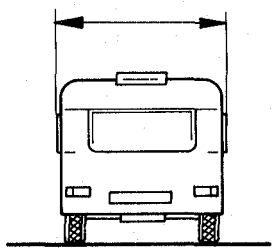
6 Dimensions

6.1 Longitudinal dimensions

No.	Term	Definition	Drawing
6.1.1	**overall length**	The distance between the two vertical planes perpendicular to the longitudinal median plane of the caravan and touching the front and rear of the caravan respectively. NOTE — All parts of the caravan, including any parts projecting from the rear, are contained within these two planes.	
6.1.2	**body length**	The distance between two vertical planes, perpendicular to the longitudinal median plane of the caravan, and touching the front and rear parts of the body. NOTE — All accessories fixed on the body (for example signalling lights, handles) are contained within these two planes.	
6.1.3	**wheel space**	In the case of close coupled axles, or tandem axle, the distance between the two vertical planes passing through the centre lines of the wheels.	
6.1.4	**rear overhang**	The distance between the vertical plane passing through the axis of the wheels and the rearmost point of any parts rigidly attached to the caravan. NOTE — In the case of caravans having twin axles, the axis of the rear wheels shall be taken for this purpose.	

No.	Term	Definition	Drawing
6.1.5	**drawbar length**	The distance between two vertical planes, perpendicular to the longitudinal median plane of the caravan, one passing through the centre of the coupling ball and the other passing through the front edge of the body bearer situated on the chassis frame.	
6.1.6	**forward displacement of the centre of gravity**	The distance between the vertical plane passing through the axis of the wheels and the centre of gravity of the caravan. NOTE — In the case of twin axles, the vertical plane equidistant from the two axles shall be taken for this purpose.	

6.2 Transverse dimensions

No.	Term	Definition	Drawing
6.2.1	**overall width**	The distance between the two vertical planes parallel to the longitudinal median plane of the caravan and touching the caravan on both sides of this plane.	
6.2.2	**track**	The distance between : a) in the case of two single wheels corresponding to the same real or imaginary axle, the two straight lines formed by the axes of the traces left by the wheels on the supporting surface; b) in the case of twin wheels, the straight lines, on each side of the caravan, equidistant from the outer edge of the trace of the inner wheel and from the inner edge of the trace of the outer wheel.