INTERNATIONAL STANDARD

ISO 10327

Second edition
2014-05-01

Air cargo — Main deck containers — Design and testing

Fret aérien — Conteneurs de pont principal — Conception et essais

Reference number
ISO 10327:2014(E)

© ISO 2014



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Container sizes and identification **3**
4 Requirements **4**
4.1 General 4
4.2 Airworthiness approval 4
4.3 Materials 4
4.4 Construction 5
4.5 Performance 7
4.6 Design loads 8
4.7 Environment 9
4.8 Hanging loads (optional) 10
5 Testing **11**
5.1 Ultimate load tests 11
5.2 Operational tests 11
6 Markings **17**
6.1 Markings required 17
6.2 Size of markings 17
6.3 Markings location 17
7 Customs/security sealing **17**
8 Manufacturer's instructions **18**
9 Quality control **18**
9.1 Design and production 18
9.2 Operations 19
Bibliography **24**

© ISO 2014 – All rights reserved

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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This second edition cancels and replaces the first edition (ISO 10327:1995), which has been technically revised.

 © ISO 2014 – All rights reserved

Introduction

The basic functions of main deck air cargo containers are

a) the unitization of cargo during ground handling and transportation, and

b) the restraint of their contents against accelerations encountered in flight.

Throughout this International Standard, the minimum essential criteria are identified by use of the key word “shall”. Recommended criteria are identified by use of the key word “should” and, while not mandatory, are considered to be of primary importance in providing safe, economical, and usable air transport containers. Deviation from recommended criteria should only occur after careful consideration and thorough service evaluation have shown alternate methods to provide an equivalent level of safety.

The requirements of this International Standard are expressed in the applicable SI units, with approximate inch-pound units conversion between brackets for convenience in those countries using that system. Where it is deemed necessary to use exact values, the SI unit ones are to be used. Per exception, the exact figures are those in inches for container base overall outside dimensions.

© ISO 2014 – All rights reserved

Air cargo — Main deck containers — Design and testing

1 Scope

1.1 This International Standard covers the minimum design and operational testing requirements for general purpose, base-restrained containers exclusively intended for the main or upper deck cargo compartments of main line civil transport aircraft, capable of being used by either airlines or shippers and requiring an airworthiness authority approval (certification).

NOTE 1 The metric equivalents for dimensions have been rounded up or down to the nearest millimetre, except in critical dimensions. Masses have been rounded up to the nearest kilogram and forces have been rounded up to the nearest 10 N.

NOTE 2 Though nothing technically prevents their being used for baggage, main deck containers are generally used only for carriage of freight.

1.2 This International Standard does not cover the performance requirements and ultimate load testing parameters for airworthiness authorities approval (certification), which are covered in ISO 21100 or, for units approved prior to 2012, ISO 8097:2001. The design and operational testing requirements of this International Standard are additional to the performance and certification testing requirements of these International Standards.

1.3 This International Standard does not cover containers with an overall height of 1 625 mm (64 in) or less, that can be loaded on the lower deck compartments of main line civil transport aircraft, which are specified in ISO 6517, nor air-surface main deck containers, which are specified in ISO 4128 and ISO 8323.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 4128:1985, *Aircraft — Air mode modular containers*

ISO 4171:1993, *Air cargo equipment — Interline pallets*

ISO 6517:1992, *Air cargo equipment — Base-restrained certified containers exclusively for the lower deck of high-capacity aircraft*

ISO 7137:1995, *Aircraft — Environmental conditions and test procedures for airborne equipment*

ISO 7166:1985, *Aircraft — Rail and stud configuration for passenger equipment and cargo restraint*

ISO 8097:2001, *Aircraft — Minimum airworthiness requirements and test conditions for certified air cargo unit load devices*

ISO 8323:1985, *Freight containers — Air/surface (intermodal) general purpose containers — Specification and tests*

ISO/TR 8647:1990, *Environmental degradation of textiles used in air cargo restraint equipment*

© ISO 2014 – All rights reserved