International Standard 6725

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Road vehicles — Dimensions of two-wheeled mopeds and motorcycles — Terms and definitions

Véhicules routiers — Dimensions des cyclomoteurs et des motocycles à deux roues — 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 6725 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in June 1979.

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

Austria	Italy	South Africa, Rep. of
Belgium	Japan	Spain
Brazil	Korea, Dem. P. Rep. of	Switzerland
Chile	Korea, Rep. of	United Kingdom
Czechoslovakia	Libyan Arab Jamahiriya	USA
France	Netherlands	USSR
Germany, F.R.	Poland	
India	Romania	

No member body expressed disapproval of the document.

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Contents

Road vehicles — Dimensions of two-wheeled mopeds and motorcycles — Terms and definitions

1 Scope

This International Standard defines terms relating to the dimensions of two-wheeled mopeds and motorcycles.

It does not deal with methods of measurement, nor with the units used in reporting the results, nor with the accuracy required or with the order of magnitude of the dimensions defined.

2 Field of application

The provisions of this International Standard apply to mopeds and motorcycles as defined in ISO 3833, with the exception of three-wheeled vehicles.

This International Standard does not cover road vehicles which are controlled by a pedestrian or which are used for the carriage of goods to the exclusion of persons.

3 References

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

ISO 6726, *Road vehicles — Two-wheeled mopeds and motorcycles — Weights — Vocabulary.*

4 Reference planes and general considerations

The planes of reference constitute a three-dimensional orthogonal system X, Y, Z (see figures 1 and 2), where

Z designates the horizontal plane;

Y designates the vertical plane;

X designates the plane perpendicular to Y and Z.

Unless otherwise stated with regard to one or more of the items mentioned below, it should be understood that

a) the supporting surface of the vehicle is horizontal (Z), that lengths and widths are measured in the horizontal plane, and that heights are measured in the vertical plane;

b) the total weight of the vehicle is the vehicle kerb weight (see ISO 6726), the load being distributed according to the manufacturer's instructions;

c) the tyres are inflated to the pressure corresponding to the manufacturer's maximum total weight (see ISO 6726);

d) the vehicle is stationary and vertical; its wheels are in the position corresponding to movement in a straight line;

e) the vehicle is new from the factory and normally equipped;

f) both wheels of the vehicle are resting on the supporting surface;

g) the expression "mid-plane of the wheel" designates the plane equidistant from the inner edges of the rim;

h) the expression "centre of the wheel" designates the point of intersection of the mid-plane of the wheel and the axis of rotation of the wheel.

5 Longitudinal median plane (plane Y)

The vertical plane, Y, corresponds to the mid-plane of the rear wheel of the vehicle (see figures 1 and 2).

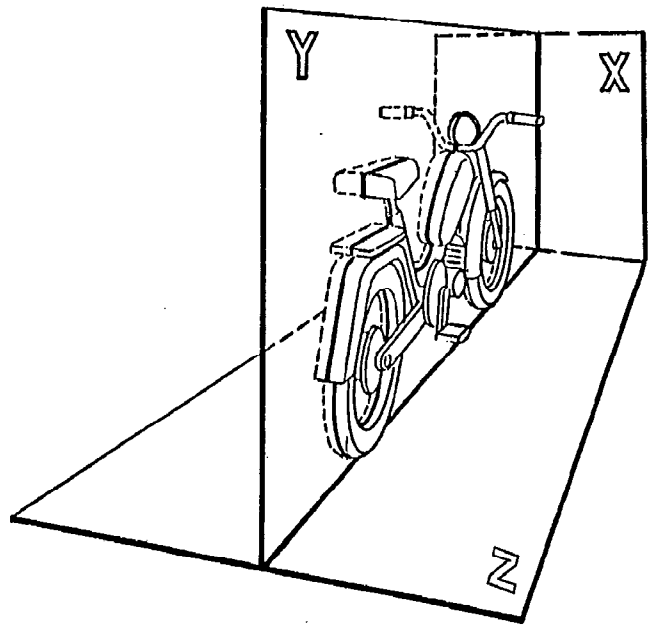


Figure 1 — Illustration of a moped in the three dimensional system X, Y, Z

NOTE — This illustration shows the particular example where the mid-plane of the rear wheel corresponds with the plane Y.

