



**उत्पाद मैनुअल
आईएस 18480: 2025 के अनुसार
सेल्फ टैपिंग पेंच**

**PRODUCT MANUAL FOR
SELF-TAPPING SCREWS
ACCORDING TO IS 18480: 2025**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

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 18480: 2025
	शीर्षक Title	:	Self-tapping screws
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Steel – IS 7178 Stainless Steel – IS 1367 (Part 14/Sec 4) – Grade to be declared by the manufacturer
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A
c)	नमूने का परिमाण Sample Quantity	:	50 Pcs
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared	:	- Type of Material - Type of Screw - Type of Cross Recess (For Cross recessed screws & Hexagon head screws only)

	in Test Request		• Type of Thread End (wherever applicable) • Thread Size • Length of screw • Type of Finish	
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – B	
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – C	
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All tests	
6.	लाइसेंस का दायरा /Scope of the Licence:			
“License is granted to use Standard Mark as per IS 18480: 2025 with the following scope:				
Name of the product		Self-tapping screws		
Type of Screw		Cross recessed screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
		Slotted screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
		Hexalobular/torx/star socket screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
	Hexagon head screws	Hexagon Head	(or)	
		Hexagon Washer Head		
		Hexagon Flange Head		
	Self-tapping screws (with the shapes mentioned above) - With Integrated / Captive Washer (or)			
	Self-tapping screws with head shape/drive/size (other than those mentioned above) –			
	(To be declared by the manufacturer)			
Type of Material		Steel (or) Stainless Steel		
Cross Recess		Type – H (or) Type – Z (For Cross recessed screws & Hexagon		

		head screws only)
Type of End		Type C (<i>or</i>) Type F (<i>or</i>) Type R
Thread size[#]		As per the corresponding Table(s) specified in the standard or any other declared by the manufacturer
Length[#]		As per the corresponding Table(s) specified in the standard or any other declared by the manufacturer
Finish	For Self-tapping screws made up of Steel	Plain (<i>or</i>) Electroplating (<i>or</i>) Hot dip galvanized (<i>or</i>) Zinc flake coated (<i>or</i>) Any other requirements or other finishes or coatings as agreed between the supplier and the purchaser (To be declared by the manufacturer)
	For Self-tapping screws made up of Stainless steel	Uncoated (Clean & Bright) (<i>or</i>) Passivated

-Any other dimension as agreed between the user/purchaser and the manufacturer is also allowed

ANNEX -A**Grouping Guidelines**

1. The variety of Self-tapping Screws are classified based on the following:

Type of Screw		Cross recessed screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
		Slotted screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
		Hexalobular/torx/star socket screws	Pan Head	(or)
			Countersunk Head	
			Raised Countersunk Head	
		Hexagon head screws	Hexagon Head	(or)
			Hexagon Washer Head	
			Hexagon flange Head	
		Self-tapping screws (with the shapes mentioned above) - With Integrated / Captive Washer (or)		
		Self-tapping screws with head shape/drive/size (other than those mentioned above) –		
(To be declared by the manufacturer)				
Type of Material		Steel (or) Stainless Steel		
Cross Recess		Type – H (or) Type – Z (For Cross recessed screws & Hexagon head screws only)		
Type of End		Type C (or) Type F (or) Type R		
Thread size [#]		As per the corresponding Table(s) specified in the standard (or) any other declared by the manufacturer		
Length [#]		As per the corresponding Table(s) specified in the standard (or) any other declared by the manufacturer		
Finish	For Self-tapping screws made up of Steel	Plain (or) Electroplating (or) Hot dip galvanized (or) Zinc flake coated (or) Any other requirements or other finishes or coatings as agreed between the supplier and the purchaser (To be declared by the manufacturer)		
	For Self-tapping screws made up of Stainless steel	Uncoated (Clean & Bright) (or) Passivated		

-Any other dimension as agreed between the user/purchaser and the manufacturer is also allowed

2. For considering GoL / CSoL, sample of each type of screw shall be tested. However, the following grouping guidelines may be considered for GoL/CSoL:
- i. Sample of each type of material shall be tested to cover that particular type of material.

- ii. Sample(s) of lowest thread size and highest thread size of any length of Self-tapping screws is to be tested to cover all the thread sizes for which firm is having complete manufacturing and testing facilities.
 - a. However, for Cross recessed screws & Hexagon head screws, samples of each type of Cross recess shall also be tested.
- iii. Sample of each type of End shall be tested.
- iv. Sample of each type of Finish is to be tested.

Note: If coated sample is tested for all requirements, corresponding Self-tapping screws of same designation^s with no coating (plain) surface condition may also be covered.

