



उत्पाद मैनुअल

भा. मा. 17381: 2021/ISO 17712: 2013 के अनुसार

फ्रेट कंटेनर्स- मेकनिकल सील्स के लिए

दस्तावेज संख्या-पी एम/IS 17381/ISO 17712/1/सितम्बर 2026

भारतीय मानक ब्यूरो की स्कीम-1 (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

PRODUCT MANUAL FOR

FREIGHT CONTAINERS- MECHANICAL SEALS

ACCORDING TO IS 17381: 2021/ISO 17712: 2013

Document No. - PM/IS 17381/ISO 17712/1/September 2026

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

मानक भवन, 9, बहादुर शाह ज़फर मार्ग

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**PRODUCT MANUAL FOR
AUTOMOTIVE VEHICLES — PORTABLE JACKS FOR AUTOMOBILES,
PART 2 HYDRAULIC JACKS
ACCORDING TO IS 4552 (Part 2) : 1993**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 17381: 2021/ISO 17712: 2013
	Title	:	Freight Containers- Mechanical Seals
	No. of Amendments	:	Nil
2.	Sampling Guidelines:	:	
a)	Raw material	:	None
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	25 Pcs of each variety selected for testing
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day	:	All tests
6.	Scope of the Licence	:	
	Licence is granted to use Standard Mark as per IS 17381:2021/ISO 17712: 2013 with the following scope:		
	Name of the product	:	Freight containers — Mechanical seals
	Seal type	:	Wire / Padlock / Strap / Cable / Bolt / Cinch (Pull-up) / Twist / Scored / Label / Barrier, as applicable
	Classification	:	Indicative (I)/Security (S)/High-security (H)
	Sub-classification	:	Flexible/ Rigid

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ANNEX – A
Grouping Guidelines

1. Mechanical freight container Seals as per IS 17381: 2021/ISO 17712: 2013 shall be grouped based on the following technical parameters:

- a) Seal type:** Wire / Padlock / Strap / Cable / Bolt / Cinch (Pull-up) / Twist / Scored / Label / Barrier
- b) Classification:** Indicative (I)/ Security (S)/High-security (H)
- c) Sub-classification:** Flexible/ Rigid

2. The guidelines given below shall be followed for Grant of Licence and Change in Scope of Licence:

- a) Sample of each seal type desired to be covered in the scope shall be tested separately.
- b) Sample of seal of each sub-classification desired to be covered in the scope shall be tested separately.
- b) Within a type and sub-class, if a High-security (H) class seal is tested, then Security (S) and Indicative (I) class seals of the same type and sub-class may also be covered without separate testing.

3. The Firm shall declare the varieties intended to be covered in the Licence. Where the design, material, locking mechanism or construction is changed in a manner that may affect performance or tamper evidence, fresh evaluation/testing shall be considered in accordance with IS 17381:2021.

4. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX – B**List of Test Equipment***Indicative list of major test equipment required to test as per the Indian Standard (For guidance only)*

Sr. No.	Test / Clause Reference	Test Equipment / Apparatus
1	Tensile test — 5.2	Universal testing machine with suitable fixtures; load cell; seal support fixtures as per Fig 1, Fig 2 , Fig 3, Fig 4 and Fig 5; calibrated displacement/load recording system
2	Shear test — 5.3	Shear test fixture as per Fig 6, Fig 7; aligned cutting blades; specimen holder; load cell / compression testing machine
3	Bending test — 5.4	Bending fixture as per Fig 8, Fig 9 and Fig 10; vice/holding device; torque wrench / moment measurement arrangement; cycle counter, as applicable
4	Impact test — 5.5	Impact test apparatus Fig 11; Cold chamber capable of maintaining -27 ± 3 °C, dead-blow weight (4 ± 0.01 kg); drop-height arrangement; suitable seal support fixture; solid concrete floor
6	Visual / dimensional examination — 4.1, 4.2, 4.3	Vernier caliper/micrometer; steel rule;
7	Tamper-evidence evaluation — Clause 6	Representative seal fixtures; appropriate tools suitable for the seal design; inspection/recording equipment

The above list is indicative only and may not be treated as exhaustive.

ANNEX – C

Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that during operation of BIS licence, manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or subcontracting/sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT/BATCH:

1.3.1 Control Unit: For the guidance of manufacturers, the recommended definition of Control Unit is the quantity of seals of the same Type, class and sub-class, manufactured from the same lot/consignment of raw materials and following the same manufacturing process, manufactured in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1. Manufacturers have the discretion of declaring their own levels of control or alternatively, manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1. However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted for the whole production.

2. ENSURING COMPLIANCE THROUGH TESTING

Manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

- i) Shared testing resources like common facility,
- ii) Cluster based testing facility,
- iii) Sub-contracting to outside laboratories which may either be:
 - a) BIS recognised/empanelled laboratories, or
 - b) Any accredited laboratory as per ISO/IEC 17025

2.1 TEST RECORDS — The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for inspection by BIS.

3. LABELLING, PACKING AND MARKING

Labelling, Packing and Marking shall be done as per IS 17381: 2021/ISO 17712: 2013. The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each product or its package, provided the product conforms to all applicable requirements of the Indian Standard.

3.1 Additional Marking Requirements: Additionally, the following shall also be marked on product or package:

- a) “For BIS certification details please visit www.bis.gov.in”

4. REJECTION

The production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1*(Recommended Levels of Control- For guidance only)*

(1)				(2)		
Test Details				Levels of Control		
Clause	Requirement	Test Methods		No. of Sample	Frequency	Remarks
		Clause	Reference			
4.1, 4.2, 4.3	Description, identification, unique numbering, manufacturer identification and classification marking	4.1, 4.2, 4.3	IS 17381:2021	1	Each control unit	
4.1.3	Minimum diameter / widest cross-dimension of metal components of bolt seals	4.1.3	IS 17381:2021	1	Each control unit	
4.1.4	Ease of affixing and positive engagement of locking mechanism	4.1.4	IS 17381:2021	1	Each control unit	
4.4	Tamper-evidence design features	4.4	IS 17381:2021	1	Each control unit	
5.2	Tensile strength	5.2 / Table 1	IS 17381:2021	5	Once in two years	Testing is to be done once every two years unless there is a meaningful modification in the design or material specifications of the seal
5.3	Shear strength	5.3 / Table 2	IS 17381:2021	5	Once in two years	
5.4	Bending resistance	5.4 / Table 3	IS 17381:2021	5	Once in two years	
5.5	Impact resistance at high and low temperature	5.4 / Table 4	IS 17381:2021	10	Once in two years	
6	Evidence of tampering	6, Table 6	IS 17381	1	Each control unit	