

Lower limb orthoses —

Part 2: Specification for hip, knee and ankle joints for lower limb orthoses

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Health and Environment Sector Board to Technical Committee HCC/9, upon which the following bodies were represented:

- British Institute of Surgical Technologists
- British Limbless Ex-service Men’s Association
- British Medical Association
- British Orthopaedic Association
- British Plastics Federation
- British Surgical Trades Association
- Chartered Society of Physiotherapy
- College of Occupational Therapists
- Consumer Policy Committee of BSI
- Department of Health
- Disablement Services Authority
- International Society for Prosthetics and Orthotics (United Kingdom National Society)
- National Centre for Training and Education in Prosthetics and Orthotics
- Opportunities for the Disabled
- Orthotic and Prosthetic Training and Education Council (OPTEC)
- Royal College of Nursing and National Council for Nurses of the United Kingdom
- Royal College of Surgeons of Edinburgh
- Royal College of Surgeons of England
- SATRA Footwear Technology Centre
- Scottish Home and Health Department
- Scottish Office
- Society of Chiropractors and Pediatricists
- Surgical Appliance Manufacturers’ Association

This British Standard, having been prepared under the direction of the Health and Environment Sector Board, was published under the authority of the Standards Board and comes into effect on 15 December 1994

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Foreword

This Part of BS 2574 has been prepared under the direction of the Health and Environment Sector Board. It supersedes BS 2574-2:1985 and BS 2931:1957, which are withdrawn.

The other Parts of BS 2574 are currently as follows:

- *Part 1: Guide to the design and manufacture of lower limb orthoses (excluding foot orthoses);*
- *Part 3: Method for the determination of mechanical properties of metal knee joints and side member assemblies.*

BS 2574 was first published in 1955 as *Specification for component parts of temporary unjointed orthopaedic calipers*. Subsequently, separate British Standards were issued dealing with knee joints, ankle joints, leather components and aluminium alloy orthoses. The first revision of BS 2574 was published in 1977 as BS 2574-1, which incorporated the relevant requirements of those separate standards and specified basic design requirements, including those for steel and aluminium alloy side members for unjointed knee-ankle-foot orthoses. Part 1 was withdrawn in 1984 until an extensive revision of that standard could be published in 1991.

The first edition of Part 2 of BS 2574, which was published in 1985, superseded both BS 2932:1957 and BS 3563:1962. It differed from those standards in that it specified neither a particular design of joint nor the materials to be used but established general requirements within which the manufacturer of the joint could exercise experience, expertise and innovation with respect to design and execution. The 1985 edition also introduced the modern terminology for orthopaedic appliances in which the type of orthosis is described by the anatomical joints that it encompasses, the description being abbreviated where necessary by the formulation of acronyms from the initial letters of the names of the joints in the English language. The standardization of this terminology has now been established by the International Organization for Standardization (ISO) and is published in BS 7313.

The Technical Committee responsible for the preparation of BS 2574-2 has found it possible neither to specify the amount of medio-lateral free play in knee joints nor to devise a method of test to measure it with sufficient accuracy and precision. The condition in which the joint assembly is to be supplied (including the permissible amount of free movement) is to be specified by the purchaser (see clause 4). Information to be exchanged between the supplier(s) of materials and castings, and the joint manufacturer is detailed in Annex A.

Type testing of knee joint assemblies is specified, but values for test results are not specified. This is to leave the orthotist free to order joints with the specific properties required for individual patients. Testing of other joint assemblies is not specified, as a standard giving the required test methods has yet to be developed.

This revision of BS 2574-2 also constitutes a revision of BS 2931 *Specification for steel ankle joints for steel orthopaedic appliances* which was first published in 1957. It essentially up-dates the performance requirements of both standards, and also extends the application to hip joints. This Part of BS 2574 is aligned where possible with the recently published Parts 1 and 3 of the standard.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing product surveillance which may be coupled with assessment of a supplier's quality systems against the appropriate standard in the BS EN ISO 9000 series.