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उत्पाद मैन्युअल
ताले के लिए सिलिंडर कार्ट्रिज के लिए
आई एस 18841:2024 के अनुसार

PRODUCT MANUAL FOR
CYLINDER CARTRIDGES FOR LOCKS
ACCORDINGTO IS 18841:2024

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 underScheme-I of Bureau of Indian Standards (Conformity Assessment)Regulations,2018 for variousproducts. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या **IS No.**	:	IS 18841 : 2024
	शीर्षक **Title**	:	Cylinder Cartridges for Locks
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	नमूना 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 to Annex-A
c)	नमूने का परिमाण **Sample Quantity**	:	7 locks along with keys and 15 keys nearby combinations Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)

d)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर** **Parameters to be Declared in Test Request**		- Same as the scope of licence
3.	**परीक्षण उपकरणों की सूची** **List of Test Equipment**	:	Please refer to Annex-B
4.	**निरीक्षण और परीक्षण की स्कीम** **Scheme of Inspection and Testing**	:	Please refer to Annex-C
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**		
	(i) (General / Security verification tests (ii) Key strength test (Clause 6.2) (iii) Torque resistance tests (Clause 6.5.1 & 6.5.2) (iv) Mechanical attack resistance tests (Clause 6.5) (v) Drilling resistance test (Clause 6.6) 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 readyreference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	**लाइसेंस का दायरा /Scope of the Licence:**		
	"Licence is granted to use Standard Mark as per IS 18841:2024 with the following scope:		
	Name of the product	Cylinder Cartridges for Locks	
	Cylinder Cartridge Profile	Euro / Swiss / Oval	
	Cylinder Cartridge type	1C / 2C / 1K / 1CK / BK	
	Classification Code	Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 | Digit 6 | Digit 7 | | | | | | | | | | | | | | | |	

ANNEX A
Grouping Guidelines

1. Cylinder Cartridges for Locks as per IS 18841:2024 is classified as below:

Cylinder Cartridge Profile	- Euro / Swiss / Oval						
Cylinder Cartridge type	- 1C / 2C / 1K / 1CK / BK						
Classification Code							
	Digit 1	***Digit 2***	***Digit 3***	***Digit 4***	***Digit 5***	***Digit 6***	***Digit 7***
	Grade– 1, 2, 3	Grade- 4, 5, 6	-	Grade- 0,1,2,3 ,4	Grade- 0,1,2,3	Grade- 1,2,3,4, 5,6	Grade- 0,1,2

2. Considering the above, the following grouping guidelines for GoL/ CSoL shall be followed:

   a) "Cylinder Cartridges for Locks" of each Profile and each Type shall be tested to cover that particular Profile and Type in the scope of licence.

   b) Following are the guidelines for coverage of the Grades specified under each Digits within the Seven-Digit Classification Code of Cylinder Cartridges :

   - Digit 1 (Category of Use): Each grade to be tested.
   - Digit 2 (Durability) : Highest Grades of Durability for each grade of Digit 1 (category of use), shall be tested to cover all lower Grades of Durability including the tested grade, for that grade of Digit 1.
   - Digit 3 (Test door mass) : *Not applicable*
   - Digit 4 (Fire resistance): Highest Grade of Fire Resistance for each grade of Digit 1 (category of use), shall be tested to cover all lower Grades of Fire Resistance including the tested grade, for that grade of Digit 1.
   - Digit 5 (Corrosion Resistance) : Highest Grades of Corrosion Resistance for each grade of Digit 1 (category of use), shall be tested to cover all lower Grades of Corrosion Resistance including the tested grade, for that grade of Digit 1
   - Digit 6 (Key related Security) : Highest Grades of Key related Security for each grade of Digit 1 (category of use), shall be tested to cover all lower Grades of Key related

Security including the tested grade, for that grade of Digit 1.

- Digit 7 (Attack Resistance) : Highest Grades of Attack Resistance for each grade of Digit 1 (category of use), shall be tested to cover all lower Grades of Corrosion Resistance including the tested grade, for that grade of Digit 1.

3. The Firm shall declare the varieties of "Cylinder cartridges for Locks" along with the profile, type and classification codes, they intend to cover in the Licence. The Scope of Licence may be restricted based on the manufacturing capabilities of the Manufacturer.

