

भारतीय मानक
Indian Standard

IS 13825 : 2024

घरेलू सिलाई मशीनें — आर्म शाफ्ट फ्रंट
बुश — विशिष्टि
(पहला पुनरीक्षण)

Household Sewing Machines —
Arm Shaft Front Bush —
Specification
(First Revision)

ICS 61.080

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FOREWORD

This Indian Standard (First 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 1993. The present revision has been taken up for incorporating the modifications found necessary as a result of experience gained with the use of this standard and amendment issued from time to time has also been incorporated. Also, in this revision, the standard has been brought into the latest style and format of Indian Standards, and references wherever applicable have been updated. The BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act, 2016*.

This standard has been prepared to rationalize the types and sizes of sewing machine components for manufacturing in economic quantities. This standard lays down the requirements for arm shaft front bush for sewing machines for household purposes.

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 — ARM SHAFT FRONT BUSH — SPECIFICATION

(*First Revision*)

1 SCOPE

This standard lays down the requirements for arm shaft front bush 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 210 : 2009	Grey iron castings — Specification (<i>fifth revision</i>)
IS 2102 (Part 1) : 1993/ISO 2768-1: 1989	General tolerances: Part 1 Tolerances for linear and angular dimensions without individual tolerance indications (<i>third 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 No.

Title

IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures (<i>first revision</i>)
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3 NOMENCLATURE

Arm shaft front bush shall be as shown in [Fig. 1](#).

4 TYPES

The arm shaft front bush shall be of the types indicated below:

- a) Type A — see [Fig. 2](#); and
- b) Type B — see [Fig. 2](#).

5 MATERIAL

The arm shaft front bush shall be made from cast iron conforming to grade FG 150 of IS 210.

6 DIMENSIONS

Dimensions shall be as shown in [Fig. 2](#).

7 TOLERANCES

7.1 Tolerances shall be as indicated in [Fig. 2](#).

7.2 The tolerances on untoleranced dimensions shall be in accordance to medium class as per IS 2102 (Part 1)/ISO 2768-1.

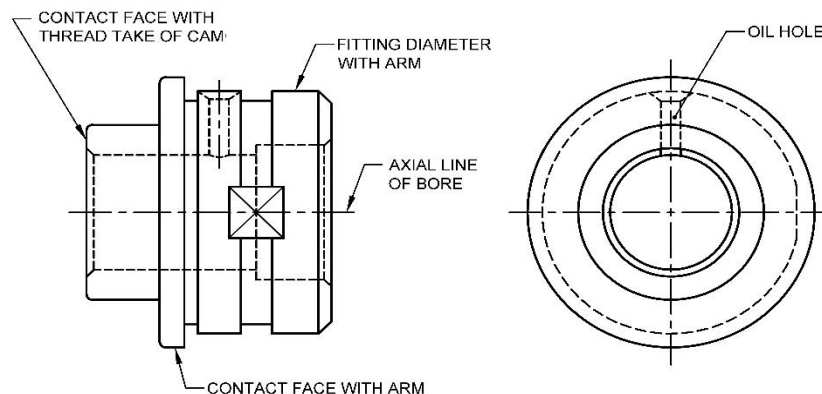


FIG. 1 NOMENCLATURE FOR ARM SHAFT FRONT BUSH

To access Indian Standards click on the link below:

https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/knowyourstandards/Indian_standards/isdetails/

8 WORKMANSHIP AND FINISH

The machining and other finish of the surfaces not indicated in the drawings shall be free from burrs, cracks, flaws, holes, dents, fins, rust, scales, inferior surface treatment, unevenness and other manufacturing defects.

9 SAMPLING

Unless otherwise agreed 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.

