



PRODUCT MANUAL FOR STEEL SHELVING CABINETS (ADJUSTABLE TYPE) ACCORDING TO IS 3312: 1984

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 3312: 1984
	Title	:	Steel Shelving Cabinets (Adjustable Type)
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per Clause 2 of IS 3312: 1984
b)	Grouping guidelines	:	Shelving Cabinet of each size i.e. Small and Large shall be tested separately to cover that variety in the Scope of Licence.
c)	Sample Size	:	Steel shelving cabinet with shelves - 1 no. Screws – 16 nos. Additional accessories as per clause 6 of IS 3312 – 1 each (if provided)
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX-B
5.	Possible tests in a day:		
	<ol style="list-style-type: none"> 1. Dimensions and tolerances (Clause 3) 2. Assembly (Clause 5) 3. Additional accessories (Clause 6) 4. Loading (Clause 7) 5. Finish (Clause 8) 6. Performance requirement of finish (Clause 9 except clause 9.5) 		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 3312: 1984 with the following scope:		
	Name of the product	Steel Shelving Cabinets (Adjustable Type)	
	Sizes	Large/Small	

ANNEX- A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Dimensions and tolerances (Clause 3), Fabrication (Clause 4) Additional accessories (Clause 6)	<ul style="list-style-type: none"> - Micrometer - Vernier calliper - Measuring tape - Steel scale - Angle protractor - Filler gauge
2	Loading (Clause 7)	<ul style="list-style-type: none"> - Required dead weight of adequate size
3	Finish (Clause 8)	<ul style="list-style-type: none"> - Hydrochloric Acid - Accelerator powder - Putty - Aluminium primer - Hot air oven - Dull pointed instrument - Adhesive tape - Weighing balance - Coat meter
4	Scratch Hardness Test (Clause 9.1)	<ul style="list-style-type: none"> - Mechanized/ Hand Operated Scratch Hardness Test Apparatus - Stainless Steel Needle - Slotted Weight
5	Pressure Test (Clause 9.2)	<ul style="list-style-type: none"> - Pressure Test Apparatus - Steel ball - Plunger Arrangement - Thermometer - Stop Watch
6	Flexibility and Adhesion test (Clause 9.3)	<ul style="list-style-type: none"> - Bend Test Equipment - Sharp razor blade. scalpel, knife or other cutting edges - Cutting guide steel or other hard metal straightedge to ensure cuts. - 25 mm wide semi-transparent pressure sensitive tape - Eraser - Magnifying Glass - Tensile Testing Machine - Hardened Polished Steel Indenter of 20 mm diameter - Cupping Test Apparatus - Cylindrical Mandrel - Coating Thickness Gauge

7	Stripping Test (Clause 9.4)	<ul style="list-style-type: none"> - Mild Steel Test Panel (0.315 mm) - Sharp razor blade. scalpel, knife or other cutting edges - Cutting guide steel or other hard metal straightedge to ensure cuts. - 25 mm wide semi-transparent pressure sensitive tape - Eraser - Magnifying Glass
8	Test for Protection against Corrosion (Clause 9.5)	<ul style="list-style-type: none"> - Mild Steel Test Panel (1.25 mm) - Corrosion Cabinet with Temperatures from 42 to 48 °C and Humidity of approximately 100 % Rh - Thermometer - Stop Watch

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

ANNEX B

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS –The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 3312: 1984.

4.LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control submitted by the manufacturer in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2.0 above.

4.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

5. REJECTIONS–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 Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
2.	Material			S	One from each variety of raw material	Each Consignment	Materials covered under the mandatory certification of BIS shall be ISI marked and received with test certificate. For other materials, further testing is not required, if received with test certificate or ISI marked.
	a) Aluminium Tube	2.1	IS 3312				
	b) Electrodes	2.2	IS 3312				
	c) Mild Steel Sheets	2.3	IS 3312				
	d) Mild steel rounds and flats	2.4	IS 3312				
	e) Screws	2.5	IS 3312				
3.	Dimensions and tolerances	3.1, 3.2, Table 1	IS 3312	R	Each cabinet	-	-
4	Fabrication	4.1 to 4.10, Table 2	IS 3312	R	Each cabinet	-	-
5	Assembly	5.1, 5.2	IS 3312	R	Each cabinet	-	-
6	Additional accessories (If provided)	6.1	IS 3312	R	Each cabinet	-	-
7	Loading	7.1, Table 3	IS 3312	R	Each cabinet	-	-
8	Finish – Sheet metal components	8.1, 8.2	IS 3312	R	Each cabinet	-	-

9. Performance requirements of finish							
9.1	Scratch hardness test	9.1	IS 3312	R	One	Once in a week	If any sample fails in any of the requirements, corrective actions shall be taken and next five control units shall be tested for that requirement. Original frequency may be restored only on conformity of samples from these control units.
9.2	Pressure Test	9.2	IS 3312	R	One	Once in a week	
9.3	Flexibility and adhesion test	9.3	IS 3312	R	One	Once in a week	
9.4	Stripping Test	9.4	IS 3312	R	One	Once in a week	
9.5	Test for protection against corrosion under conditions of condensation	9.5	IS 3312	S	One	Once in six months for each size	-

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.