\$ - Refer Cl. 10 – ‘Designation’ of IS 18480: 2025

- 3. The Scope of License may be restricted based on the Manufacturing and testing capabilities of the manufacturer.
- 4. During the operation of License, it shall be ensured that all the varieties covered in the License are tested in rotation, to the extent possible

Note: Manufacturer shall submit the dimensions and drawing of all such Screws which are not covered in the Standard and are mutually agreed between the user/purchaser and the manufacturer.

ANNEX- B
LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sr No	Tests used in with clause reference	Test equipment
1.	Dimension, Cl. 4 & Table(s) (Table 2 to Table 13)	Micrometer Scale Vernier Caliper Radius Gauge(s) Profile projector
2.	Cross Recess, Cl. 5.1 Hexalobular socket, Cl. 5.2 Threads, Cl. 7 Tolerances, Cl. 8	Go-No Go gauges Radius gauge(s) Thread gauge (s) Profile projector
3.	Mechanical and Hardness Properties, Cl. 6	UTM Hardness Tester Optical Microscope Spectrometer Test plate as per ISO 6507-1 Torque wrenches
4.	Finish – Coating, Cl. 9	Coat meter Salt spray tester with heater and temperature controller Stop watch / Timer Sulphur-dioxide

ANNEX C

Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Control Assurance Plan 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 Control system defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *Self-tapping Screws of same type and designation* and type of finish manufactured in a day under similar process condition from the same consignment of raw materials* shall constitute a control unit.

* - Refer Cl. 10 – ‘Designation’ of IS 18480: 2025.

1.3.2 As mentioned above, recommended levels of control are given in **Table 1 for guidance only.**

1.3.3 The tests as indicated in Table 1 and at the levels of control in column 3 of Table 1 or the Quality Assurance Plan as submitted by the manufacturer to BIS may be carried out on the whole production of the factory which is covered by this plan and records maintained in accordance with para 2.5.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates where test equipment is required in house i.e “R” or whether it can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility is optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers (including foreign manufacturers) shall maintain an in-house laboratory,

which shall be suitably equipped (as given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the method given in the standard. They shall also implement a calibration plan for the test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, these manufacturers can also utilize the provisions of Sharing of testing facilities as per the Annexure-X (Relaxation in test facilities) of the guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process)

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be marked legibly and indelibly on the packaging of Self-tapping Screws provided always that the screws so marked conforms to each requirement of the specification.

3.1 Marking on the packaging of Self-tapping Screws shall be done as per Cl. 10 of IS 18471: 2025

3.2 **Additional Marking requirements:** The following additional details shall also be marked on the packaging of the Self-tapping Screws:

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

3.3 All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

4. HYGIENIC CONDITIONS (if applicable) – NA.

5. REJECTION - 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

(1)					(2)	(3)		
Test Details					Test Equipment requirement R: Required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement		Test Method			No. of Sample	Frequency	Remarks
			Clause	Reference				
6	Materials	Steel		IS 7178	S	One	Each Consignment	No further testing is required, if accompanied with test certificate or ISI marked.
		Stainless Steel		IS 1367 (Part 14/Sec 4)				
4	Dimensions		4.1 to 4.3 and Table 2 to Table 13	IS 18480	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	Drive							
	Dimension of Cross Recess	5.1	IS 7478					
	Dimension of Hexalobular socket	5.2	ISO 10664					
7	Thread			IS 5957				
8	Tolerances			IS 1367 (Part 2)				
6.1	Steel (Mechanical and Functional Properties)							
	Metallurgical Properties							
	Surface Hardness		4.1.1	IS 7178	R	03	Each Control Unit	
	Case Depth		4.1.2	IS 7178	R	03	Each Control Unit	
	Core Hardness		4.1.3	IS 7178	R	03	Each Control Unit	
	Microstructure		4.1.4	IS 7178	R	03	Each Control Unit	
6.1	Mechanical Properties							

	Thread forming capability	4.2.1	IS 7178	R	03	Each Control Unit	
	Torsional Strength	4.2.2	IS 7178	R	03	Each Control Unit	
6.2	<i>Stainless Steel</i> (Mechanical Properties)						
	Surface Hardness	5.2	IS 1367 (Part 14 / Sec 4)	R	03	Each Control Unit	
	Core Hardness	5.3	IS 1367 (Part 14 / Sec 4)	R	03	Each Control Unit	
	Torsional strength	5.4	IS 1367 (Part 14 / Sec 4)	R	03	Each Control Unit	
	Thread forming capability	5.5	IS 1367 (Part 14 / Sec 4)	R	03	Each Control Unit	
9	Finish – Coating (Steel)						
	Electroplating		IS 1367 (Part 11) / ISO 4042	S	03	Each batch of Surface condition treatment	
	Hot dip galvanized		IS 1367 (Part 13) / ISO 10684	S	03		
	zinc flake coated		IS / ISO 10683	S	03		
	Passivation (Stainless steel)		IS 19056	S	03		