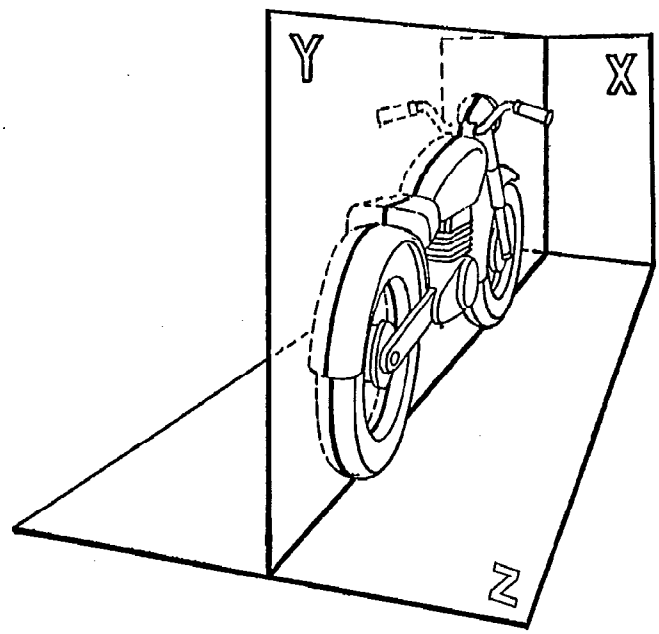
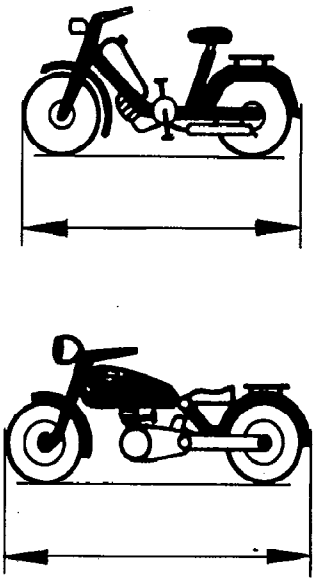
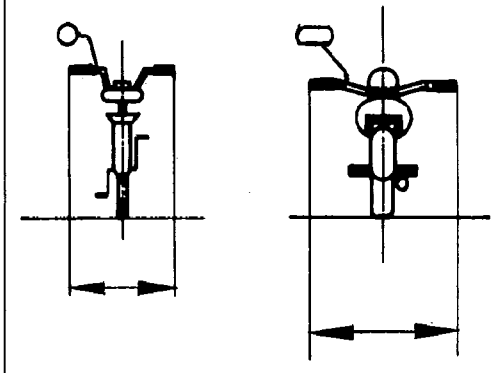
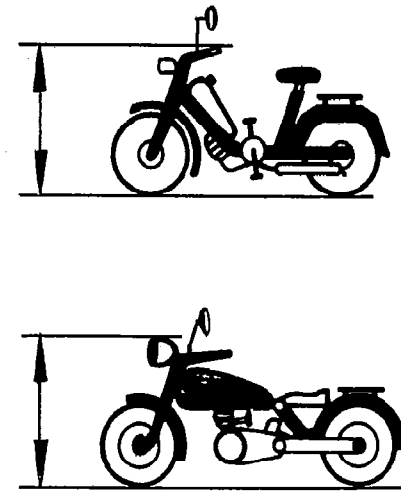
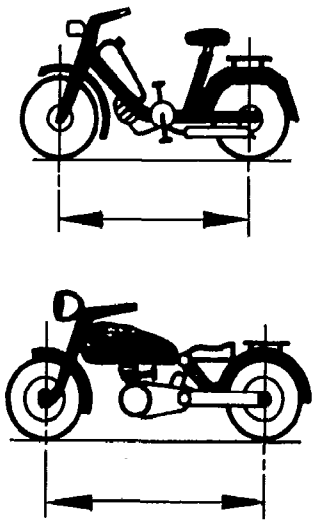
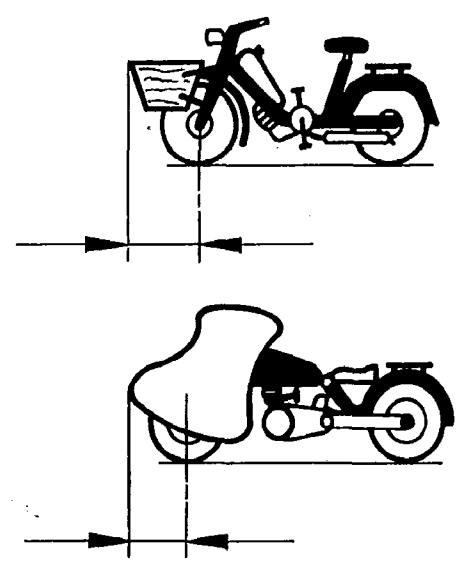
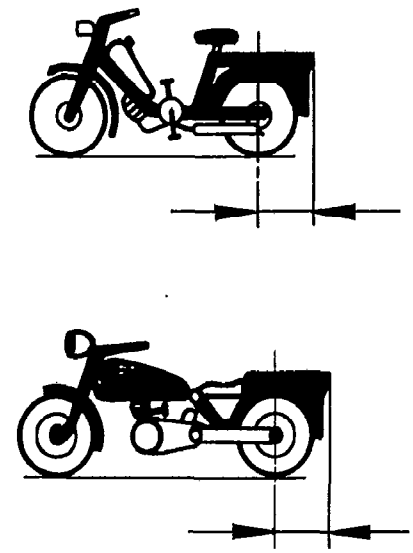


