### भारतीय मानक Indian Standard

मॉड्यूलर लोअर लिंब के ऑर्थोटिक घटक — विशिष्टि भाग 3 रकाब प्लेटें

IS 9471 (Part 3): 2024

(पहला पुनरीक्षण)

# Modular Lower Limb Orthotic Components — Specification Part 3 Stirrup Plates

(First Revision)

ICS 11.180.01

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Artificial Limbs, Rehabilitation Appliances and Equipment for the Persons with Disability Sectional Committee, MHD 09

#### **FOREWORD**

This Indian Standard (Part 3) (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Artificial Limbs, Rehabilitation Appliances and Equipment for the Persons with Disability Sectional Committee had been approved by the Medical Equipment and Hospital Planning Division Council.

This standard was first published in 1980. This revision of this standard has been brought out to align the cross references to the latest standards to incorporate the updated designation of steel and the currently used methods of performance and corrosion resistance. This revision includes the following amendments to IS 9471 (Part 3): 1980.

- a) Amendment no. 1 July 1993;
- b) Amendment no. 2 September 1994; and
- c) Amendment no. 3 April 2012.

The composition of the Committee, responsible for the formulation of this standard is given in Annex A.

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 same as that of the specified value in this standard.

#### Indian Standard

## MODULAR LOWER LIMB ORTHOTIC COMPONENTS — SPECIFICATION

#### PART 3 STIRRUP PLATES

(First Revision)

#### 1 SCOPE

This standard (Part 3) specifies the dimensional and other requirements of stirrup plates for modular lower limb braces.

#### 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 edition of these standards:

IS No. Title

IS 513 (Part 1): Cold reduced carbon steel sheet 2016 and strip: Part 1 Cold Forming

and drawing purpose (sixth

revision)

IS 1079: 2017 Hot rolled carbon steel sheet,

plate and strip - Specification

(seventh revision)

IS 1573:1986S Specification for electroplated

coatings of zinc on iron and steel

(second revision)

#### 3 SHAPE AND DIMENSIONS

The stirrup plates shall be in three sizes to suit the three sizes of split stirrup. The stirrup plate shall be as shown in Fig. 1.

#### 4 MATERIAL

#### 4.1 Plate

Mild steel sheet/strip cold rolled annealed Grade CR1 of IS 513 (Part 1) or hot rolled annealed Grade HR1 of IS 1079, thickness 1.6 mm.

#### 4.2 Channel

Mild steel sheet/strip cold rolled Grade CR1 of IS 513 (Part 1) or hot rolled annealed Grade HR1 of IS 1079, thickness 1.6 mm.

#### **5 FABRICATION**

The stirrup plate shall consist of a plate and a channel which could be integral or in two pieces. In case of two-piece construction, the plate and the channel shall be welded or brazed along the entire length. In case of integral construction, the channel shall be covered by a simple strip welded throughout its length. The strength of welded/brazed joint shall be not less than 50 kg/mm<sup>2</sup>.

#### 6 WORKMANSHIP AND FINISH

All sharp edges shall be deburred. Welded/brazed joints shall be dressed smooth. The stirrup plates shall be free from tool marks, scales, pittings and other surface flaws. The stirrup plates shall be zinc plated to Grade I (FeZn5) of IS 1573.

#### 7 MARKING

**7.1** The stirrup plate shall be marked with the manufacturer's name, initials or recognized trade mark along with size and Identification of right or left.

#### 7.2 BIS Certification Marking

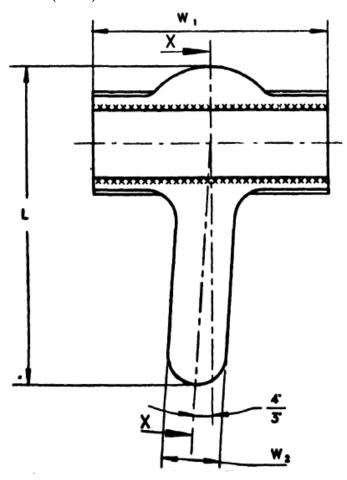
The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed there under, and the product(s) may be marked with the Standard Mark.

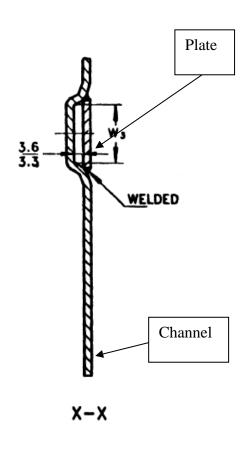
#### 8 PACKING

The stirrup plates shall be packed in polyethylene bags and ends heat-sealed.

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 $\begin{aligned} & \text{All dimensions in millimetres.} \\ & \text{Fig. 1 Stirrup Plate} \end{aligned}$ 

Sl No.	Size	L ± 3	$W_1 \pm 3$	$W_2 \pm 2$	$W_{3}^{+0.3}_{-0}$
(1)	(2)	(3)	(4)	(5)	(6)
i)	1	75	60	15	12
ii)	2	90	70	20	16
iii)	3	105	80	20	20

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#### ANNEX A

(Foreword)

#### COMMITTEE COMPOSITION

Artificial Limbs, Rehabilitation Appliances and Equipment for the Persons with Disability Sectional Committee, MHD 09

Organization	Representative(s)
Organization	Representative(s)

All India Institute of Medical Sciences, New Delhi DR SANJAY WADHWA (Chairperson)

All India Institute of Medical Sciences, New Delhi SHRI AJAY BABBAR

SHRI ANIL KUMAR (Alternate)

Artificial Limbs Manufacturing Corporation of India, SHRI A. K. SINGH

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SHRI VISHAL SHUKLA (Alternate I) SHRI PRASHANT THAKUR (Alternate II)

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Rehabilitation, Mumbai DR THIRUNAVUKKARASU P. (Alternate)

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#### **Amendments Issued Since Publication**

Amend No.	Date of Issue	Text Affected	

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