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BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

भारतीय मानक **मसौदा**

घरेलू सिलाई मशीन — टांका नियंत्रक — विशिष्टि

(आई एस 13872 का *पहला पुनरीक्षण)*

DRAFT *Indian Standard*

HOUSEHOLD SEWING MACHINE — STITCH REGULATORS — SPECIFICATION

(First Revision of IS 13872)

ICS 61.080

Sewing Machine Sectional Committee, MED 29	Last date for receipt of comments: **23 June 2025**

FOREWORD
(*Formal clause will be added later*)

This standard is one of the series of standards prepared to rationalize the type and sizes of sewing machine components for manufacturing in economic quantities. The present revision has been taken up with a view incorporating the modification found necessary as a result of experience gained in the use of this standard. Also, in this revision, the standard has been brought into latest style and format of Indian Standards, and references to Indian Standards, wherever applicable have been updated. BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standard Act,* 2016.

Household sewing machines available in the market are generally of two designs, namely Standard Round and Horizontal Arm (HA-1). While the standard round design is the one that has been available over the years, horizontal arm HA-1 is also becoming popular. The stitch regulators covered in this standard have been classified as Type A — with through hole for fixing thread take up cam and Type B — with blind hole for fixing screw.

For general requirements of sewing machines, IS 1610 : 2018 ‘Household sewing machines — General requirements (*fourth revision*)’ can be referred.

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 (s*econd 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.

DRAFT *Indian Standard*

HOUSEHOLD SEWING MACHINE — STITCH REGULATORS — SPECIFICATION

(First Revision)

1 SCOPE

This standard specifies the requirements of cam/link type stitch regulators 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:

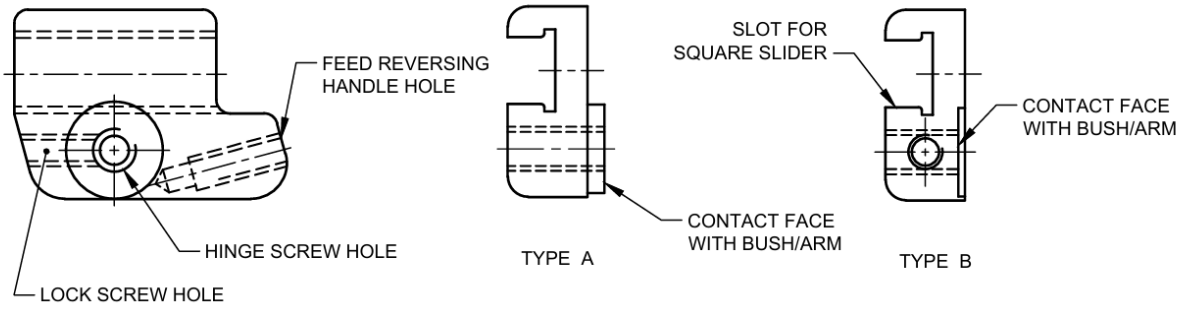
IS No.	*Title*
IS 210 : 2009	Grey iron castings (*fifth revision*)
IS 2500 (Part 1) : 2000/ ISO 2859-1 : 1999	Sampling procedure for inspection by attributes: Part 1 Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (*third revision*)
IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedure (*first revision*)

3 NOMENCLATURE

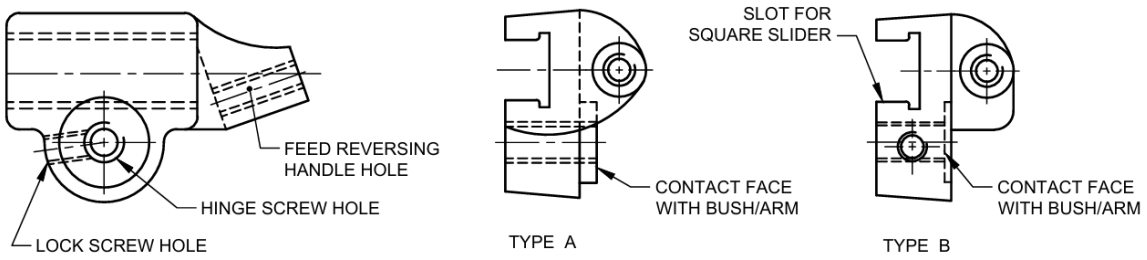
The nomenclature of the stitch regulators shall be as indicated in Fig. 1.

4 TYPES

The stitch regulator shall be either Type A or Type B (*see* Fig. 1).