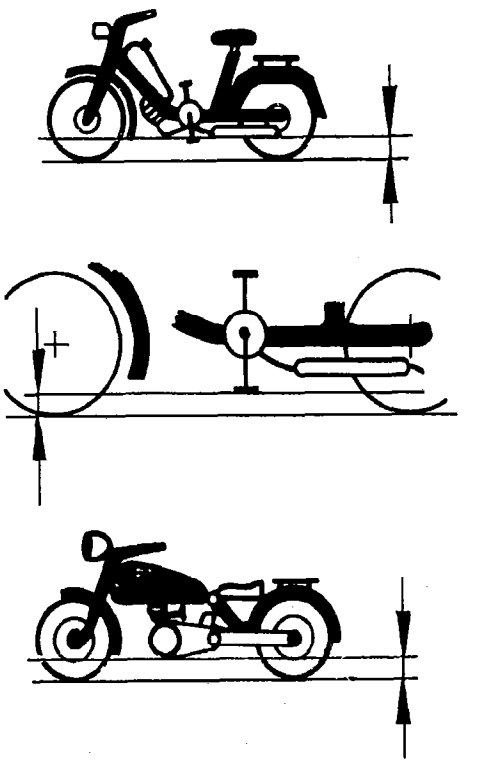
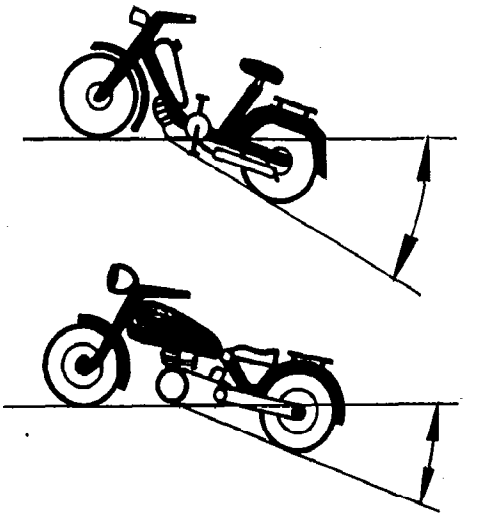
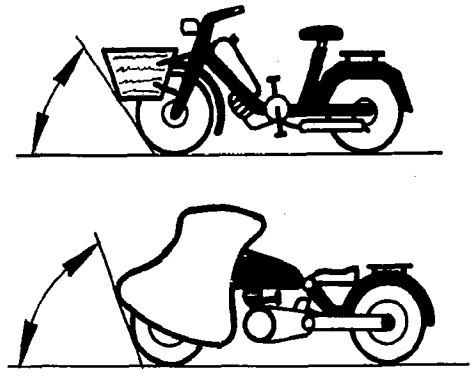
Figure 2 — Illustration of a motorcycle in the three dimensional system X, Y, Z

