



**उत्पाद मैनुअल
भारतीय मानक 3980: 2026 के सintered बियरिंग्स के लिए**

दस्तावेज़ संख्या – पी एम/आई एस 3980 /1/ मई 2026

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/ प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
SINTERED BEARINGS
ACCORDING to IS 3980: 2026**

Document No.- PM/IS 3980/1/May 2026

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.

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PRODUCT MANUAL FOR SINTERED BEARINGS ACCORDING TO IS 3980: 2026

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- 1 के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने 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 लाइसेंस/प्रमाणपत्र 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 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.	उत्पाद Product:	IS 3980: 2026
	शीर्षक Title:	Sintered Bearings
	संशोधन संख्या No. of Amendments:	Nil
2.	नमूनाकरण दिशानिर्देश Sampling Guidelines:	
a)	कच्चा माल Raw material :	As per IS 15585 OR As given in Table 1 of IS 3980 <i>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</i>
b)	समूहीकरण दिशानिर्देश Grouping guidelines :	Please refer ANNEX – A
c)	नमूने का परिमाण Sample Size :	05 Nos (for without corrosion resistance, in case corrosion resistance is also desired, additional number of samples as required will be drawn), <i>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 (in case of market surveillance, effort may be made to procure the</i>

		<i>required quantity of product sample, as far as possible since raw material sample may not be available in market).</i>
3.	परीक्षण उपकरणों की सूची List of Test Equipment:	Please refer ANNEX – <u>B</u>
4.	निरीक्षण व परीक्षण की स्कीम Scheme of Inspection and Testing:	Please refer ANNEX – <u>C</u>
5.	एक दिन में संभावित परीक्षण Possible tests in a day:	Dimensions (Cl. 5), Density (Cl. 8.1)
6.	लाइसेंस का कार्यक्षेत्र Scope of the Licence:	Licence is granted to use Standard Mark as per IS 3980: 2026 with the following scope:
	Name of the Product:	Sintered Bearings
	Type	Cylindrical (C)/Flanged (F)/Spherical (S)
	Material grade	
	Inner diameter	
	Normal series (N) or Thin wall series (T), applicable for Cylindrical and flanged types only	
	Length	
	Whether with Corrosion resistance (Optional requirement)	

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ANNEX A
Grouping Guidelines

1. “Sintered Bearings” as per IS 3980: 2026 can be classified into different varieties as given below:
 - a) Type : Cylindrical (C)/Flanged (F)/Spherical (S)
 - b) Material:
 - Material grades as per IS 15585
 - /Grade 1/Grade 2 of IS 3980
 - c) Inner diameter
 - d) Normal series (N) or Thin wall series (T), *applicable for Cylindrical and flanged types only*
 - e) Length
 - f) Whether with Corrosion resistance (*Optional requirement*)
2. Considering the above, the guidelines given below shall be followed for Grant of Licence /Change in Scope of Licence:
 - (a) Samples of Sintered Bearing of each type (C/F/T) shall be tested separately.
 - (b) Sample of each material grade shall be tested separately.
 - (c) Sample of largest inner diameter and largest length intended to be covered in scope, shall be tested to cover all inner diameters and lengths below the tested size. To cover bearings of both Normal series (N) or Thin wall series (T), (*applicable for Cylindrical and flanged types only*), sample of any series (N or T) may be tested.
3. The Firm shall declare the varieties they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
4. During the operation of the Licence, BO 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*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dimensions and Tolerances (Cl. 5)	Coordinate Measuring Machine (CMM) Height Gauge/Bore & OD Micrometer Dial Gauge
2.	Density (Cl. 8.1)	Test set up as per IS 15585 or as per IS 4841-1, as applicable
3.	Open porosity, (Cl. 8.2) Cl. 4.1, Cl 4.7	Test set up as per IS 15585 or as per IS 5642, as applicable
4.	Radial Crushing strength, (Cl. 8.3)	Test set up as per IS 15585 or as per IS 10385, as applicable
4.	Corrosion resistance , Cl. 8.4- (Optional- as agreed to between manufacturer and purchaser)	Set up as per IS 5528

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 subcontracting/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 : Quantity of Bearings of same type manufactured from same consignment of raw material in a day.
- 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.

- 2. ENSURING COMPLIANCE THROUGH TESTING** – 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 recognized/empaneled 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. PACKAGING AND MARKING – As per the requirements given in IS 3980: 2026. The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on the packaging of the product, provided always that the product so marked conforms to each requirement of the specification.

3.1 Additional Marking requirements: Additionally, the following shall also be marked on product or package :

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4. REJECTION - All 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- For guidance only)

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Test Method		No. of Sample	Frequency	Remarks
		Clause	Reference			
4	Material	4	IS 3980 IS 15585	One	Each consignment	In case of multiple material grades, sample of each grade shall be tested. No further testing is required, in case the material is ISI Marked or is received along with test certificate
5	Dimensions and Tolerance	5	IS 3980 IS 19709	Manufacturer shall exercise adequate levels of control to ensure that entire production is conforming. Records shall be maintained		
6	Manufacture, Workmanship and Finish	6	IS 3980			
8	TESTS					
8.1	Density	8.1	IS 3980 IS 15585 IS 4841-1	One	Once in a month	Bearing of every type and made from every material grade, manufactured in the month shall be tested
8.2	Open porosity	8.2	IS 3980 IS 15585 IS 5642	One	Once in a month	Bearing of every type and made from every material grade, manufactured in the month shall be tested
8.3	Radial crushing strength	8.3	IS 3980 IS 15585 IS 10385	One	Once in a month	Bearing of every type and made from every material grade, manufactured in the month shall be tested
8.4	Corrosion resistance, <i>optional requirement</i>	8.4	IS 3980 IS 5528	As agreed between manufacturer and purchaser		

