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NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

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**GB/T 23420-2009** / ISO 6968:1994

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**Aircraft – Wide body aircraft lower deck container /  
pallet loader – Functional requirements**

宽体飞机下舱集装箱/集装箱装载机功能要求

(ISO 6968:1994, IDT)

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## Foreword

This Standard equivalently adopts ISO 6968:1994 “Aircraft - Wide body aircraft lower deck container / pallet loader - Functional requirements” (English Edition).

This Standard equivalently translates ISO 6968:1994.

For ease of use, this Standard has made the following editorial changes:

- a) Changed “this International Standard” as “this Standard”;
- b) Use the decimal point “.” to replace the comma “,” that is used as decimal point;
- c) Deleted the Foreword of International Standard.

This Standard was proposed by Civil Aviation Administration of China.

This Standard shall be under the jurisdiction of Aviation Safety Technical Center of Civil Aviation Administration of China.

Drafting organization of this Standard: Airport Department of China Civil Aviation Administration.

Main drafter of this Standard: Gao Tian.

For further information, see IATA Specification AHM 931, "Functional specification for lower deck container pallet loader".

## 2 Normative references

The articles contained in the following documents have become this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

ISO 4116:1986, Air cargo equipment – Ground equipment requirements for compatibility with aircraft unit load devices

## 3 Structure and overall dimensions

**3.1** On an adequate chassis, the loader shall provide two platforms:

- a) a front platform which is positioned at the applicable aircraft door and which remains at this position during the loading/unloading operation;
- b) a main platform for up and down movement between 483 mm (19 in) and 3450 mm (136 in).

**3.2** The overall height of the entire unit shall not exceed 3 600 mm (142 in) when being driven. The height of the front platform (top of rollers) shall not exceed 1 880 mm (74 in) in the fully down position.

**3.3** The overall dimensions of the unit shall be kept to a minimum.

**3.4** The loader shall support at their maximum gross weight:

- a) two half-size containers on the main platform and simultaneously one half size container on the front platform;
- b) one pallet on the main platform, and simultaneously one half-size container on the front platform.

**3.5** The unit shall have adequate clearance underneath from any portion of the equipment to the ground when negotiating two ramps that intersect at 5°.

**3.6** The loader shall not interfere with the positioning of the aircraft tractor below the fuselage of the aircraft.

with and without the engine running.

**5.3** Both the front and main platform elevating mechanisms shall incorporate safety features to prevent sudden collapse in the event of system failure.

**5.4** Load movement in and out of the aircraft shall be carried out by one person (operator). The unit shall be capable of being positioned and operated by one person. The operator shall be able to open the aircraft door from the front platform.

**5.5** The time taken for the main platform to reach maximum height from the lowered position and vice versa, i.e. one complete cycle, shall be less than 35 s.

**5.6** The front platform shall be accessible from the ground at all times.

**5.7** It shall not be possible to alter the height of either platform when containers/pallets are bridging the platforms.

## **6 Mobility and stability**

**6.1** The unit shall be capable of being driven at speeds up to 16 km/h (10 mph) for at least 3 km (2 miles). The unit does not require the capability of being driven when loaded.

**6.2** Power steering shall be provided.

**6.3** The unloaded unit shall be capable of starting from rest up a 3° incline under its own power.

**6.4** The unit shall be capable of turning with a swept radius of less than 12.2 m (40 ft).

**6.5** For the final safe positioning at the aircraft door a slow positive non-jerking speed is required.

**6.6** Power-operated stabilizers shall be installed in order to provide for the stability required for loading/unloading operations and to unload the wheel axles. In case of power failure, manual retraction of the stabilizers shall be possible.

**6.7** The unit in the raised position with stabilizers extended shall be safe in wind velocities up to 130 km/h (80 mph). In the lowered position, the loader shall remain stable in wind velocities up to 190 km/h (120 mph).

**6.8** It shall not be possible:

- a) to activate the transfer system and to raise the main platform from the full down position if the stabilizers are not extended;
- b) to drive the loader when the stabilizers are extended;

c) for stabilizers to collapse in the case of system failure.

## 7 Controls

**7.1** All controls necessary to move and position the loader shall be located in the driver position.

**7.2** An electrical control panel shall be provided to allow control of both platforms and complete loading/ unloading processes from the front platform. This should be located so that it can be used simultaneously with the in-aircraft control systems.

**7.3** Ample lighting is required for night operations and to illuminate the platforms and close surroundings.

**7.4** Normal system warning and indicator lights shall be provided.

\_\_\_\_\_ **END** \_\_\_\_\_