

*For Comments Only*

**BUREAU OF INDIAN STANDARDS**

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**भारतीय मानक मसौदा**

**अंतरिक्ष पद्धतियां - घन उपग्रह (क्यूबसैट)**

*Draft Indian Standard*

**SPACE SYSTEMS — CUBE SATELLITES (CUBESATS)**

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**Air and Space Vehicles Sectional Committee, TED 14**

**Last date for receipt of comments is  
XX/XX/XXXX**

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ICS: 49.140

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Air and Space Vehicles Sectional Committee, TED 14

## NATIONAL FOREWORD

*(Formal Clause to be added later)*

The text of ISO standard is proposed for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standard for which Indian Standard also exist. The corresponding Indian Standard, which is to be substituted in it’s respective place, is listed below along with it’s degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 14620-1 Space systems — Safety requirements — Part 1 System safety	Doc (22331) / ISO 14620-1 : 2018 Space systems — Safety requirements — Part 1 System safety ( <i>under development</i> )	Identical under dual numbering

The technical committee has reviewed the provisions of following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 24113	Space systems — Space debris mitigation requirements

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The Bureau of Indian Standards shall not be held responsible for identifying any or all such patent rights.

This Standard also makes a reference to the BIS Certification Marking of the Product. Details of which is given in National Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## SCOPE

This document addresses CubeSats, CubeSat Deployer and related verification of assurance/quality terms and metrics.

This document defines a unique class of picosatellite, the CubeSat. CubeSats are ideal as space development projects for universities around the world. In addition to their significant role in educating space scientists and engineers, CubeSats provide a low-cost platform for testing and space qualification of the next generation of small payloads in space. A key component of the project is the development of a standard CubeSat Deployer.

This Deployer is capable of releasing a number of CubeSats as secondary payloads on a wide range of launchers. The standard Deployer requires all CubeSats to conform to common physical requirements, and share a standard Deployer interface. CubeSat development time and cost can be significantly reduced by the development of standards that are shared by a large number of spacecraft.

Normative control of the CubeSat design, qualification and acceptance testing is generally applied from other small satellite specific standards with the exception of CubeSat/Deployer launch environment test.

**FOR COMPLETE TEXT OF THE DOCUMENT KINDLY REFER ISO 17770 : 2017 or CONTACT:**

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**NATIONAL ANNEX A**  
*(National Foreword)*

**A-1 BIS CERTIFICATION MARKING**

**A-1.1** The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark