



उत्पाद मैनुअल
घरेलू और समान विद्युतीय उपकरणों की सुरक्षा
भाग 2: विशेष अपेक्षाएँ खंड 75: वाणिज्यिक परिसंपक उपकरण एवं वेंडिंग मशीनें
आईएस 302 (Part 2/ Sec 75): 2018 के अनुसार

PRODUCT MANUAL
SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES
PART 2 PARTICULAR REQUIREMENTS SECTION 75 COMMERCIAL DISPENSING APPLIANCES
AND VENDING MACHINES
according to IS 302 (Part 2/ Sec 75): 2018

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 302 (Part 2/ Sec 75): 2018
	शीर्षक / Title	:	Safety of household and similar appliances Part 2 Particular Requirements – Section 75 Commercial Dispensing Appliances and Vending Machines
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूनाकरण दिशानिर्देश / Sampling Guidelines		
a)	कच्चा माल Raw material	:	Nil 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	:	1 number.
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर / Parameters to be Declared in Test Request	:	Parameters as given in scope of licence. 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	:	- Marking (Cl. 7) - Earth Continuity test (A-1 of IS 302-1) - Electric strength test (A-2 of IS 302-1) - Protection against access to live parts (Cl. 8) - Power input and current (Cl. 10) - Heating (Cl. 11) - Leakage current and electric strength at operating temperature (Cl. 13) - Mechanical strength (Cl. 21) - Provision for earthing (Cl. 27) - Screws and connections (Cl. 28) - Resistance to heat and fire (Cl. 30) - Stability and Mechanical Hazards (Cl. 20) <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:		
Licence is granted to use Standard Mark as per IS 302 (Part 2/ Sec 75): 2018 with the following scope:			
Name of the Product		Safety of Commercial Dispensing Appliances and Vending Machines	
Type of Appliance		Bulk tea or coffee brewing machines/ Cigarette vending machines/ Coffee grinders/ Commercial liquid heaters/ Coffee makers with integrated coffee grinder/ Coffee makers without integrated coffee grinder/ Coffee makers with cooling systems/ Hot and cold beverage vending machines/ Hot water dispensers/ Ice cream and whipped cream dispensers/ Ice dispensers/ Newspaper, audio or video tape or disc vending machines/ Packaged food and drink vending machines/ Refrigerated merchandisers/ Others (as declared by the manufacturer)	
Model No.			
Rating		W, V, Hz, Phase	
Type of supply		a.c./ d.c.	
Grade		Pollution degree:__, Material group:__	
Insulation Class			
Ingress Protection (IP)			
Class of Appliance		Class I/II/III	
Rated Pressure (if applicable)		MPa	
Connections to water mains		Directly connected to water mains/ Not connected to water mains	
Rated Pressure for water mains (if applicable)		MPa	
No. of canisters (if applicable)			
Accessories (if applicable)		Cleaning kit/ Milk condenser/ Water dispensing tube etc	

ANNEX -A
Grouping Guidelines

1. Manufacturer shall declare the parameters indicated in scope of licence for each model of Commercial Dispensing Appliances and Vending Machines manufactured by them.
2. For the purpose of Grant of licence/ change in scope of licence, each model of Commercial Dispensing Appliances and Vending Machines shall be tested. However, following relaxations are given:
 - a. Change in aesthetics, i.e. colour, visual design, may not be treated as different varieties of the models of the Commercial Dispensing Appliances and Vending Machines and additional testing in such cases need not be done for those models of the Commercial Dispensing Appliances and Vending Machines, subject to condition that all the parameters declared in scope of licence for the models of Commercial Dispensing Appliances and Vending Machines remain same;
 - b. In case a model of Commercial Dispensing Appliances and Vending Machines is tested with particular set of accessories, other models of the Commercial Dispensing Appliances and Vending Machines which are supplied without the accessories can also be covered in scope of licence without any further testing. E.g. if a Commercial Dispensing Appliances and Vending Machines with milk condenser is tested then the models of Commercial Dispensing Appliances and Vending Machines without milk condenser can also be covered in scope of licence, subject to condition that other parameters defined in scope of licence are same.
 - c. If one model is tested for the EMI/EMC requirements as per clause 19.11.4 of IS 302 (Part 1) (if applicable), other models may be covered in the scope of the licence without EMI/EMC testing provided the tested model is having the maximum features among the models to be covered in the licence. A declaration may be submitted by the manufacturer to this effect.
3. Further, the manufacturer shall also submit the following details for each model:
 - a. Declaration of elastomeric parts (with/ without elastomeric parts).
 - b. Design/ Photographs
4. The Firm shall declare the models they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing capability and Testing facilities of the Manufacturer.
5. During the operation of the Licence, BO shall ensure that all the models covered in the Scope of Licence are tested in rotation to the extent possible.

