



उत्पाद मैनुअल
उत्पाद ग्रेड ए और बी के लिए षट्कोणीय शीर्ष वाले काबले, पेंच और ढ़िबरियाँ
भाग 3 षट्कोणीय ढ़िबरियाँ, शैली 1 (साइज़ रेंज एम 5 से एम 39 तक)
आईएस 1364 (Part 3):2026 के अनुसार

PRODUCT MANUAL
Hexagon Head Bolts, Screws and Nuts of Product Grades A and B
Part 3 Hexagon Nuts, Style 1 (Size Range M5 to M39)
According to IS 1364 (Part 3):2026

यह उत्पाद नियमावली सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसधारियों द्वारा विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-1 के अंतर्गत प्रमाणन के संचालन में एकरूपता और पारदर्शिता सुनिश्चित करने के लिए संदर्भ सामग्री के रूप में उपयोग की जाएगी। बीआईएस प्रमाणन प्राप्त करने के इच्छुक भावी आवेदक भी इस दस्तावेज़ का उपयोग कर सकते हैं।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	मानक संख्या / IS No.	:	IS 1364 (Part 3):2026 / ISO 4032: 2023
	शीर्षक / Title	:	Hexagon Head Bolts, Screws and Nuts of Product Grades A and B Part 3 Hexagon Nuts, Style 1 (Size Range M5 to M39)
	संशोधनों की संख्या No. of amendments	:	0
2.	नमूनाकरण दिशानिर्देश / Sampling Guidelines		
a)	कच्चा माल Raw material	:	As per Cl. 5 & Table 3 of IS 1364 (Part 3):2026 Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A
c)	नमूने का परिमाण Sample Quantity	:	50 pieces
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	Same as the parameters given in scope of the licence under S. No. 6. Note: Apart from the above, any other requirements/ parameters may also be declared as per the standard, as applicable.
3.	परीक्षण उपकरण की सूची List of Test Equipment	:	Please refer ANNEX – B
4.	निरीक्षण एवं परीक्षण योजना Scheme of Inspection and Testing	:	Please refer ANNEX – C

5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	• All tests <i>Note: This section is for the guidance of BIS Certification Officers/ Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/ auditor.</i>
6.	लाइसेंस का दायरा / Scope of the Licence:		
“License is granted to use Standard Mark as per IS 1364 (Part 3):2026 / ISO 4032: 2023 with the following scope:			
Name of the product		Hexagon Head Bolts, Screws and Nuts of Product Grades A and B Part 3 Hexagon Nuts, Style 1 (Size Range M5 to M39)	
Thread		As per Table 1 & 2 / Table A.1* & A.2* of IS 1364 (Part 3):2026 / ISO 4032: 2023	
Product Grade		D ≤ M16: Product Grade A / D > M16: Product Grade B	
Material		Steel / Stainless Steel	
Property Class (for Steel Nuts)		M5 ≤ D ≤ M16: 5 / 6 / 8 / 10 / 12 M16 < D ≤ M39: 5 / 6 / 8 / 10 D < M5, D > M39: No property class specified	
Material Grade and Property Class (for Stainless Steel Nuts)		M5 ≤ D ≤ M24: A2-70 / A4-70 / A4-80 / D4-80 / D6-80 M24 < D ≤ M39: A2-50 / A2-70 / A4-50 / A4-70 / D4-70 / D6-70 D < M5, D > M39: No property class specified	
Surface condition	Steel	As processed (no coating) / Electroplated coatings / Non-electrolytically applied zinc flake Coatings / Hot dip galvanized coatings / Other finishes, coatings as declared by the manufacturer	
	Stainless Steel	As processed (Clean and bright) and/or Passivated / Other finishes, coatings as declared by the manufacturer	

* Historical nuts not conforming to ISO 898-2 nor to ISO 3506-2, the mechanical properties and related tests to be performed as well as the relevant marking and labelling are to be defined by agreement between the purchaser and the supplier at the time of the order

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ANNEX -A **Grouping Guidelines**

