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

GB/T 31150-2025

Replacing GB/T 31150-2014

**Automotive parts logistics - Size series and technical
requirements for plastic returnable containers**

汽车零部件物流 塑料周转箱尺寸系列及技术要求

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 31150-2014 "Dimensions and Technical Requirements of Plastic

Turnover Boxes for Automotive Parts Logistics" and is consistent with GB/T 31150-2014, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- The definition of "plastic turnover box" has been changed (see 3.1, 2014 version 3.1), and "stackable box", "foldable box", and "plastic turnover box" have been removed. Terms and definitions for "side of the box", "end of the plastic turnover box", and "external dimensions of the plastic turnover box" (see section 3.2 of the 2014 edition). 3.3, 3.4, 3.5, 3.6);
- A new category for plastic turnover boxes has been added (see Chapter 4);
- The term "stackable container" has been changed to "non-foldable container" (see Table 1, 2014 version). The nesting dimensions of non-foldable containers have also been changed. The required folded height of collapsible boxes is specified (see Table 1, 2014 edition). The section on applicable pallets has been removed (see 2014 edition). (Table 1)
- Added a non-foldable case with external dimensions of 300mm x 200mm and a height of 120mm, and external dimensions of 400mm x Heights of 300mm, 120mm, 175mm, and 230mm; external dimensions of 600mm x 400mm, height of 120mm, 175mm, 230mm, 340mm (see Table 1);
- Added a foldable case with external dimensions of 300mm x 200mm and a height of 148mm, and external dimensions of 400mm x The height is 300mm, with variations of 148mm, 175mm, 230mm, and 280mm, and the external dimensions are 600mm x 400mm, 148mm, 175mm, 230mm, 280mm, 340mm (see Table 1);
- The dimensions and tolerances for non-foldable cases with a height of 144mm, and for foldable cases with heights of 165mm, 242mm, and 320mm have been removed. The dimensions, and the dimensions and tolerances of the series of turnover boxes applicable to pallets of 1100mm x 1100mm (see the 2014 edition). Table 1);
- Tolerances for major external dimensions have been increased (see Table 2);
- Added features to the plastic turnover boxes, including their material, appearance, anti-slip performance, empty box pressure performance, drop resistance, and folding ability. Requirements, other details, etc. (see 6.1, 6.2, 6.4, 6.5.1, 6.6, 6.7, 6.8);
- The requirements for impact resistance, bottom load-bearing capacity, and applicable temperature have been removed (see sections 5.3, 5.4, and 5.5 of the 2014 edition);
- The position of the label holder and the requirements for the handle have been changed (see 6.8.1.1, 6.8.2, and

1 Scope

GB/T 31150-2025 is the Chinese national standard covering the returnable plastic bin that carries parts between supplier and assembly line - the size series that has to nest and stack on a standard pallet without wasted space, the load and stacking strength, and the durability through hundreds of round trips. Issued on 31 October 2025, it has been in force since 31 October 2025, replacing GB/T 31150-2014.

This document provides a classification of plastic turnover boxes used in the logistics of automotive parts, and specifies the dimensions, technical requirements, and markings for these boxes. The corresponding experimental methods are described. This document applies to the design and production of plastic turnover boxes for automotive parts logistics.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 4857.4-2008 Packaging - Basic Tests for Transport Packaging - Part

4.Compression and Stacking Resistance Tests Using a Compression Testing Machine Code test method

GB/T 18354 Logistics Terminology

GB/T 31838.3 Dielectric and resistive properties of solid insulating materials - Part

3.Resistive properties (DC method) - Surface resistivity and surface resistance surface resistivity

GB/T 39907-2021 Size Series and Technical Requirements for Fruit and Vegetable Turnover Boxes

GB/T 40006.1-2021 Plastics - Recycled Plastics - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 18354 and the following terms and definitions apply to this document.

3.1 Containers made of reusable plastic used for storing items.

3.2 Nesting height The depth to which the upper layer of plastic turnover boxes is embedded into the lower layer when stacking plastic turnover boxes.

3.3 folded height The maximum height of the foldable case when folded.

4. Classification Based on their structure, plastic turnover boxes can be divided into two categories. non-foldable boxes and foldable boxes.

Note. The classification of plastic turnover boxes according to their structure is shown in Figure A.1 of Appendix A.

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