



उत्पाद मैनुअल
बैंकनोट छँटाई मशीन – विशिष्टि
आईएस 18663: 2024

PRODUCT MANUAL FOR
NOTE SORTING MACHINE - SPECIFICATIONS
ACCORDING TO IS 18663: 2024

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 18663: 2024
	शीर्षक Title	:	Note Sorting Machine - Specifications
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Nil
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer ANNEX – A
c)	नमूने का परिमाण Sample Quantity	:	02 Nos. (01 – Safety Requirements 01 – Performance Requirements)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	- All parameters as specified in the Scope of Licence at Sl. No. 6 - Material group - Pollution degree
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – B
			1

4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Guidelines for Certification मानकीकरण के लिए दिशानिर्देश	:	Please refer ANNEX – D
6.	Possible tests in a day एक दिन में संभावित परीक्षण	:	All Performance test as per Cl. 6.2(Excluding Authenticity Test as per Cl. 6.2.2 & Stress test as per Cl. 6.2.5)
6.	लाइसेंस का दायरा /Scope of the Licence:		
“License is granted to use Standard Mark as per IS 18663: 2024 with the following scope:			
Name of the product		Note Sorting Machine	
Model(s)			
No. of Stackers (n+1) Where n = configurable stackers with one reject / suspect stacker			
Mode of Machine		Single mode/ Mixed Mode/ Fitness Mode/ Counting Mode	
Input Supply		ac / dc (through external power adapter)	
Ratings	ac	WVHz, ac Single / Three phase	
	dc	WV	
Class of Appliances		Class I / Class II	
Degree of Protection			

ANNEX -A

Grouping Guidelines

1. Manufacturer shall submit the declaration for each of the parameters as specified in the scope of the licence (as per Sl. No. 6 above) each model of 'Note Sorting Machine' that the manufacturer intends to cover in the scope of licence
2. For considering GoL/CSoL, each model of Note Sorting Machine has to be tested.
In case the manufacturer intends to get a licence for a model having series of Note Sorting Machine, then it has to request for GoL for these machines with technical justification that all Note Sorting Machine of that models fall under same). Head (BO) may consider the request in consultation with CMD-3. If the justification is acceptable, then the Note Sorting Machine with most stringent requirement of the series is to be tested to cover entire series.
3. During the operation of the Licence, BO shall ensure that all the model(s) covered in the Scope of the Licence are tested in rotation to the extent possible.

Note 1: Firm shall also submit declaration with material group and pollution degree for each model number of Note Sorting Machines.

Note 2: Firm shall provide the instruction manual/ operating manual along with each Note Sorting Machine.

ANNEX- B
List of Test Equipment & Documents
INDICATIVE LIST, FOR GUIDANCE ONLY

Sl. No.	Tests Used in With Clause Reference	Test Equipment/Chemical
1.	Marking and instructions (Cl. 4.1.15 of IS/IEC 62368-1)	85% n-hexane solution, water, piece of cloth, stopwatch
2.	Protection against access to live parts (Cl. 5.3 of IS/IEC 62368-1)	Test probe-B, Test Probe-13, Test probe-41, Push-Pull Gauge, Voltmeter
3.	Power input and current (Cl. 6.3.2 and Annex B.2 of IS/IEC 62368-1)	Wattmeter, Ammeter, Voltmeter
4.	Heating (Cl. 9 of IS/IEC 62368-1)	Wireless power transmitter, temperature sensor.
5.	Creepage clearance and solid insulation (Cl. 5.4.1 to 5.4.4 of IS/IEC 62368-1)	Vernier Caliper, weighing balance, Cord grip test apparatus, Stopwatch, Resistance meter, Torque Screw Drivers, HV tester, Metal foil, Cord flexing test apparatus, Push-pull gauge, vernier, slip gauges, Ball Pressure apparatus, Mandrel Test equipment
6.	Humidity conditioning (Cl. 5.4.8 of IS/IEC 62368-1)	Humidity chamber
7.	Leakage current and electric strength at operating temperature (Cl. 5.7 of IS/IEC 62368-1, Cl. 5.4.9 of IS/IEC 62368-1)	Leakage current tester, Voltmeter, stopwatch, HV tester, Humidity chamber, IP test setup. Test electrodes, measuring network and measuring device as per IS/IEC 60990
8.	Provision for earthing (Cl. 5.6.6 of IS/IEC 62368-1)	Earth continuity tester, Dry Film thickness Meter
9.	Performance test (Cl. 6.2)	Stopwatch Counter with Timer Currency notes as specified in Standard Table 2 and Table 3
10.	Air- conditioner	For maintaining ambient temperature

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 2.2.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *Note Sorting Machines of the same Model manufactured under similar conditions 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.

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. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

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 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 each Note Sorting machines (NSM) provided always that the NSM so marked conforms to each requirement of the specification.

