



**PRODUCT MANUAL FOR
GENERAL REQUIREMENTS FOR LIGHT DUTY
SEWING MACHINE HEADS FOR INDUSTRIAL USE
ACCORDING TO IS 12109:1987**

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 12109:1987
	Title	:	General requirements for Light Duty Sewing Machine Heads for Industrial Use
	No. of Amendments	:	One
2.	Sampling Guidelines:		
a)	Raw material	:	As per Cl 2.1 and 2.2 of IS 12109: 1987
b)	Grouping guidelines	:	Sewing Machine head with each mode of driving arrangement (Foot operated/ Motor-driven) shall be tested separately for GoL/CSoL.
c)	Sample Size	:	One
3.	List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day	:	All tests
6.	Scope of the Licence:		
	Licence is granted to use Standard Mark as per IS 12109:1987 with the following scope:		
	Name of the product	General requirements for Light Duty Sewing Machine Heads for Industrial use	
	Mode of driving arrangement		

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	General measurement, Construction, Cl. 2	Vernier caliper, Micrometer, V Block
2	Coating thickness, Cl. 3	Chemicals, weighing balance
3	Accuracy requirements, Cl. 6.2	Surface plate, height gauge, puppy dial indicator, feeler gauge, slip gauges, Tachometer, Dial indicator, Durability test ring (for durability test)
4	Durability requirements, Cl. 7	
5	Sewing requirement, Cl. 8, Table 2	Needles, various types of threads and fabric.

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 requirement of IS 12109:1987.

4. CONTROL UNIT–A batch of 100 sewing machine heads of same model and design or a part thereof manufactured in a day shall constitute a control unit

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control 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 above.

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

6. 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 Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
2.1, 2.2	Material	2.1, 2.2	IS 12109	S	One	Each Consignment	No further testing is required, if the consignment is received with test certificate or ISI marked
2	Construction and Function	2.2 to 2.7	IS 12109	R	Each Machine		--
3.1	Finish- Body	3.1	IS 12109	R	Each Machine		
3.2	Finish- components	3.2, Table1	IS 12109	R	One	Each batch plated in single bath at a time	For plated components received from outside, five samples per consignment shall be tested in case the consignment is not received with test certificate.
4	Sewing Mechanism	4.1 to 4.4	IS 12109	R	Each Machine		--
5	Lubrication	5	IS 12109	R	Each Machine		--
6	Accuracy requirement	6.1, 6.2, Table 1	IS 12109	R	Two	Each Control Unit	If any of the machines fail in any one or more than one requirement, then each machine of the control unit shall be checked for that characteristics in which failure has occurred and only those machines conforming to the characteristics shall be considered for marking.

7	Durability test	7, Table 1	IS 12109	R	Two	Each control unit	In case of failure, double the number of machines shall be checked and only when no failure is observed, machines shall be marked.
8	Sewing requirements	8, Table 2	IS 12109	R	Two	Each control unit	In case of failure, double the number of machines shall be checked and only when no failure is observed, machines shall be marked.
9	Accessories	9	IS 12109	-		Each Machine	
11	Packaging requirements	11	IS 12109	-		Each Machine	

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.