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घरेलू सिलाई मशीनें — फ़ीड दंड रोलर और  
स्टड — विशिष्टि  
(दूसरा पुनरीक्षण)

Household Sewing Machines — Feed  
Bar Rollers and Studs —  
Specification  
( Second Revision )

ICS 61.080

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Price Group 4

## FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sewing Machine Sectional Committee had been approved by the Mechanical Engineering Division Council.

This standard was first published in 1967 and subsequently revised in 1997. This revision has been brought out to view for incorporating the modifications found necessary as a result of experience gained on the use of this standard. Also, in this revision, the standard has been brought into the latest style and format of Indian Standard, and references to Indian Standards, wherever applicable have been updated. The BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act, 2016*.

For general requirements of sewing machines IS 1610 : 2018 'Household sewing machines — General requirement (*fourth revision*)' may be referred.

The composition of the Committee responsible for the formulation of this standard is given in [Annex B](#).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***HOUSEHOLD SEWING MACHINES — FEED BAR ROLLERS  
AND STUDS — SPECIFICATION***( Second Revision )***1 SCOPE**

This standard specifies the requirements for two types of feed bar rollers and studs for sewing machines for household purposes.

**2 REFERENCES**

The standards given below contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards:

<i>IS No.</i>	<i>Title</i>
IS 1501 (Part 1) : 2020/ISO 6507- 1 : 2018	Metallic materials — Vickers hardness test: Part 1 Test method ( <i>fifth revision</i> )
IS 2500 (Part 1) : 2000/ISO 2859- 1 : 1999	Sampling procedures for inspection by attributes: Part 1 Sampling schemes indexed by acceptance quality limit (AQL) for lot- by-lot inspection ( <i>third revision</i> )
IS 4432 : 1988	Specification for case hardening steels ( <i>first revision</i> )
IS 4905 : 2015/ ISO 24153: 2009	Random sampling and randomization procedures ( <i>first revision</i> )

**3 NOMENCLATURE**

The nomenclature of feed bar rollers and studs shall be as indicated in [Fig. 1](#).

**4 TYPES**

The feed bar rollers and studs shall be either Type A or Type B.

**5 MATERIAL**

The rollers and studs shall be manufactured from any suitable case hardening steel (*see* IS 4432).

**6 HARDNESS**

The rollers shall be case hardened to attain a hardness value of 400 HV, *Min* [*see* IS 1501 (Part 1)/ISO 6507-1].

**7 DIMENSIONS AND TOLERANCES**

**7.1** The dimensions and tolerances for feed bar rollers and studs shall be as shown in [Fig. 2](#) and [Fig. 3](#).

**7.2** The error in the concentricity of the external bearing face of the roller when rotated about the main hole of the roller shall not exceed 0.01 mm.

**8 WORKMANSHIP AND FINISH**

**8.1** The main hole and external bearing surface of the roller shall be ground to smooth finish and shall be free from rust, dust, etc.

**8.2** The bearing diameter of the stud shall be precision ground to a smooth finish and shall be free from rust, dust, etc.

**9 SAMPLING**

Unless otherwise agreed to between the purchaser and the supplier the sampling plan as given in [Annex A](#) shall be followed. For further information, reference may be made to IS 2500 (Part 1)/ISO 2859-1 and IS 4905/ISO 24153.

**10 MARKING**

**10.1** Each piece of the feed bar roller and stud shall be legibly and indelibly marked with the following:

- a) Source of manufacture and trade-mark, if any; and
- b) Type of feed bar roller and stud.

**10.2 BIS Certification Marking**

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

To access Indian Standards click on the link below:

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11 PACKING

Each feed holder rollers and studs shall be given a suitable anti-rust coating and wrapped in polyethylene bags. The wrapped feed bar rollers and

studs shall be securely packed in accordance with the best prevalent trade practice. Each package shall bear address of the source of manufacture, type and description of contents.