10 MARKING

The arm shaft front bush shall be permanently marked with the following:

- Nameplate or trademark of the manufacturer; and

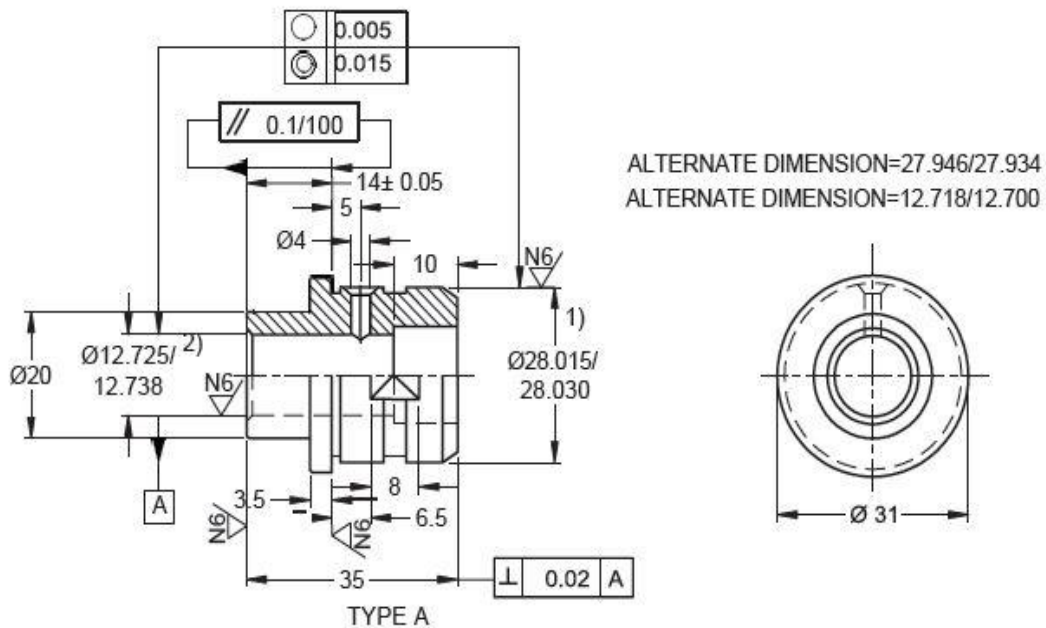
- Type.

10.1 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 products may be marked with the Standard Mark.