1. "Hexagon Head Bolts, Screws and Nuts of Product Grades A and B Part 3 Hexagon Nuts, Style 1 (Size Range M5 to M39)" covered in IS 1364 (Part 3):2026 are classified based on the following parameters:

Thread		As per Table 1 & 2 / Table A.1* & A.2* of IS 1364 (Part 3):2026 / ISO 4032: 2023
Product Grade		D ≤ M16: Product Grade A / D > M16: Product Grade B
Material		Steel / Stainless Steel
Property Class (for Steel Nuts)		M5 ≤ D ≤ M16: 5 / 6 / 8 / 10 / 12 M16 < D ≤ M39: 5 / 6 / 8 / 10 D < M5, D > M39: No property class specified
Material Grade and Property Class (for Stainless Steel Nuts)		M5 ≤ D ≤ M24: A2-70 / A4-70 / A4-80 / D4-80 / D6-80 M24 < D ≤ M39: A2-50 / A2-70 / A4-50 / A4-70 / D4-70 / D6-70 D < M5, D > M39: No property class specified
Surface condition	Steel	As processed (no coating) / Electroplated coatings / Non-electrolytically applied zinc flake Coatings / Hot dip galvanized coatings / Other finishes, coatings as declared by the manufacturer
	Stainless Steel	As processed (Clean and bright) and/or Passivated / Other finishes, coatings as declared by the manufacturer

** Historical nuts not conforming to ISO 898-2 nor to ISO 3506-2, the mechanical properties and related tests to be performed as well as the relevant marking and labelling are to be defined by agreement between the purchaser and the supplier at the time of the order*

2. Further, Hexagon Nuts, Style 1 are grouped as following based on the Thread:

Group 1*	Group 2	Group 3*
D < M5	M5 ≤ D ≤ M39	D > M39

3. Considering the above, the grouping guidelines given below shall be followed for GoL/CSoL:
 - Sample(s) of Hexagon Nuts, Style 1 having lowest thread and highest thread from each group mentioned under S. No. 2 above, shall be tested for all requirements to cover all the threads in that particular group.
 - Samples of Hexagon Nuts, Style 1 of each Product Grade shall be tested separately.
 - Sample of Hexagon Nuts, Style 1 with highest property class of a particular material shall be tested to cover all the Hexagon Nuts, Style 1 with lesser property classes of the same material.
 - Sample of Hexagon Nuts, Style 1 made from each grade of stainless steel shall be tested separately.
 - Sample of Hexagon Nuts, Style 1 having each type of surface condition shall be tested separately. However, if samples of coated Hexagonal nuts are tested, Hexagonal nuts without coating may also be covered.
4. The Firm shall declare the varieties of Hexagon Nuts, Style 1 intended to be covered in the Licence.
5. The Scope of Licence may be restricted based on the Manufacturing and testing capabilities of the manufacturer.
6. During the operation of Licence, it shall be ensured that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX- B
List of Test Equipments
(Indicative List, For Guidance Only)

Major test equipment required to test as per the Indian Standard

Sl. No.	Cl. Ref.	Tests used in with Clause Reference	Test Equipment
1.	4 Table 1 & 2	Dimensions	Micrometer Scale Vernier Caliper Radius Gauge(s) Profile projector
2.	5, Table 3	Threads and tolerances	Go-No Go gauges Radius gauge(s) Thread gauge (s) Profile projector
3.	5, Table 3	Mechanical Properties	UTM Hardness Tester Optical Microscope Spectrometer Test plate as per ISO 6507-1 Torque wrenches
4.	5, Table 3	Surface condition	Coat meter Salt spray tester with heater and temperature controller Stop watch / Timer Sulphur di oxide
5.	5, Table 3	Surface integrity	MPI Liquid penetrate or Other NDT Methods

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 sub-contracting/ 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:**
- 1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *entire quantity of Hexagonal Nuts, Style 1 of same thread, same product grade, same material/grade, same property class and having same surface condition and manufactured in a day* constitute a control unit.
- 1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in [Table 1](#) and [Table 2](#). Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.
- 1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan.
- 1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING

The 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. PACKING AND MARKING

The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on the packaging of the Hexagon Nuts, Style 1 provided always that the Hexagon Nuts, Style 1 so marked conforms to each requirement of the specification.