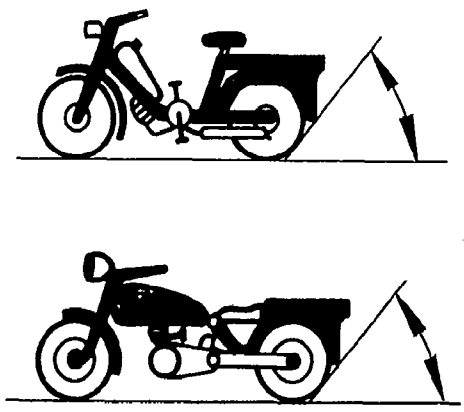
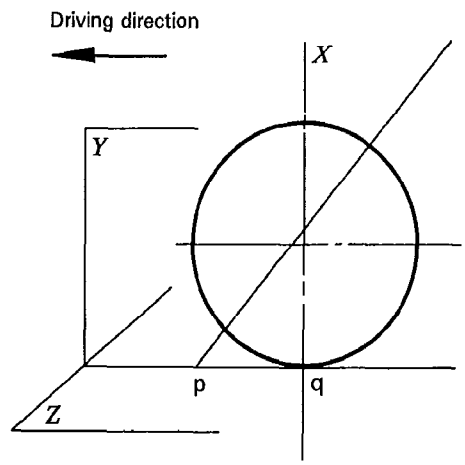
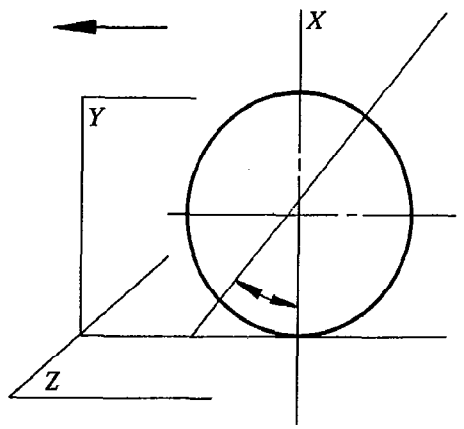
NOTE — This illustration shows the particular example where the mid-plane of the rear wheel corresponds with the plane Y.