3.1 Marking on each Note Sorting Machines shall be done as per Cl. 5 of IS 18663: 2024.

3.2 The technical parameter given in the scope are to be marked in the instruction manual provided by the manufacturer.

3.3 **Additional Marking requirements:** The following additional requirement shall also be marked on the packaging of each Note Sorting Machines:

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				
5	Marking	5	IS 18663	R	Each NSM		
6.1	Safety Tests						
6.1 Table 4	Marking and Instruction	4.1.15	IS/IEC 62638-1	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity			
	Provision for earthing	5.6.6	IS/IEC 62638-1				
	Creepage clearance and solid insulation	5.4.1 to 5.4.4	IS/IEC 62638-1				
	Protection against access to live parts	5.3	IS/IEC 62638-1	R	One NSM	Each Control Unit	
	Power input and current	6.3.2 Annex B.2	IS/IEC 62638-1	R	One NSM	Each Control unit	
	Leakage current and electric strength at operating temperature	5.7 5.4.9	IS/IEC 62638-1	R	One NSM	Each Control unit	
	Heating	9	IS/IEC 62638-1	S	One NSM	Once in every six months	For each model of NSM manufactured during that period
	Humidity conditioning	5.4.8	IS/IEC 62638-1	S			
	6.2	Performance Test	6.2.1 to 6.2.7 Table 2 & Table 3	IS 18663	See Note - 1		
6.3	Calibration and Periodic Testing						

Note 1: Firm to have adequate in-process controls to ensure compliance of NSMs for Performance tests as per Cl. 6.2 and Calibration and Periodic Testing as per Cl. 6.3 of IS 18663. The manufacturer has to declare the methodology of testing of NSMs for the requirements of Performance tests as per Cl. 6.2 and Calibration and Periodic Testing as per Cl. 6.3 of IS 18663.

Annex - D

Guidelines for Certification of Note Sorting Machine

- 1) This has reference to the RBI Circular DCM (NPD) No. S2193/09.45.000/2024-25 dated 30 Oct 2024 wherein it has been specified that banks should deploy only such Note Sorting Machines (NSM) models that conform to the IS 18663: 2024 and are duly certified by BIS.

Note: Any revision of above circular issued by RBI shall be de-facto applicable.

- 2) The product is of critical importance and therefore to ensure smoother certification and operation, the guidelines placed below shall be followed:
 - i) Guidelines for Grant of Licence – see *Annexure-I*
 - ii) Guidelines for Operation of Licence (including inclusion) – see *Annexure-II*

Annexure – I
Guidelines for Grant of Licence

- 1) For certification of NSMs, the latest version of Indian Standards including notified amendments shall apply.
 - i. The application for BIS certification for NSMs shall be submitted under Option-1 (Normal procedure) only.
 - ii. Manufacturers shall provide the necessary Model No. and its operating manual and other declared parameters of the NSM alongwith application as per the Product Manual and Indian Standard.
- 2) Applications received shall be examined by the BO and if any discrepancies observed, it shall be communicated to the applicant. If the application is found to be satisfactory, PI is to be done.
- 3) During PI, if the infrastructure and technical competence of the firm is found to be satisfactory, then samples shall be drawn for independent testing. The manufacturer shall offer atleast three (03) nos. of NSMs of each model for sampling and testing:
 - i) One machine shall be subjected to Factory testing for all possible tests. If it is found conforming for the test done, this may be drawn and kept as a counter sample.
 - ii) Second machine shall be drawn and sealed to carry out safety testing as per IS 18663 and sent to a BIS recognised Lab.
 - iii) Third machine shall be drawn and sealed to carry out Performance testing as per IS 18663 at Central lab, BIS.
 - iv) The manufacturer is to be advised to submit the applicant samples to concerned labs within 7 days of issuance of test request.
 - v) Testing charges shall be borne by applicant and paid in advance.
- 4) Testing of performance requirements of the NSM(s) shall be carried out at the Central Laboratory in presence of RBI's representative. Authorised representative of the manufacturer (to facilitate working of machine for testing) may also be present. On receipt of the samples of NSM(s) at the BIS Central Laboratory for performance test, Central Lab shall contact the RBI for fixing a suitable date for testing and the same shall be informed to the applicant manufacturer with the help of the BO.
- 5) BO shall review the test reports (both performance and safety requirements) and based on the outcome of the test reports, decision for Grant of BIS Certification Marks Licence shall be taken.

Annexure – II

Guidelines for Operation of Licence (including inclusion)

- 1) During the operation of the licence, the manufacturer shall be responsible for maintaining necessary quality checks towards conformance of NSM machines to the requirements of the Indian Standard and usage of Standard Mark as per conditions of licence including scope of certification, i.e. models covered.
- 2) Manufacturers shall not make any change in the covered models without prior approval of the BIS.
- 3) During the surveillance visits to be undertaken by BIS certification officer, the compliance w.r.t. required infrastructure, technical capabilities and submission of the consignee details shall be checked and reported. Any feedback received from consignees or instance of rejection shall also be checked and reported.
- 4) Compliance to marking & labelling requirement shall also be checked and reported during the inspection.
- 5) All possible tests shall be conducted in the factory during the surveillance visit. Samples shall not be drawn for independent testing.
- 6) For inclusion of new variety, '***Guidelines for Change in Scope of Licence (CSoL) and special situations as per the conformity assessment Scheme – I of Schedule – II of BIS (Conformity Assessment) Regulations, 2018***' shall be followed with the following additional modifications:

- a. Applicant shall get the model(s) tested for 'Safety Requirements as per Cl. 4.2 of IS 18663: 2024' from BIS approved third party laboratories.
- b. For 'Performance test as per Cl. 4.1 of IS 18663: 2024', the applicant shall submit the test request to BIS Central Laboratory, Sahibabad under intimation to the concerned BO (FMCD in case of a Foreign manufacturer) for facilitating them to carry out these tests.

Note: In case of Domestic Manufacturers, the above test request(s) for testing are to be raised through Manakonline only. Foreign manufacturers shall submit their request directly to the Lab with information to FMCD department.

- c. If required, inspection visit may be carried out for the assessment of infrastructure and technical competence of the firm, in consultation with CMD-3.