3.1 Marking and Labelling of Hexagon Nuts, Style 1 shall be done as per Cl. 6 of IS 1364 (Part 3):2026.

3.2 **Additional Marking requirements:** The Hexagon Nuts, Style 1 shall also be marked with the following additional requirement on its packaging:

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: Hexagon Nuts, Style 1 (Size Range M5 TO M39)
(Recommended Levels of Control by BIS- for Guidance Only)

(1)				(2)			
Test Details				Levels of Control			
Cl.	Requirement		Test Methods		No. of Sample	Frequency	Remarks
			Clause	Reference			
5	Material	Steel		IS 1367 (Part 6) / ISO 898-2	Each Consignment	No further testing is required if accompanied with the Test Certificate or ISI marked.	
		Stainless Steel		IS 1367 (Part 14 / Sec 2) ISO 3506-2			
4	Dimensions		4, Table 1 & Table 2	IS 1364 (Part 3)	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
5 Table 3	General Requirements			IS 1367 (Part 1) / ISO 8992			
	Thread			IS 14962 (Part 1) / ISO 965-1			
	Tolerances			IS 1367 (Part 2) / ISO 4759-1			
	Acceptability			IS 1367 (Part 17) / ISO 3269			
5 Table 3	Mechanical Properties	Steel		IS 1367 (Part 6) / ISO 898-2	01	Each Control Unit	
		Stainless Steel		IS 1367 (Part 14 / Sec 2) ISO 3506-2			
5 Table 3	Surface Condition		5, Table 3	IS 1364 (Part 3)			
	Electroplating			IS 1367 (Part 11) / ISO 4042	03	Each batch of Surface condition treatment	
	Non-electrolytically applied zinc flake coatings			IS/ISO 10683	03		
	Hot dip galvanized coatings			IS 1367 (Part 13) / ISO 10684	03		
	Passivation			IS 19056 / ISO 16048	03		
5 Table 3	Surface Integrity			IS 1367 (Part 10) / ISO 6157-2	03	Each Control Unit	

TABLE-2: Historical nuts with D < M5 and D > M39, not conforming to ISO 898-2 nor to ISO 3506-2

(Recommended Levels of Control by BIS- for Guidance Only)

(1)					(2)		
Test Details					Levels of Control		
Cl.	Requirement		Test Methods		No. of Sample	Frequency	Remarks
			Clause	Reference			
Annex A	Material	Steel	Table A.3	IS 1364 (Part 3)	To be defined by agreement between the purchaser and the supplier at the time of the order		
		Stainless Steel					
Annex A	Dimensions		Table A.1 & Table A.2	IS 1364 (Part 3)	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
Table A.3	General Requirements			IS 1367 (Part 1) / ISO 8992			
	Thread			IS 14962 (Part 1) / ISO 965-1			
	Tolerances			IS 1367 (Part 2) / ISO 4759-1			
	Acceptability			IS 1367 (Part 17) / ISO 3269			
Table A.3	Mechanical Properties	Steel	Table A.3	IS 1364 (Part 3)	To be defined by agreement between the purchaser and the supplier at the time of the order		
		Stainless Steel					
Table A.3	Surface Condition		Table A.3	IS 1364 (Part 3)	To be defined by agreement between the purchaser and the supplier at the time of the order		
	Electroplating			IS 1367 (Part 11) / ISO 4042			
	Non-electrolytically applied zinc flake coatings			IS/ISO 10683			
	Hot dip galvanized coatings			IS 1367 (Part 13) / ISO 10684			
	Passivation			IS 19056 / ISO 16048			
Table A.3	Surface Integrity			IS 1367 (Part 10) / ISO 6157-2	To be defined by agreement between the purchaser and the supplier at the time of the order		