



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Automatic instruments for weighing road vehicles in motion -
Part 1: General technical specification**

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1 Scope

This Part of GB/T 21296 specifies the terms and definitions, classification and naming, measurement requirements, general technical requirements, production and installation requirements, general requirements for installation conditions and maintenance, WIM system functions and data requirements, test methods, inspection rules, as well as the requirements for marking, packaging, transportation and storage of automatic instruments for weighing road vehicles in motion (hereinafter referred to as: WIM weighing instruments).

This Part applies to the legally relevant applications and general applications of WIM weighing instruments.

This Part applies to WIM weighing instruments or systems that are installed in the controlled weighing area and adopt the principle of gravity to obtain the axle load (which can be directly measured, or obtained by accumulating the separately measured wheel loads), axle-group load and curb weight of road vehicles, regardless of the specific product structure and technical implementation mode. WIM weighing instruments without the controlled weighing area may take this Part as a reference.

This Part does not apply to weighing instruments or measuring systems, in which, there is no relative movement of the load receptor or measuring device and the vehicle in the horizontal driving direction during measurement, such as: static wheel load gauge and load measuring device embedded in vehicle components, etc.

This Part does not apply to weighing instruments or measuring systems that cannot

guarantee that all tyres of the test vehicle and the upper surface of the load receptor are approximately on the same plane during measurement (for example, products and systems that simply place the load receptor on the road surface).

This Part does not apply to weighing instruments that merely measure the wheel load on one side, and then, obtain the axle load, axle-group load and curb weight by multiplying.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 191 Packaging - Pictorial Marking for Handling of Goods

GB/T 2423.3 Environmental Testing - Part 2: Testing Method - Test Cab: Damp Heat, Steady State

GB/T 13384 General Specifications for Packing of Mechanical and Electrical Product

GB/T 14250 Terminology of Weighing Instruments

GB/T 17626.2 Electromagnetic Compatibility - Testing and Measurement Techniques
-Electrostatic Discharge Immunity Test

GB/T 17626.3 Electromagnetic Compatibility - Testing and Measurement Techniques
-Radiated, Radio-frequency, Electromagnetic Field Immunity Test

GB/T 17626.4 Electromagnetic Compatibility - Testing and Measurement Techniques
-Electrical Fast Transient / Burst Immunity Test

GB/T 17626.5 Electromagnetic Compatibility - Testing and Measurement Techniques -
Surge Immunity Test

GB/T 17626.6 Electromagnetic Compatibility - Testing and Measurement Techniques
-Immunity to Conducted Disturbances, Induced by Radio-frequency Fields

GB/T 17626.11 Electromagnetic Compatibility - Testing and Measurement Techniques
-Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests

GB/T 26389 Method of Classified Type of Weighing Instrument Products

ISO 7637-2 Road Vehicles - Electrical Disturbances from Conduction and Coupling - Part 2:
Electrical Transient Conduction along Supply Lines Only

ISO 7637-3 Road Vehicles - Electrical Disturbances from Conduction and Coupling - Part 3:
Electrical Transient Transmission by Capacitive and Inductive Coupling via Lines other than