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# INTERNATIONAL STANDARD



# 4130

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Road vehicles — Three-dimensional reference system and fiducial marks — Definitions

*Véhicules routiers — Système de référence tridimensionnel et points repères — Définitions*

**iTeh STANDARD PREVIEW**

First edition — 1978-08-15

**(standards.iteh.ai)**

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UDC 629.11.071.1 : 514

Ref. No. ISO 4130-1978 (E)

**Descriptors** : road vehicles, reference planes, definitions.

## 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 4130 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in July 1977.

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

[ISO 4130:1978](#)

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No member body expressed disapproval of the document.

# Road vehicles – Three-dimensional reference system and fiducial marks – Definitions

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard defines a three-dimensional reference system and fiducial marks which are used to define dimensional data relating to road vehicles defined in ISO 3833, excepting motorcycles and mopeds.

## 2 REFERENCES

- ISO 612, *Road vehicles – Dimensions of motor vehicles and towed vehicles – Terms and definitions.*  
 ISO 3833, *Road vehicles – Types – Terms and definitions.*

## 3 DEFINITIONS

No.	Term	Definition	Symbol
3.1	<b>Three-dimensional reference system</b>	Three orthogonal planes established by the vehicle manufacturer in the initial design stage (see figure).	X, Y, Z
3.1.1	<b>Zero Y plane</b>	The longitudinal median plane (of the vehicle), as defined in ISO 612.	Y
3.1.2	<b>Zero X plane</b>	A plane, conventionally vertical, normal to the zero Y plane (3.1.1).	X
3.1.3	<b>Zero Z plane</b>	A plane, conventionally horizontal, normal to the zero X and Y planes (3.1.2 and 3.1.1).	Z
		NOTES 1 With the exception of dimensions related to the supporting surface (ground), each point on the vehicle is defined in the three-dimensional reference system by its three coordinates : X, Y and Z. 2 Distances forward of the zero X plane (3.1.2), to the left of the zero Y plane (3.1.1), and below the zero Z plane (3.1.3) are regarded as negative dimensions. 3 The planes defined in 3.1.2 and 3.1.3 may be located outside the vehicle profile.	
3.2	<b>Fiducial marks</b>	Three or more physical points (holes, surfaces, marks or indentations), on the vehicle body, as defined by the manufacturer.	
		NOTE – These points are dimensioned in relation to the three-dimensional reference system (3.1). They are also used to define the position of the vehicle relative to the supporting surface (ground) in various loading conditions.	

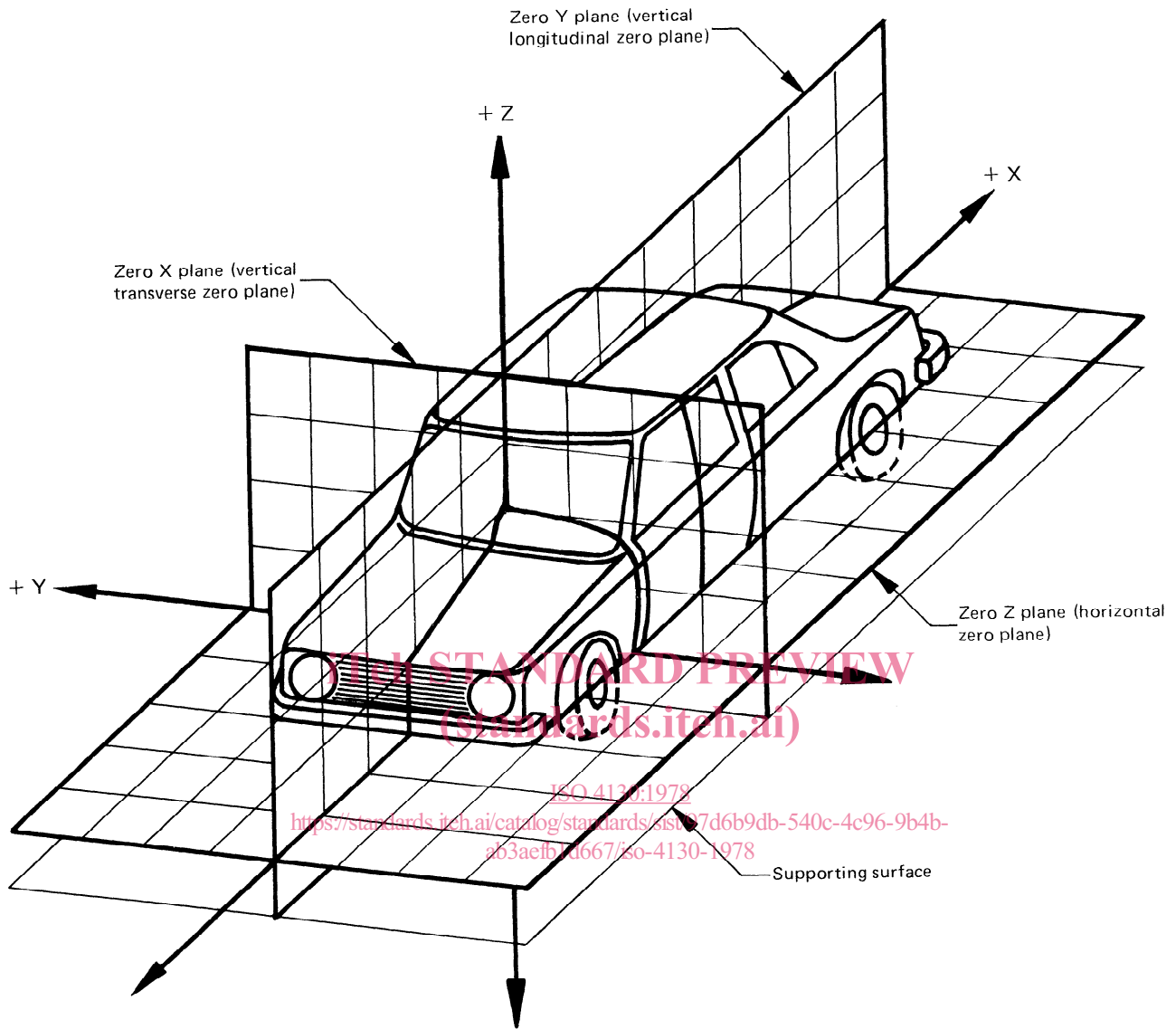


FIGURE – Three-dimensional reference system