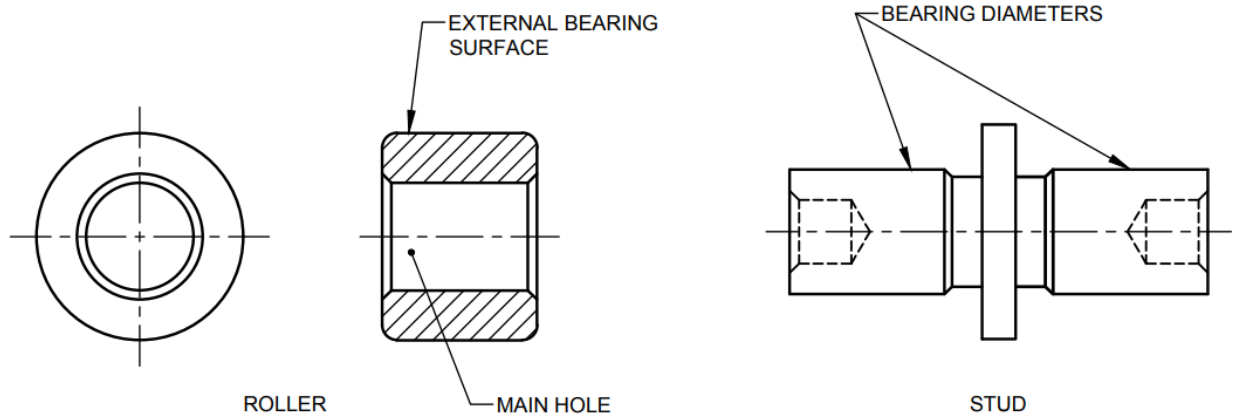
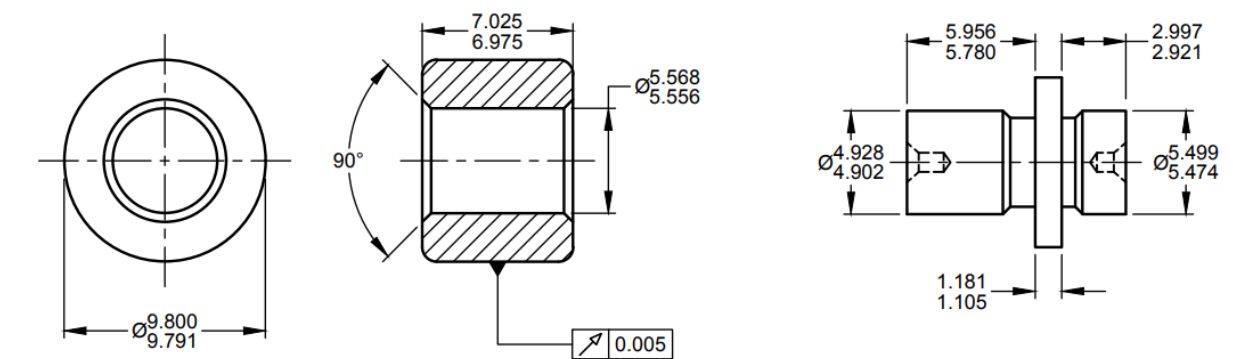
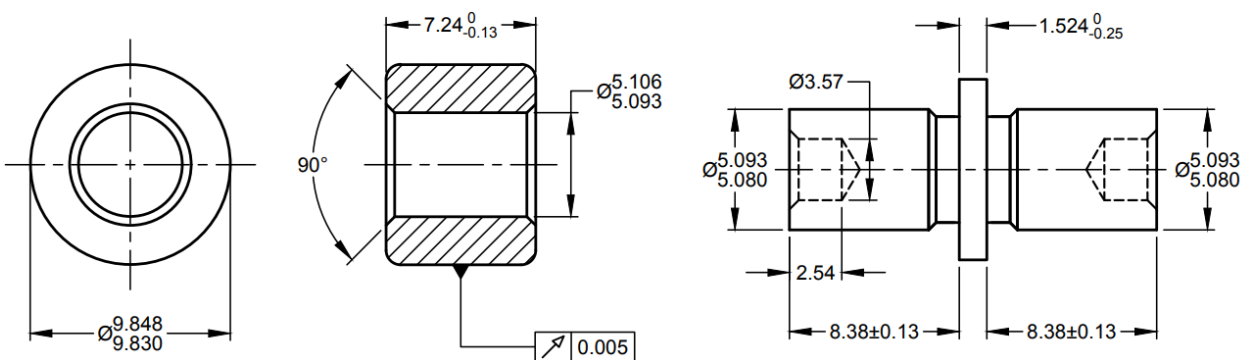


FIG. 1 NOMENCLATURE FOR FEED BAR ROLLER AND STUD



All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE A



All dimensions in millimetres.

FIG. 3 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE B

## ANNEX A

(Clause 9)

## SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

## A-1 SCALE OF SAMPLING

## A-1.1 Lot

In any consignment, all the feed bar rollers of the same type and manufactured from the same material under essentially similar conditions of manufacture shall be grouped together to constitute a lot.

**A-1.2** For ascertaining the conformity of the lot to the requirements of the specification, tests shall be carried out for each lot separately. The number of feed bar rollers to be selected at random for this purpose shall be in accordance with col (1) and col (2) of [Table 1](#).

**A-1.3** If the items are packed individually, in order to ensure the randomness of selection, random number tables shall be used. In cases such tables are not available the following procedure may be adopted.

‘Starting from any feed bar roller in the lot, count them in one order as 1, 2, 3,..... up to  $r$  and so on, where  $r$  is the integral part of  $N/n$  ( $N$  being the lot size and  $n$  the sample size). Each feed bar roller thus counted shall be selected to constitute the sample.’

