

Schedule 25 **ATSO-C1002 — Refrigerated cargo unit load container**

(subsection 13.2 (1), table, item 5)

1 **Application**

This Schedule applies to a refrigerated cargo unit load container that:

- (a) is for carriage as main cabin (upper deck) cargo in transport category aeroplanes; and
- (b) will be connected to the aeroplane's electrical system; and
- (c) is manufactured by an article manufacturer.

2 **Definitions**

In this Schedule:

NAS 3610 means the document called the National Aerospace Standard (NAS) 3610, *Cargo Unit Load Devices – Specification for*, published by the Aerospace Industries Association of America, Inc., as existing from time to time.

RTCA/DO-160D means the RTCA Document RTCA/DO-160D, *Environmental Conditions and Test Procedures for Airborne Equipment*, as existing from time to time, or a later version of RTCA Document RTCA/DO-160, as existing from time to time.

RTCA/DO-178B means the RTCA Document RTCA/DO-178B, *Software Considerations in Airborne Systems and Equipment Certification*, as existing from time to time.

RTCA/DO-178C means the RTCA Document RTCA/DO-178C, *Software Considerations in Airborne Systems and Equipment Certification*, as existing from time to time.

RTCA/DO-254 means RTCA Document RTCA/DO-254, *Design Assurance Guidance for Airborne Electronic Hardware*, as existing from time to time.

Technical Instructions has the meaning as defined in regulation 92.010 of CASR.

ULD Technical Manual 13th means the *ULD Technical Manual 13th*, published by the International Air Transport Association, as existing from time to time.

3 **Minimum performance standard — general**

- (1) The refrigerated cargo unit load container must meet the requirements mentioned in the following:
 - (a) NAS 3610;
 - (b) AS/NZS 1677.2:1998, *Refrigerating systems, Part 2: Safety requirements for fixed applications* (Category 2 Occupancy Classification), as existing from time to time;
 - (c) SAE ARP 1308, *Preferred Electrical Connectors for Aerospace Vehicles and Associated Equipment*, as existing from time to time;
 - (d) SAE ARP 1199, *Selection, Application, and Inspection of Electric Overcurrent Protective Devices*, as existing from time to time;
 - (e) SAE ARP 1870, *Aerospace Systems Electrical Bonding and Grounding For Electromagnetic Compatibility and Safety*, as existing from time to time.
- (2) The container must meet the requirements mentioned in the following sections of the *ULD Technical Manual 13th*:
 - (a) Standard Specification 50/4 – Certified Aircraft Container;

- (b) Standard Specification 80/1 – Requirements for Thermal Containers:
 - (i) 4.7 Spillage; and
 - (ii) 4.8 Pressurization; and
 - (iii) 8 Markings;
- (c) Standard Specification 80/2 – Pressure Equalization Requirements for Aircraft and Shipping Containers.

4 Minimum performance standard — environmental test

The refrigerated cargo unit load container must meet be tested in accordance with the test conditions mentioned in RTCA/DO-160D.

5 Minimum performance standard — software

If the refrigerated cargo unit load container includes a digital computer, the software for the computer must be developed in accordance with RTCA/DO-178B, RTCA/DO-178C or RTCA/DO-254.

6 Minimum performance standard — refrigeration unit

- (1) The refrigerant for the refrigerated cargo unit load container must:
 - (a) meet the requirements for refrigerants mentioned in clause 5.9 of Standard Specification 80/1 – Requirements for Thermal Containers of the *ULD Technical Manual 13th*, which requires refrigerants to meet the ICAO Dangerous Goods Regulations; and
 - (b) be of a type acceptable to CASA.
- (2) The refrigeration unit of the refrigerated cargo unit load container must be shown not to create a hazard when subjected to the combined loads mentioned in NAS 3610 and the following self-inertia loads:
 - (a) up 3.0g;
 - (b) forward 9.0g;
 - (c) side 3.0g;
 - (d) down 6.0g.

7 Minimum performance standard — fire protection

- (1) All materials used, except small parts (such as knobs, fasteners, seals, grommets and small electrical parts) that would not contribute significantly to the propagation of a fire, must comply with the applicable requirements of § 25.853 and Part 25, Appendix F of the FARs, as in force from time to time.
- (2) The design of the refrigerated cargo unit load container must include provisions for the following:
 - (a) an overheat protection system for the refrigerator compressor unit;
 - (b) overheat protection for all electric motors;
 - (c) a method of ensuring that the discharge air from the refrigeration unit, during its normal operation, will not activate any fire detection system installed in the aeroplane cabin.

8 Minimum performance standard — dangerous goods

- (1) The refrigeration unit for the refrigerated cargo unit load container must not be excluded from being subject to the Technical Instructions because of Special Provision A26 in Part 3, Chapter 3 of the Technical Instructions.
- (2) Lubricating oils used in the container must not be a flammable liquid within the meaning of Part 2, Chapter 3 of the Technical Instructions.

9 Minimum performance standard — marking

- (1) The refrigerated cargo unit load container must be permanently and legibly marked in accordance with section 8 of the *ULD Technical Manual 13th*.
- (2) The container must be permanently and legibly marked with:
 - (a) the environmental categories over which the equipment has been designated to operate in accordance with RTCA/DO-160D; and
 - (b) if an environment category is not applicable and a test is not conducted — an “X” in the space in which that category would otherwise be marked.

10 Minimum performance standard — technical data

The technical data mentioned in paragraph 21.605 (2) (b) of CASR for a refrigerated cargo unit load container must include the following:

- (a) a complete technical description of the container, including detail drawings, manufacturing procedures, material identification and specifications;
- (b) the manufacturer’s analysis or test results and the results of the environmental qualification tests conducted in accordance with RTCA/DO-160D;
- (c) the conformity inspection reports for the tested components;
- (d) the manufacturer’s operating instructions and limitations;
- (e) the manufacturer’s instructions for maintenance and repair of the container;
- (f) the manufacturer’s instructions for installation and servicing of the container together with any limitations;
- (g) the appropriate documentation in relation to the container mentioned in RTCA/DO-178B, RTCA/DO-178C or RTCA/DO-254;
- (h) if the container includes a digital computer — a Plan for Software Aspects of Certification or a Plan for Hardware Aspects of Certification mentioned in RTCA/DO-178B, RTCA/DO-178C or RTCA/DO-254.

11 Minimum performance standard — supply of container

If the article manufacturer for the refrigerated cargo unit load container supplies a container to a person, the manufacturer must give the person the following:

- (a) the manufacturer’s operating instructions and limitations;
- (b) the manufacturer’s instructions for maintenance and repair of the container;
- (c) the manufacturer’s instructions for installation and servicing the container and any limitations;
- (d) for each container — a copy of a document containing the following statement:
The conditions and tests required for ATSO approval of this article are minimum performance standards. It is the responsibility of those proposing to install the container on or within a specific type or class of aeroplane to determine that the aeroplane’s installation conditions are within ATSO standards. The container

may be installed only if further evaluation by the applicant (user/installer) substantiates an acceptable installation and is approved by CASA.