4. During the operation of the Licence, BOs shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX B

List of Test Equipment

Indicative list of major test equipment required to test as per the Indian Standard, For guidance only

S. No.	Test Requirement	Clause Ref.	Test Equipment Required
1	Dimensional verification (profile, length, crank, keyway)	Cl. 4	Vernier caliper, Micrometer.
2	Smooth operation and functional check	Cl. 6.1	Manual test fixture or lock body mounting fixture
4	Maximum identical steps verification	Cl. 6.1.3	Micrometer, Vernier calipers
5	Non-interchangeability test	Cl. 6.1.4	Test fixture with torque application arrangement Fig 3
6	Key strength test	Cl. 6.2	Torque testing device, Key holding fixture Fig 3
7	Durability test	Cl. 6.3	Automatic durability test rig (cycling machine), Lock mounting fixture, Cycle counter, Fig 4
8	Corrosion resistance test	Cl. 6.4	Salt spray chamber (as per IS 9844), pH meter, weighing balance, sodium chloride solution.
9	Torque resistance of plug	Cl. 6.5.1	Torque testing machine, Plug holding fixture
10	Torque resistance of cylinder cartridge	Cl. 6.5.2	Torque testing machine, Heavy-duty mounting fixture
11	Resistance to chisel attack	Cl. 6.5.3	Drop hammer, Cold chisel, Wooden mounting block, Height guide mechanism
12	Resistance to twisting	Cl. 6.5.4	Torque wrench or twisting rig, Fixture as per Fig 5

13	Resistance to attack by cylinder cartridge extraction	Cl. 6.5.5	Pull test machine, Traction screws, Extraction fixture Fig 6
14	Drill resistance test	Cl. 6.6	Drilling machine, Drill bits, Force application arrangement , Mounting jig
15	Fire resistance test (if applicable)	Cl. 6.7	Fire resistance furnace (as per IS 3614), Test door assembly
16	Torque measurement during operation	Cl. 6.3, 6.5	Digital torque meter
17	General inspection tools	—	Magnifying glass, steel scale.
18	Sample preparation and mounting	—	Bench vice, mounting plates, fixture blocks

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

ANNEX C
SCHEME OF INSPECTION AND TESTING

1. LABORATORY - Manufacturers shall establish a suitably equipped and staffed in house laboratory (In-house testing facility) for testing of all parameters for ensuring quality of the product.

1.1 Column 2 of Table 1 indicates tests on "Cylinder Cartridges for Locks" where test equipment is required in-house as "R" or raw material/components, tests of which can be subcontracted as "S". Subcontracting of tests on raw materials/components is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as perIS/ISO/IEC 17025.

1.2 The manufacturer shall prepare a calibration plan for the test equipment.

2 **TEST RECORDS** – The manufacturers shall maintain test records for the tests carried out to establish conformity of the product. For the tests of raw materials/components being subcontracted to BIS recognized/empaneled laboratoryor any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports of raw materials issued by the laboratories shall be available for inspection by BIS.

3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

4.1 **Control Unit:** For the guidance of manufacturers, the recommended definition of Control Unit is the quantity of Cylinder Cartridges of same profile, type, size bearing same classification code which are manufactured from the same consignment of the raw material under similar manufacturing conditions in a single production shift.

4.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1.

4.3 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.

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

4 **PACKING, LABELLING AND MARKING** – As per the requirement of IS 18841: 2024. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Cylinder cartridge or its package provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L- and details of BIS website shall be marked at an appropriate place on product or package as follows: "For details of BIS certification please visit www.bis.gov.in".

5. 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)	(2)		
Test Details				**Test equipment requirement**	**Recommended Levels of Control**		
Clause	**Requirement**	**Test Methods Clause Reference**		**R: Required/ S: Sub-contracting permitted**	**No. of Sample**	**Frequency**	**Remarks**
4	Dimensions, profile and configuration	4	IS 18841	R	Firm to have adequate in-process controls to check compliance of this parameter specified in the Indian Standard. Appropriate records shall be maintained by the manufacturer as evidence of conformity		
6.1	General operation and workmanship	6.1	IS 18841	R			
6.1.1	Minimum number of key combinations (Effective differs)	6.1.1, Table 2	IS 18841	R	At the time of Grant of licence or whenever there is any change in design/type/profile		
6.1.2	Minimum types of movable detainers	6.1.2, Table 3	IS 18841	R			
6.1.3	Maximum number of identical steps	6.1.3, Table 4	IS 18841 IS 3614	R			
6.1.4	Non-interchangeability of close combinations	6.1.4	IS 18841	R	One	Each Control Unit	
6.2	Key strength test	6.2	IS 18841 IS 5528	R	One	Once in six months	One sample of each grade (based on category of use and Durability) produced during the period shall be tested
6.3	Durability test	6.3	IS 18841	R	One		

6.4	Corrosion resistance test	6.4		R	One	Once in six months	One sample of each grade (based on category of use and Corrosion resistance) produced during the period shall be tested
6.5	Resistance against mechanical attack	6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.5.5		R	One	Once in six months	One sample of each grade (based on category of use, attack resistance and key related security) produced during the period shall be tested