**A-1.4** If the feed bar rollers are packed in different cartons, a suitable number of cartons (not less than 20 percent of the total in the lot subject to a

minimum of 2) shall be chosen at random. From each of the cartons so chosen, an approximately equal number of feed holder rollers shall be picked up from its different parts so as to obtain the required number of needle bar link studs specified in col (1) and col (2) of [Table 1](#).

## A-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

**A-2.1** The feed bar rollers selected according to [A-1.2](#) and [A-1.3](#) or [A-1.4](#) shall be examined for dimensions and tolerances (*see 7*) and workmanship and finish (*see 8*). If the number of feed bar rollers failing to meet one or more of the requirements mentioned above is less than or equal to the permissible number of defectives given in col (3) of [Table 1](#), the lot shall be declared as conforming to the requirements of these characteristics.

**A-2.2** In the case of those lots which have been found satisfactory according to [A-2.1](#), a number of feed bar rollers equal to the sample size indicated in col (4) of [Table 1](#), shall be subjected to hardness test (*see 6*). Any roller failing to meet the requirement for harness shall be considered to be defective.

**A-2.2.1** If no defectives are found among the feed bar rollers subjected to the hardness test (*see A-2.2*), the lot shall declared as conforming to the requirements of the specification, otherwise not.

Table 1 Scale of Sampling and Permissible Number of Defects

(Clauses [A-1.2](#), [A-1.4](#), [A-2.1](#) and [A-2.2](#))

SI No.	No. of Flywheel Bushes in the Lot	For Dimensions, Tolerances and Workmanship and Finish		Sample Size for Hardness and Tests
		Sample Size	Permissible No. of Defectives <sup>1</sup>	
	$N$	$n$		
(1)	(2)	(3)	(4)	(5)
i)	Up to 15	5	0	2
ii)	16 to 40	8	0	3
iii)	41 to 110	13	0	3
iv)	111 to 300	20	1	5
v)	301 to 500	32	1	6
vi)	501 to 800	50	2	8
vii)	801 to 1 300	80	3	10
viii)	1 301 and above	125	5	15

<sup>1</sup>) This ensures that lots containing one and half percent or less defective will be accepted most of the time.

## ANNEX B

(Foreword)

## COMMITTEE COMPOSITION

Sewing Machines Sectional Committee, MED 29

<i>Organization</i>	<i>Representative(s)</i>
Research & Development Centre for Bicycle and Sewing Machines, Ludhiana	SHRI SANJEEV KATOCH ( <b>Chairperson</b> ) SHRI PAPINDER SINGH ( <i>Alternate I</i> ) SHRI VISHWAS MEHTA ( <i>Alternate II</i> ) SHRI MANPREET SINGH ( <i>Alternate III</i> )
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Directorate General of Quality Assurance, New Delhi	SHRI R. V. JAIN
G. D. Rupal Industries, Ludhiana	SHRI GURMUKH SINGH
Gee Tech Hooks, Ludhiana	SHRI MANJEET SINGH
Geminy Industrial Enterprises Private Limited, Ludhiana	SHRI VINAY DUA SHRI B. C. PANDEY( <i>Alternate</i> )
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Makhan Sewing Machines, Ludhiana	SHRI DALBIR SINGH DHIMAN
Narindera and Company, Ludhiana	SHRI S. BALDEV SINGH SHRI HARINDER JIT SINGH ( <i>Alternate</i> )
Navrang Manufacturing Corporation, Ludhiana	SHRI DINESH KAPILA SHRI SUDESH KAPILA ( <i>Alternate</i> )
Northern India Textile Research Association, Ghaziabad	SHRI VIKAS SHARMA SHRI VIVEK AGARWAL ( <i>Alternate</i> )
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Ranew Engineering (India) Private Limited, Ludhiana	SHRI SANJEEV KUMAR JAIN SHRI ABHILASH JAIN ( <i>Alternate</i> )
Singer India Limited, New Delhi	SHRI PRASHANT AGGARWAL SHRI ATUL KUMAR SETH ( <i>Alternate</i> )
Swan Mechanical Works, Ludhiana	SHRI AMARJEET SINGH
United Sewing Machines and Parts Manufacturing Association, Ludhiana	SHRI DALBIR SINGH DHIMAN
Usha International Limited, New Delhi	SHRI RUP LAL KANGLA SHRI PRANAY SRIWASTAV ( <i>Alternate</i> )
Uttam Sewing Machine Company (Private) Limited, Jalandhar	SHRI JAGDEEP RAI SHRI MANOHAR LAL ( <i>Alternate</i> )

<i>Organization</i>	<i>Representative(s)</i>
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Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	SHRI M. A. U. KHAN
BIS Directorate General	SHRI K. VENKATESWARA RAO, SCIENTIST 'F'/SENIOR DIRECTOR AND HEAD (MECHANICAL) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]

*Member Secretary*  
SHRI SHUBHAM TIWARI  
SCIENTIST 'D'/JOINT DIRECTOR  
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### Amendments Issued Since Publication

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