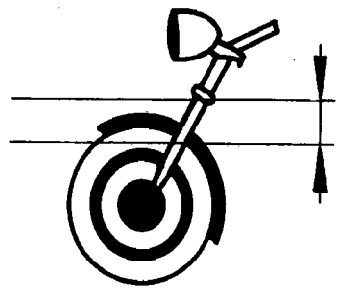
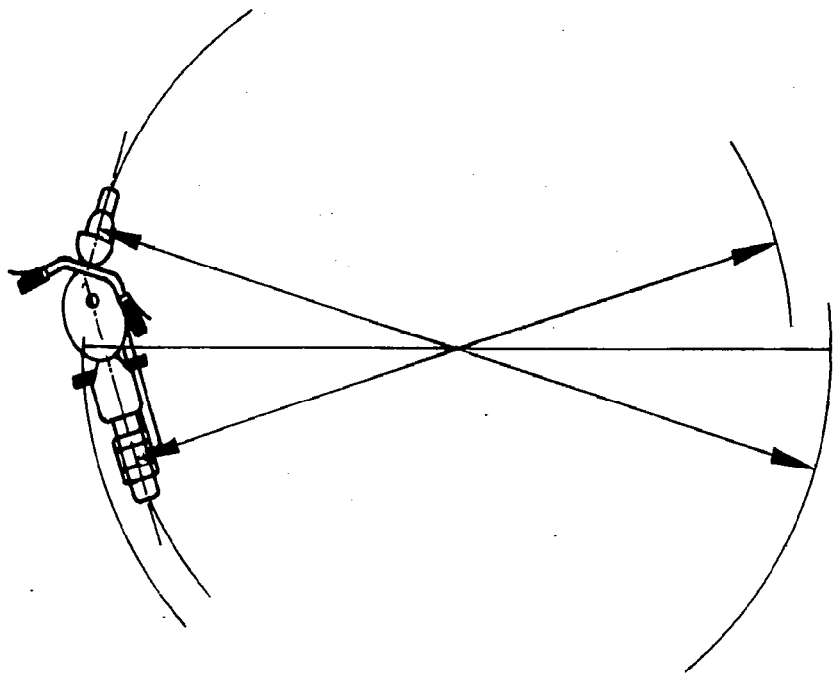
6 Terms and definitions

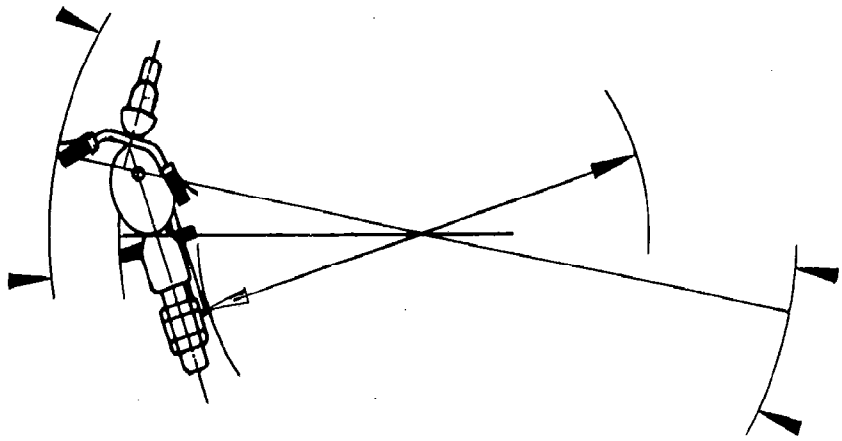
No.	Term	Definition	Illustration
6.1	Length	The distance between two vertical planes perpendicular to the longitudinal median plane and touching respectively the front and rear of the vehicle. NOTE — All parts of the vehicle and, in particular, any parts projecting to front or rear (mudguards, etc.), are contained between these two planes.	
6.2	Width	The distance between two planes parallel to the longitudinal median plane and touching the vehicle on either side of this plane. NOTE — All parts of the vehicle and, in particular, any lateral projections of fixed parts, are contained between these two planes with the exception of the driving mirror.	
6.3	Height	The distance between the supporting surface and a horizontal plane touching the topmost part of the vehicle. NOTE — All fixed parts of the vehicle are contained between these two planes, with the exception of the driving mirror.	

