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International Standard 4116

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

Air cargo equipment — Ground equipment requirements for compatibility with aircraft unit load devices

Équipement pour le fret aérien — Caractéristiques de l'équipement au sol en vue d'assurer sa compatibilité avec les unités de charge d'aéronefs

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Descriptors : cargo transportation, aircraft, unit loads, handling equipment, conveyors

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4116 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

This second edition cancels and replaces the first edition (ISO 4116-1980), of which it constitutes a minor revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Air cargo equipment — Ground equipment requirements for compatibility with aircraft unit load devices

0 Introduction

The term "device" used in this International Standard is intended to mean "aircraft unit load device".

It is intended that this International Standard should apply to equipment manufactured or installed after publication of this International Standard.

1 Scope and field of application

This International Standard specifies requirements for those portions of the aircraft unit load device ground and terminal handling equipment that will have a direct bearing on the life of the device for the purpose of preventing undue wear on the device. (Experience has shown that inadequate design and maintenance of ground equipment increase the cost of unit load devices.)

This International Standard covers requirements for conveyor systems, guides, stops and restraint hardware that are used on trucks, transporters, dollies, storage provisions, pallet build-up hoists, or other device-handling equipment, and it should be noted that

- a) these requirements reflect current criteria applied to known successfully operated hardware. Any design deviations shall be required to demonstrate equivalency to the criteria specified in this International Standard;

- b) these devices usually form an integral part of the aircraft and, as such, are subject to the requirements of regulatory agencies, to ensure structural integrity.

The devices (aircraft unit load devices) to which this International Standard is applicable can be containers, galley modules and pallets for aircraft galley and cargo systems. Size, shape and load capacities of devices are not included in this International Standard.¹⁾

2 Equipment requirements

NOTE — The metric units given in this International Standard are exact converted equivalents except in the cases where equivalent manufacturing standards are established in metric units for the relevant component.

2.1 Conveyor systems for transport of devices

2.1.1 Uni-directional conveyor system (rollers)

Characteristic	Requirement
a) Roller diameter	50 mm (2 in) min.
b) Roller length	100 mm (4 in) min. effective bearing length

The cumulative length of any number of rollers on a common axis shall support at least 50 % of the corresponding device dimension. A staggered pattern of rollers shall provide equivalent support.

1) Specification details for these features can be obtained from other International Standards or from International Air Transport Association (IATA) specifications, the airline operator and the device manufacturer