

**BUREAU OF INDIAN STANDARDS**

**DRAFT FOR COMMENTS ONLY**

*(Not to be reproduced without permission of BIS or used as an Indian Standard)*

भारतीय मानक मसौदा  
**प्रोस्थेटिक्स और ऑर्थोटिक्स – अंग का अभाव**  
भाग 1: जन्म के समय मौजूदा अंग की कमियों का वर्णन करने की रीति

*Draft Indian Standard*  
**Prosthetics and orthotics — Limb deficiencies**  
Part 1: Method of describing limb deficiencies present at birth

**[ICS 11.040.40]**

---

Assistive Products including Rehabilitation      Last date for comments: 26 September 2025  
Appliances, Orthotic and Prosthetic Items  
Sectional Committee, MHD 09

---

**NATIONAL FOREWORD**

*(Adoption clause will be added later)*

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’
- Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their respective places are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 8549-1: 1989, Prosthetics and orthotics— Vocabulary - Part 1: General terms.	IS 13970 (Part 1) : 2023/ISO 8549-1: 2020 Prosthetics and orthotics Vocabulary Part 1 General terms for external limb prostheses and external orthoses ( <i>first revision</i> )	Identical

ISO 8549-2: 1989, Prosthetics and orthotics – Vocabulary – Part 2: Terms relating to external limb prostheses and wearers of these prostheses.	IS 13970 (Part 2): 2023/ISO 8549-2: 2020 Prosthetics and orthotics Vocabulary Part 2 Terms relating to external limb prostheses and wearers of these prostheses ( <i>first revision</i> )	Identical
--	---	-----------

## Scope

This part of ISO 8548 establishes a method for describing deficiencies of the upper and lower limbs present at birth.

It describes only those bone deficiencies that are due to a failure of formation of parts, and it does so on anatomical and radiological bases. No attempt has been made to attribute any etiological or epidemiological factors.

## Introduction

Prior to 1961 there was little or no agreement over the terms used to describe congenital skeletal limb deficiencies. In that year Frantz and O'Rahilly published a classification in USA which attempted to provide a comprehensive system of nomenclature. At the same time a different system was in use in Europe. Although both systems used terms derived from Greek roots there was little similarity. A revision of the US classification by Burtch in 1966 attempted to bridge the gap, but has been used as a third system rather than as a revised version. In 1969 Henkel and Willert produced a systemization of the German nomenclature based on a progression in the severity of the defect.

Against this background the International Society for Prosthetics and Orthotics formed an international working party in 1973 whose task was to produce a single acceptable classification. Early agreement was reached that this should apply only to those deficiencies which result from a failure of formation of parts, and should describe them in simple anatomical terms avoiding words derived from Greek or Latin roots. This working party (usually known as the Kay Committee after its Chairman, the late Hector Kay) produced such a classification which was tested in a number of centres. In brief, it describes all such deficiencies as either "transverse" or "longitudinal". The former includes all those in which the affected limb has developed proximodistally to a particular level beyond which no skeletal elements exist, and thus the limb resembles an amputation stump. Such deficiencies are described by the level at which the limb terminates: The longitudinal type of deficiency includes all other deficiencies in which one or more bones may be partially or totally absent, and in this case the absent bone(s) are individually named.

Users of this International Standard are also advised of the WHO International Classification of Impairments, Disabilities and Handicaps, published by the World Health Organization, Geneva, 1980.

---

The technical content of the document has not been enclosed as it is identical with the corresponding ISO standard. For details, please refer to ISO 8548-1: 1989 or kindly contact:

Head,  
Medical Equipment and Hospital Planning Department  
Bureau of Indian Standards  
9 Bahadur Shah Zafar Marg  
New Delhi-110002  
Email: [mhd@bis.gov.in](mailto:mhd@bis.gov.in)  
[hmhd@bis.gov.in](mailto:hmhd@bis.gov.in)