No.	Term	Definition	Illustration
6.4	**Wheel base**	The distance between the perpendicular planes projected through the centres of the wheels onto the supporting surface.	
6.5	**Front overhang**	The distance between the transverse vertical plane *X* passing through the centre of the front wheel and the foremost point of the vehicle, taking into consideration any parts rigidly attached to the vehicle.	
6.6	**Rear overhang**	The distance between the transverse vertical plane *X* passing through the centre of the rear wheel and the rearmost point of the vehicle taking into consideration the registration number plate or its mounting and any parts rigidly attached to the vehicle.	

No.	Term	Definition	Illustration
6.7	**Ground clearance**	The distance between the supporting surface and the lowest point of the vehicle lying within the wheel space, except for the front and rear wheels. In the case of a moped equipped with pedals, the measurement can also be made with the pedal in its lowest position when in use. In this case, the ground clearance is the distance between the lowest surface of the pedal and the supporting surface (see middle illustration). NOTE — The lowest part of the mudguards are not considered in measuring ground clearance.	
6.8	**Ramp angle**	The minimum acute angle measured between two planes perpendicular to the longitudinal median plane, tangential, respectively, to the tyres of the front and rear wheels, and intersecting at a line touching the lower part of the vehicle, outside these wheels. This angle defines the largest ramp over which the vehicle can move, without taking into consideration the position of the pedals in the case of a moped equipped with pedals.	
6.9	**Approach angle**	The greatest angle between the supporting surface and the plane tangential to the radius of the front tyre and perpendicular to the longitudinal median plane, so that no part of, nor any part rigidly attached to, the vehicle lies below this plane.	

No.	Term	Definition	Illustration
6.10	**Departure angle**	The greatest angle between the supporting surface and the plane tangential to the radius of the rear tyre and perpendicular to the longitudinal median plane, so that no part of, nor any part rigidly attached to, the vehicle lies below this plane.	
6.11	**Castor**	The distance between the points p and q defined by the intersection of the supporting surface Z by the plane, perpendicular to plane Y, containing the axis of the fork pivot, and plane X, passing through the centre of the wheel. It is positive when p is ahead of q in the driving direction. NOTE – Negative castor is also defined as "trail" in English.	
6.12	**Castor angle**	The projection onto the plane Y of the acute angle formed by the vertical and the axis of the fork pivot.	

No.	Term	Definition	Illustration
6.13	**Residual vertical wheel clearance**	The vertical displacement of a wheel, in relation to the suspended part of the vehicle from the position corresponding to the manufacturer's maximum payload (see ISO 6726) to the position in which any additional vertical travel is impossible.	
6.14	**Turning circle diameter**	The diameter of the circle circumscribing the extension on the supporting surface of the mid-plane of the steered wheel [the vehicle being upright and vertical, and the steered wheel being turned on full lock to, respectively, the left and right for the two turning circles (see note 2)]. NOTES 1 The smaller diameter of the circle circumscribing the extension on the supporting surface of the mid-plane of the non-steered wheel is also of practical interest. 2 Each vehicle has left-hand and right-hand turning circles.	

No.	Term	Definition	Illustration
6.15	**Turning clearance circle diameters**	The diameters measured with the vehicle upright and vertical, the steered wheel being turned on full lock defined as follows : a) diameter of the largest circle beyond which are located the projections onto the supporting surface of all parts of the vehicle; b) diameter of the smallest circle within which are located the projections onto the supporting surface of all parts of the vehicle. NOTE — Each vehicle has left-hand and right-hand turning clearance circles.	
6.16	**Banking angle**	The maximum angle between the supporting surface and the planes tangential to the sidewalls of the front and rear wheel tyres. If these angles are not the same, then the smaller measurement of the two is taken. In the case where any part of the vehicle intrudes into the angle thus defined, without taking into consideration the position of the pedals of a moped equipped with pedals, the angle between the supporting surface and the line projecting from the apex of the angle defined above, and tangential to the outer surface of the intruding part, is taken. NOTE — Each vehicle has a left-hand and a right-hand banking angle.