

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

कृषि ट्रैक्टरों के लिए ड्रॉबार - लिंक टाइप - विशिष्टता

(आईएस 12953 का पहला पुनरीक्षण)

Draft Indian Standard

**DRAWBAR FOR AGRICULTURAL
TRACTORS - LINK TYPE - SPECIFICATION**

(first revision of IS 12953)

ICS 65.060.10

FOREWORD

Formal clause will be added later

Link type drawbars are used in lower links of three-point linkage of agricultural wheeled tractors for pulling the implements and trailers. The dimensions and other characteristics of this type of drawbar differ considerably. Consequently, the users of tractors experience difficulty in securing their implements.

This standard was first published in 1990 with a view to regulate the uniformity and the quality of the indigenous production of the drawbars and ensure interchangeability which superseded the earlier published IS 9545 (Part 1): 1980 'Drawbar for agricultural tractors: Part 1 Link type', covering the provision of this type of drawbar.

The standard is being revised to align the requirements with [IS 17231 : 2019 'Agricultural Wheeled Tractors — Rear-Mounted Three-Point Linkage — Categories 1N, 1, 2N, 2, 3N, 3, 4N and 4'](#).

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: ~~1960~~ 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

DRAWBAR FOR AGRICULTURAL TRACTORS - LINK TYPE – SPECIFICATION

(first revision)

1 SCOPE

1.1 This standard specifies material, dimensions and other requirements for link type drawbar for agricultural wheeled tractors.

2 REFERENCES

The standards given below contain provisions which through reference in this text, constitute provisions 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 editions of the standards indicated below:

IS No	Title
1852 : 1985	Specification for rolling and cutting tolerances for hot rolled steel products (fourth revision)
17231 : 2019	Agricultural Wheeled Tractors — Rear Mounted Three Point Linkage — Categories 1N, 1, 2N, 2, 3N, 3, 4N and 4

3 MATERIAL

3.1 Materials used for the manufacture of drawbar shall have a minimum tensile strength of 685 MN/m² (70 kgf/mm²)

4 HARDNESS

4.1 The hardness of the material shall be minimum 212 HB.

5 DIMENSIONS

5.1 All the dimensions mentioned in fig 1, shall confirm to table 1.

5.2 The minimum value of chamfer (see R in Fig. 1) shall be 3 mm.

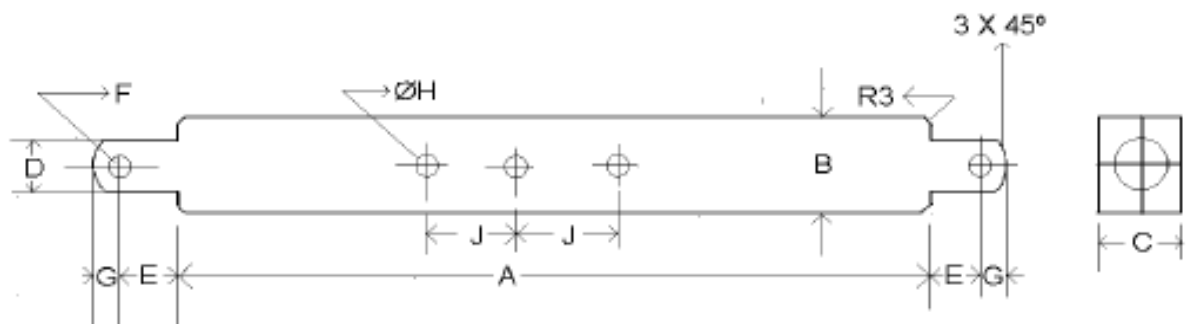


FIG. 1 LINK TYPE DRAWBAR

Table 1: Dimensions of Link Type Linkage Drawbar Parameters (Dimensions in millimetre)

Notation	Cat 1N	Cat 1	Cat 2N	Cat 2	Cat 3N	Cat 3	Cat 4N	Cat 4
A	400 ± 1.5	683 ± 1.5	683 ± 1.5	825 ± 1.5	825 ± 1.5	965 ± 1.5	952 ± 1.5	1166.5 ± 1.5
B*	75 (-2)	75 (-2)	75 (-2)	75 (-2)	80 (-2)	80 (-2)	85 (-2)	85 (-2)
C*	30 (-1.5)	30 (-1.5)	30 (-1.5)	30 (-1.5)	32 (-1.5)	32 (-1.5)	34 (-1.5)	34 (-1.5)
D φ	21.79 to 22.0	21.79 to 22.0	27.79 to 28.0	27.79 to 28.0	36.39 to 36.6	36.39 to 36.6	49.7 to 50.8	49.7 to 50.8
E	39.0 (min)	39.0 (min)	49.0 (min)	49.0 (min)	52.0 (min)	52.0 (min)	68.0 (min)	68.0 (min)
F φ	12.0 (min)	12.0 (min)	12.0 (min)	12.0 (min)	12.0 (min)	12.0 (min)	17.0 (min)	17.0 (min)
G	15.0 (min)	15.0 (min)	15.0 (min)	15.0 (min)	20.0 (min)	20.0 (min)	25.0 (min)	25.0 (min)
H φ	25 ± 1	25 ± 1	25 ± 1	25 ± 1	33 ± 1	33 ± 1	33.0 (min)	33.0 (min)
J	80 ± 1.5	80 ± 1.5	80 ± 1.5	80 ± 1.5	80 ± 1.5	80 ± 1.5	80 ± 1.5	80 ± 1.5
No. of holes	5	7	7	9	9	11	10 (min)	10 (min)

** For B & C, value higher than mentioned in table 1 shall also be acceptable considering special implements.*

6 WORKMANSHIP AND FINISH

6.1 The surface of the drawbar shall be smooth and free from cracks, pits, burrs and other visual defects. Sharp corners shall be avoided.

7 MARKING AND PACKING

7.1 Marking

The drawbar may be marked with the following particulars:

- a) Indication of the source of manufacture,
- b) Batch or code number, and
- c) Category.

7.1.1 The drawbar may also be marked with the Standard Mark, details of which may be obtained from the Bureau of Indian Standards.

7.2 Packing

The drawbar shall be packed as agreed to between the purchaser and the supplier.

Annex A - Reference data for tolerance as per IS 1852: 1985

(For discussion only, NOT to be send for printing)

IS 1852 :1985 SPECIFICATION FOR ROLLING AND CUTTING TOLERANCES FOR HOT-ROLLED STEEL PRODUCTS

6. ROLLING TOLERANCE FOR FLATS

6.1 Width — The tolerances on width of flats shall be as follows:

<i>Width</i>		<i>Tolerance</i>
Over	Up to and including	
mm	mm	mm
—	50	+ 1.0
50	75	± 1.5
75	100	± 2.0
100	—	± 2 percent subjected to a maximum of 6.0 mm

6.2 Thickness — The tolerances on thickness of flats shall be as follows:

<i>Thickness</i>	<i>Tolerance</i>
mm	
Up to and including 12	± 0.5 mm
Over 12	± 4 percent subject to a maximum of 1.5 mm