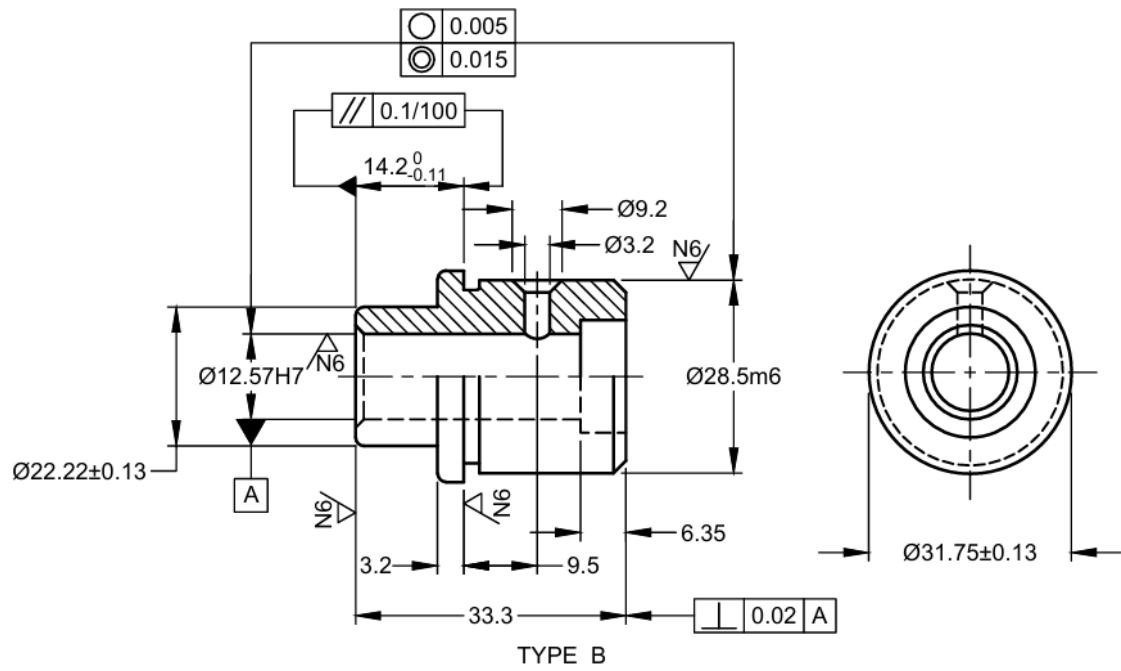
11 PACKING

Each arm shaft front bush shall be given a suitable antirust coating and wrapped in polyethylene bags. The wrapped arm shaft front bush shall be securely packed in accordance with the best prevalent trade practices.



¹⁾ Fitting diameter with arm casing/body.

²⁾ Bore diameter for arm shaft assembly.



All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR ARM SHAFT FRONT BUSH

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 arm shaft front bushes of 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 arm shaft front bushes to be selected at random for this purpose shall be in accordance with col (2) and col (3) of [Table 1](#).

A-1.3 If the arm shaft front bushes are packed individually, in order to ensure the randomness of selection, IS 4905/ISO 24153 shall be used.

A-1.4 If arm shaft front bushes are packed in different cartons, a suitable number 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 arm shaft front bushes shall be picked up from its different locations so as to obtain the required number of arm shaft front bushes specified in col (3) of [Table 1](#).

A.2 NUMBER OF TEST AND CRITERIA FOR CONFORMITY

A-2.1 The arm shaft front bushes selected according to [A-1.2](#) and [A-1.3](#) or [A-1.4](#) shall be examined for dimensions (*see* [6](#)), tolerances (*see* [7](#)), and workmanship and finish (*see* [8](#)). If the number of arm shaft front bushes 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 (4) of [Table 1](#), the lot shall be declared as conforming to the requirements of these characteristics.

Table 1 Scale of Sampling and Permissible Number of Defective

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

Sl No.	No. of Arm Shaft	For Dimensions, Workmanship and Finish	
		Sample Size	Permissible No. of Defectives*
(1)	(2)	(3)	(4)
i)	Up to 15	5	0
ii)	16 to 40	8	0
iii)	41 to 110	13	0
iv)	111 to 300	20	1
v)	301 to 500	32	1
vi)	501 to 800	50	2
vii)	801 to 1 300	80	3
viii)	1 301 and above	125	5

* This ensures that lots containing only 1.5 percent or less defectives shall 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 (<i>Chairperson</i>)
Research & Development Centre for Bicycle and Sewing Machines, Ludhiana	SHRI PAPINDER SINGH SHRI VISHWAS MEHTA (<i>Alternate I</i>) SHRI MANPREET SINGH (<i>Alternate II</i>)
Brother International (India) Private Limited, Mumbai	SHRI MATHEW YOHANNAN
C. R. Auluck & Sons Private Limited, Ludhiana	SHRI SUNIL AULUCK SHRI KULJEET SINGH (<i>Alternate</i>)
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>)
Ludhiana Sewing Machine Association, Ludhiana	SHRI HARDEEP SINGH SHRI RAJVINDER (<i>Alternate</i>)
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>)
Novel Sewing Machine Technologies, Pune	SHRI BHARAT NARAYENDAS PARMAR SHRI ARJUN BHARAT PARMAR (<i>Alternate</i>)
Office of Development Commissioner (MSME), New Delhi	SHRI SUVANKAR SANTRA Ms MAITREYEE TALAPATRA (<i>Alternate</i>)
ORAA International, Ludhiana	SHRI ASHISH GUPTA
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>
Virindra Engineering Works, Ludhiana	SHRI AMARPREET SINGH PANESAR SHRI SWARN SINGH (<i>Alternate</i>)
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
(MECHANICAL), BIS

Bureau of Indian Standards

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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