STITCH REGULATOR FOR STANDARD ROUND SEWING MACHINE



STITCH REGULATOR FOR H A - 1 TYPE SEWING MACHINE

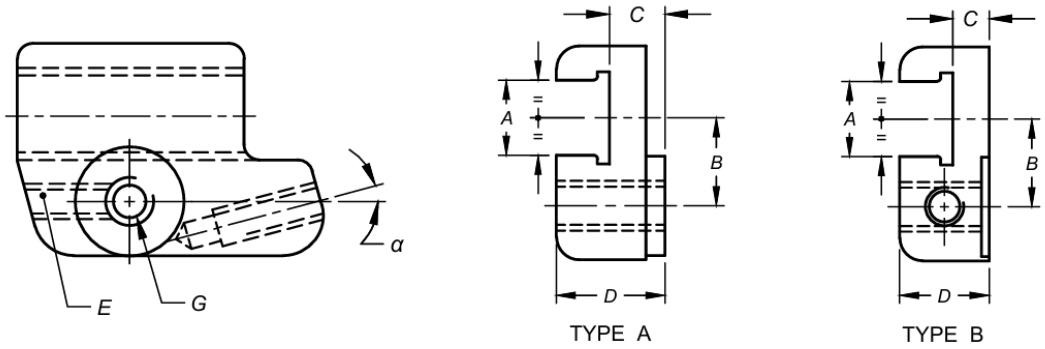
FIG. 1 NOMENCLATURE FOR STITCH REGULATOR

5 MATERIALS

The stitch regulator shall be made from cast iron Grade FG 150 of IS 210.

6 DIMENSIONS AND TOLERANCES

The main dimensions and tolerances of stitch regulator shall be as given in Fig. 2.



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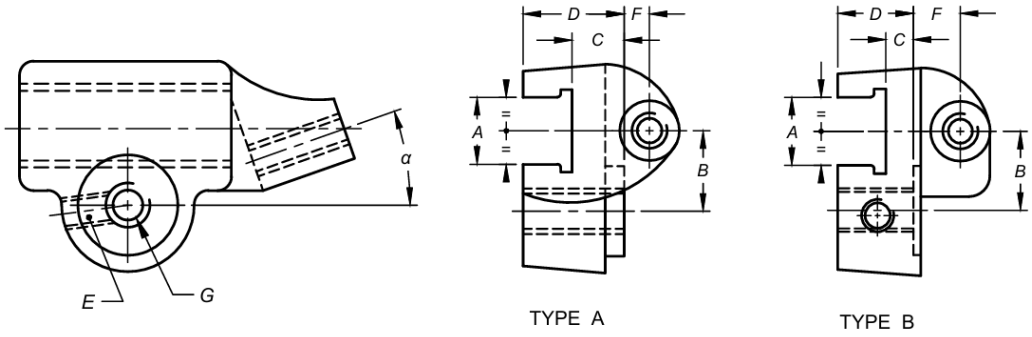

STITCH REGULATOR FOR H A - 1 TYPE SEWING MACHINE

Sl No.	Stitch Rugulator Type	For Sewing Machine Design	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*α*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
i)	A	Standard Round	9.55	10.90	7.03	12.80	4BA	—	15/64 × 28	8º
ii)			9.53	10.70	6.93	12.60				
iii)		HA-I	9.55	8.90	7.03	12.80	4BA	1.60	15/64 × 28	15º
iv)			9.53	8.70	6.93	12.60		1.55		
v)	B	Standard Round	9.857	10.69	3.53	9.95	M5 × 0.8	—	M6×1	13º-30º
vi)			9.842	10.64	3.43	9.80				
vii)		HA-I	9.857	10.54	3.86	10.24	M5 × 0.8	6.52	M6×1	18º
viii)			9.842	10.49	3.76	10.09		6.47		

All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR STITCH REGULATOR

7 WORKMANSHIP AND FINISH

7.1 Sliding surfaces of the slot shall be finely finished to ensure smooth sliding of square slider in it.

7.2 Surface of casting shall be treated by plating or other adequate surface treatment.

7.3 Stitch regulator shall be free from defects such as crack, rust, burrs, etc.

8 SAMPLING

Unless otherwise agreed to between the purchaser and 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.

9 MARKING

9.1 The stitch regulator shall be permanently marked with the following:

a) Name or source of manufacture; and
b) Type.

9.2 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.

10 PACKING

Each stitch regulator shall be given a suitable antirust coating and wrapped in polyethylene bag. The wrapped stitch regulator shall be securely packed in accordance with best prevailing trade practices. Each package shall bear the manufacturer's name or trade-mark, type, and description of contents.

ANNEX A

(*Clause* 8)

SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

A-1 SCALE OF SAMPLING

A-1.1 Lot

In any consignment all the stitch regulators 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 specification, tests shall be carried out for each lot separately. The number of stitch regulators 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 stitch regulators are packed individually, in order to ensure the randomness of selection IS 4905/ISO 24153 shall be used.

A-1.4 If the stitch regulators 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 stitch regulators shall be picked up from its different parts so as to obtain the required number of stitch regulators specified in col (3) of Table 1.

Table 1 Scale of Sampling and Permissible Number of Defectives

(*Clauses* A-1.2, A-1.4 *and* A-2)

Sl No.	**No. of Stitch Regulators**	**For Dimensions, Tolerances, Workmanship and Finish**	
		Sample Size	**Permissible No. of Defectives***
	N	***n***	
(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.

A-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

The stitch regulators selected according to **A-1.2** and **A-1.3** or **A-1.4** shall be examined for dimensions and tolerances (*see* **6**) and workmanship and finish (*see* **7**). If the number of stitch regulators 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 those characteristics.