

Translated English of Chinese Standard: GB/T43407.1-2023

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 43.080.20

CCS T 42

GB/T 43407.1-2023

**Road Vehicles - Ergonomic Requirements for the Driver's
Compartment in Low-floor Line-service Buses - Part 1:
General Description and Basic Requirements**

道路车辆 低地板专线行驶客车驾驶区人体工程学要求 第1部分:

总体描述和基本要求

(ISO 16121-1:2012, Road Vehicles - Ergonomic Requirements for the Driver's
Workplace in Line-service Buses - Part 1: General Description, Basic Requirements,
MOD)

Issued on: November 27, 2023

Implemented on: March 1, 2024

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of China.

Table of Contents

| | |
|---|----|
| Foreword..... | 3 |
| Introduction..... | 6 |
| 1 Scope..... | 7 |
| 2 Normative References..... | 7 |
| 3 Terms and Definitions..... | 7 |
| 4 Basic Requirements | 8 |
| 4.1 Dimensional Requirements..... | 8 |
| 4.2 General Requirements for Driver’s Compartment..... | 11 |
| 4.3 Driver’s Seat | 14 |
| 4.4 Pedals..... | 17 |
| 4.5 Steering Wheel..... | 19 |
| Appendix A (informative) Comparison of Structural No. between this Document and ISO 16121-1:2012..... | 22 |
| Bibliography | 24 |

Road Vehicles - Ergonomic Requirements for the Driver's Compartment in Low-floor Line-service Buses - Part 1: General Description and Basic Requirements

1 Scope

This document specifies the basic requirements for ergonomics and comfort in the driver's compartment of low-floor line-service buses.

This document is applicable to the design of the driver's compartment of Category-M₃ low-floor line-service buses with a width greater than 2.30 m.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. 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 13053 Bus Inner Dimensions

GB 13094 The Safety Requirements for Bus Construction

GB/T 43407.3-2023 Road Vehicles - Ergonomic Requirements for the Driver's Compartment in Low-floor Line-service Buses - Part 3: Information Devices and Controls (ISO 16121-3:2011, MOD)

ISO 2575 Road Vehicles - Symbols for Controls, Indicators and Tell-tales

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 line-service buses

Passenger cars that travel on fixed routes and have fixed stops.

3.2 low-floor

For line-service buses, each passenger door step is a first-level step, and the floor of the central passage area in the compartment (for double-decker buses, the lower compartment) from the front passenger door to the center line of the rear axle (or beyond the center line) is a single

step-free area.

[source: GB 19260-2016, 3.1, modified]

3.3 required values

Ergonomic design values applicable to the driver's compartment.

3.4 recommended values

Values complying with optimal ergonomic conditions of the driver's compartment.

3.5 accelerator heel point; AHP

After the two-dimensional human body design prototype is positioned in accordance with the hinged accelerator pedal and H-point in the free state, the contact point of the heel with the floor surface (considering the collapse of the carpet) or other heel supports.

NOTE: it is also known as heel point.

[source: GB/T 13053-2008, 3.4.19, modified]

3.6 zero-X-plane

The transverse plane perpendicular to the longitudinal center plane of the bus and passing through the accelerator heel point (AHP).

3.7 zero-Y-plane

The center plane of the driver (in the driving state) parallel to the longitudinal center plane of the buses.

3.8 zero-Z-plane

The horizontal plane passing through the accelerator heel point (AHP).

4 Basic Requirements

4.1 Dimensional Requirements

4.1.1 Reference coordinates

4.1.1.1 The reference coordinate system consists of mutually perpendicular zero-X-plane, zero-Y-plane and zero-Z-plane (see Figure 1). All dimensions in the driver's compartment are all based on the driver's position as the reference coordinate system.

800 mm.

4.2.2 Access to driver's compartment

4.2.2.1 The driver's compartment should be arranged on a platform with a height of (300 ± 50) mm from the floor and which can be reached by one step. If the platform height is greater than 350 mm, then, corresponding steps shall be provided. The maximum height of each step shall be less than or equal to 250 mm, and the minimum height shall be greater than or equal to 125 mm.

4.2.2.2 The net width of the protective door opening shall be greater than or equal to 450 mm.

4.2.2.3 The requirements for the passage area of the driver's compartment shall comply with the stipulations of GB 13094.

4.2.3 Stowage space

4.2.3.1 Stowage space for the driver's belongings shall be provided in the driver's compartment. The stowage space shall ensure that the driver can easily access the items. The stowage space shall have anti-slip function or a device to restrain the items placed there.

4.2.3.2 Clothes hooks or hangers can be installed in the driver's compartment. Clothes hung on the clothes hooks shall not interfere with the driver's operation and shall not obstruct the driver's sight.

4.2.3.3 There should be a lockable storage compartment in the driver's compartment for the storage of valuables.

4.2.4 Protective plate of driver's compartment

A protective plate shall be installed behind the driver's seat.

4.3 Driver's Seat

4.3.1 Positioning, seat dimensions and adjustment range

The center line of the driver's seat shall be aligned with the center line of the steering wheel, allowing a maximum offset of 25 mm.

The seat point-H shall coincide with the seat point-H reference position (see Figure 4). The seat dimensions and adjustment range shall satisfy the requirements of Table 1 (see Figure 5).

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----