



# **New Zealand Technical Standard Order**

## **NZTSO-C90c**

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**Cargo Pallets, Nets, and  
Containers**

Revision 0

20/12/02

Published by  
Civil Aviation Authority  
PO Box 31 441  
Lower Hutt 6315  
NEW ZEALAND

Approved by  
Manager Aircraft Certification

## 1.0 GENERAL

- 1.1 The Civil Aviation Authority of New Zealand documents specifications through the issue of New Zealand Technical Standard Orders (NZTSO). An NZTSO contains information about the minimum performance standard for equipment that the Authority considers acceptable to comply with an applicable rule. It may also specify acceptable practices and procedures for the production of equipment under an associated NZTSO Authorisation granted in accordance with Civil Aviation Rule (CAR) Part 21, Subpart O.
- 1.2 When new standards, practices or procedures are found to be acceptable this NZTSO may be revised or cancelled. Pursuant to CAR 21.615, any related authorisation may be suspended or revoked if this NZTSO is cancelled or revised to the extent that an existing authorisation is no longer appropriate.
- 1.3 During the development of this NZTSO, consultation with relevant organisations and persons was undertaken. The comments assisted in determining the acceptable and achievable minimum performance standard for this equipment.

## 2.0 PURPOSE

This NZTSO prescribes the Minimum Performance Standards (MPS) for cargo unit load devices. It is intended for NZTSO Authorisation applicants under Rule Part 21, Subpart O planning to manufacture Cargo Pallets, Nets, and Containers (cargo unit load devices), and identify them with the relevant NZTSO marking.

## 3.0 APPLICABILITY

- 3.1 This NZTSO is effective for new applications submitted after the effective date of this NZTSO.
- 3.2 This NZTSO is directly aligned with a Federal Aviation Administration (FAA) Technical Standard Order (TSO) TSO-C90c. To reflect this the NZTSO number shares the same revision suffix as the FAA TSO.

## 4.0 REQUIREMENTS

### 4.1 Minimum Performance Standard

Models of cargo unit load devices that are to be identified as meeting the requirements of this NZTSO, and that are manufactured on or after the effective date of this NZTSO, must meet the Minimum Performance Standard (MPS) of FAA TSO-C90c.

### 4.2 Deviations

Alternative means of meeting the requirements of the MPS in this NZTSO can be applied for under the provisions of rule 21.511.

## 5.0 MARKING

To meet the requirements of Rule Part 21 Subpart O, articles manufactured under this NZTSO must be marked as follows:

- 5.1 At least one major component must be permanently and legibly marked with all of the information listed in rule 21.621(5), and the information detailed in paragraph b except b(7) of FAA TSO-C90c.

5.2 For each separate component that is easily removable (without hand tools), each interchangeable element, and each separate sub-assembly of the article that the manufacturer determines may be interchangeable must be permanently and legibly marked with at least the name of the manufacturer, manufacturer's subassembly part number, and the NZTSO number.

## 6.0 DATA REQUIREMENTS

### 6.1 Application Data

To meet the requirements of Rule Part 21, Subpart O, the manufacturer shall furnish to the Manager Aircraft Certification (MAC), Civil Aviation Authority (CAA) one copy each of the following technical data to support the CAA design and manufacturing approval:

6.1.1 Operating instructions and equipment limitations. The limitations shall be sufficient to describe the operational capability of the equipment. In particular, operational or installation limitations resulting from specific deviations granted must be described in detail.

6.1.2 Installation procedures and limitations. The limitations shall be sufficient to ensure that the cargo unit load device, when installed according to the installation procedures, continues to meet the requirements of this NZTSO. The limitations shall identify any unique aspects of the installation. Finally, the limitations also shall include a note with the following statement:

*The conditions and tests required for NZTSO approval of this article are minimum performance standards. It is the responsibility of those installing this article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the NZTSO standards. NZTSO articles must have separate approval for installation in an aircraft. The article must be installed in accordance with the provisions of Rule Part 43.*

6.1.3 Schematic drawings, as applicable to the installation procedures.

6.1.4 Wiring diagrams, as applicable to the installation procedures.

6.1.5 List of the components, by part number, that make up the cargo unit load device system complying with the standards prescribed in this NZTSO. Manufacturers should include vendor part number cross-references when applicable.

6.1.6 Instructions, in the form of a Component Maintenance Manual (CMM) containing information on the periodic maintenance, calibration and repair, for the continued airworthiness of installed cargo unit load devices, including recommended inspection intervals and service life. Details of deviations granted, as noted in paragraph 6.1.1 of this NZTSO, may also be described in the CMM.

6.1.7 Material and process specifications list.

6.1.8 The functional test specifications to be used to test each production article to ensure compliance with this NZTSO.

6.1.9 Manufacturer's NZTSO qualification test report.

6.1.10 Nameplate drawing providing the information required by paragraph 5 of this NZTSO.

6.1.11 A list of all drawings and processes, including revision level, necessary to define the article's design. In the case of a minor change, any revisions to the drawing list need only be made available upon request.

## 6.2 **Manufacturer Data**

In addition to the data to be furnished directly to the CAA, each manufacturer must have available for review by MAC the following technical data:

- 6.2.1 The functional qualification specifications to be used to qualify each production article to ensure compliance with this NZTSO.
- 6.2.2 Equipment calibration procedures.
- 6.2.3 Corrective maintenance procedures within 12 months after issue of an NZTSO Authorisation.
- 6.2.4 Schematic drawings.
- 6.2.5 Wiring diagrams.
- 6.2.6 Material and process specifications.

## 6.3 **Furnished Data**

One copy of the technical data and information specified in paragraphs 6.1.1 to 6.1.6 of this NZTSO and any other data or information necessary for the proper installation, certification and use and/or for continued airworthiness of the cargo unit load devices, must accompany each article or multiple articles, if furnished to one source, i.e. operator, maintenance organisation, etc., manufactured under this NZTSO.

## 7.0 **AVAILABILITY OF REFERENCE DOCUMENTS**

### 7.1 FAA TSO-C-90c can be obtained from-

U.S. Department of Transportation,  
Subsequent Distribution Office,  
Ardmore East Business Center, 3341 Q 75th Avenue,  
Landover, MD 20785,  
USA

Telephone: (301) 322-4477  
FAX: (301) 386-5394.

Copies also may be obtained from the FAA Internet website at:

<http://av-info.faa.gov/tso/Tsocur/C90c.doc>

### 7.2 Copies of the New Zealand Civil Aviation Rules, Advisory Circulars, and other information can be obtained from-

The CAA web site at <http://www.caa.govt.nz/>

and the-

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