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

Sl. No.	Test Equipment	Clause Reference
1	Petroleum spirit, Cloth, Stopwatch	Cl. 7 (Marking and instruction)
2	Test probe-B, Test Probe-13, Test probe-41, Push-Pull Gauge, Voltmeter	Cl.8 (Protection against access to live parts)
3	Wattmeter, Voltmeter	Cl. 10 (Power Input and current)
4	Digital temp Indicator, Steel scale, Voltmeter, Wattmeter, Wooden test corner, Thermometer, Stopwatch	Cl. 11 (Heating)
5	Leakage current tester, Wattmeter, Voltmeter, Stop watch, HV tester, Metal foil	Cl. 13 & Cl. 16 (Leakage current and electric strength)
6	Humidity chamber, Saline solution	Cl. 15 (Moisture Resistance)
7	Watt-meter, Voltmeter, Temp indicator, HV tester, Metal Foil, Thermometer, Stop watch	Cl. 19 (Abnormal Operation)
8	Inclined plane, Angle Finder, Push pull gauge, Test probe B, Steel scale, Spring Hammer	Cl. 20 (Stability and mechanical Hazards), Cl. 21 (Mechanical Strength)
9	Test Probe-B, Test Probe-13, Test Probe-41, Push-pull Gauge, Hot Air Oven, Stop watch, Voltmeter, Multi meter, Vernier Caliper,	Cl. 22 (Construction)
10	Flexing Test Apparatus, HV tester, Metal Foil, Stop watch	Cl. 23 (Internal Wiring)
11	LCR meter, Endurance test apparatus	Cl. 24 (Components)
12	Vernier Caliper, weighing balance, Cord grip test apparatus, Stop watch, Micro ohm meter, Torque Screw Drivers, HV tester, Metal foil, Cord flexing test apparatus, Push pull gauge	Cl. 25 (Supply connections and External Flexible Cables and Cords), Cl. 26 (Terminal for external Conductors) Cl. 28 (Screw and connections), Cl. 29 (Creepage distances and Clearances)
13	ECR Tester	Cl. 27 Provision for Earthing
14	Hot Air Oven, Ball pressure test apparatus, Vernier caliper, Glow wire tester, Travelling microscope	Cl. 30 (Resistance to heat, Fire and tracking)
15	Humidity Chamber with Temp and Humidity Controller, Measuring Cylinder 500 ml Ammonium Chloride, Carbon Tetrachloride, Distilled Water	Cl. 31 (Resistance to rusting)
16	Temp recorder, Fine wire thermocouples, Winding resistance measurement system, Test Corner, probe for measurement of surface temperature	Cl.17 (Overload protection of transformers and associated circuits)
17	Impulse voltage test generator and monitor	Cl. 14 (Transient voltages)
18	Chemicals as per Annex AA	Cl. 22 (Construction), Cl. 15 (Moisture Resistance)
19	Air Conditioner	To maintain ambient temperature

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: *All Commercial Dispensing Appliances and Vending Machines of same model number manufactured in a day* shall 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. 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 each Commercial Dispensing Appliance and Vending Machine provided always that the product so marked conforms to each requirement of the specification.

3.1 Marking on each product shall be done as per Cl. 7 of IS 302 (Part 2/ Sec 75): 2018.

3.2 **Additional Marking requirements:** The product shall also be marked with the following additional requirement on each product/ packing:

- a) "For BIS certification details please visit www.bis.gov.in"
- b) Instruction booklet(s) shall be provided with each Commercial Dispensing Appliances and Vending Machines as per requirement prescribed at Cl. 7.12 of the of IS 302 (Part 2/ Sec 75): 2018.

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 by BIS- for Guidance Only)

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Test Methods		No. of Sample	Frequency	Remarks
		Clause	Ref			
24	Components	24	IS 302-1 IS 302-2-75	Each consignment	No further testing required, if supplied with test certificate or BIS Standard Mark.	
7	Marking	7	IS 302-1 IS 302-2-75	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.		
5.1	Earth continuity test	A-1	IS 302-1	Each product		
5.1	Electric strength test	A-2				
5.1	Functional test	A-3				
27	Provision for earthing	27	IS 302-1 IS 302-2-75	One	Each Control Unit	
8	Protection Against Electric Shock	8	IS 302-1	One	Each model of Commercial Dispensing Appliances and Vending Machines manufactured in the period of six months	
10	Power Input and Current	10	IS 302-1	One		
11	Heating	11	IS 302-1 IS 302-2-75	One		
13	Leakage current and Electric strength at operating temperature	13		One		
14	Transient Over-voltages	14	IS 302-1	One		
15	Moisture Resistance	15	IS 302-1 IS 302-2-75	One		
16	Leakage current and Electric strength	16		One		
17	Overload protection of transformers and associated circuits	17	IS 302-1	One		
19	Abnormal operation	19	IS 302-1 IS 302-2-75	One		
20	Stability and Mechanical hazards	20		One		
21	Mechanical strength	21		One		
22	Construction	22		One		
23	Internal wiring	23		One		
25	Supply connection and external flexible cables and cords	25		One		
26	Terminals for external conductors	26	IS 302-1	One		
28	Screws and connections	28	IS 302-1 IS 302-2-75	One		
29	Creepage distances, clearances and distances through insulation	29		One		
30	Resistance to heat, fire and tracking	30		One		
31	Resistance to rusting	31	IS 302-1	One		
32	Radiation, Toxicity and Similar Hazards	32	IS 302-1	One		

* No further testing is required if accompanied with Test certificate or ISI Marked.