
**Space systems — General test
requirements for launch vehicles**

*Systèmes spatiaux — Exigences générales d'essai pour véhicules
lanceurs*



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Published in Switzerland

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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. 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).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

This second edition cancels and replaces the first edition (ISO 24917:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

- correction of terms and definitions according to other existing standards;
- modification of the “Flight vehicle development test structure” ([Figure 1](#));
- modification of the “Requirements applicability matrix” ([Annex B](#)).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document provides space launch vehicle customers, contractors and manufacturers with general requirements for test types and programmes for space launch vehicles and rocket units (modules) for use in the documentation associated with their test activity.

This document is intended to help reduce the development time and cost of space launch vehicles and rocket units, and to enhance their quality and reliability through the use of common, optimized and approved requirements in the space launch vehicle test scope and organization.

Space systems — General test requirements for launch vehicles

1 Scope

This document establishes general test requirements for launch vehicles equipped with liquid-propellant engines, launched from stationary ground-, sea- and air-based launchers, in all phases of their development.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14302, *Space systems — Electromagnetic compatibility requirements*

ISO 14303, *Space systems — Launch-vehicle-to-spacecraft interfaces*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

space-rocket complex

set of *flight vehicles* (3.2) with functionally relative technical facilities intended for transportation, storage, maintenance service, preparation, launching and flight control of flight vehicles with payload

3.2

flight vehicle

launch vehicle (3.3) including *space nose section* (3.6)

3.3

launch vehicle

vehicle designed to transport payloads to space

[SOURCE: ISO 10795:2019, 3.139, modified — The preferred term "launcher" has been removed.]

3.4

unit

lowest level of hardware assembly for which *acceptance* (3.26) and *qualification tests* (3.25) are required

[SOURCE: ISO 15864:2004, 3.1.13]

3.5

orbital stage

stage of *flight vehicle* (3.2) capable of injecting payloads into their planned orbit from the sub-orbital trajectory that resulted from operation of lower stages