BRITISH STANDARD

BS 5205:1990

Specification for

Adjustable metal walking sticks

UDC 685.557 – 182.7:615.477.27

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Health Care Standards Policy Committee (HCC/-) to Technical Committee HCC/38, upon which the following bodies were represented:

Association of National Health Service Supplies Officers
British Investment Casting Trade Association
British Medical Association
British Surgical Trades Association
Chartered Society of Physiotherapy
College of Occupational Therapists
Consumer Policy Committee of BSI
Department of Health
Disabled Living Foundation
Disablement Services Authority
Royal Association for Disability and Rehabilitation
Royal College of Nursing and National Council for Nurses of the United Kingdom
Coopted members

This British Standard, having been prepared under the direction of the Health Care Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 30 November 1990

First published April 1975
Second edition November 1990

The following BSI references relate to the work on this standard:
Committee reference HCC/38
Draft for comment 89/53821 DC

ISBN 0 580 18421 8

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

Foreword

This British Standard has been prepared under the direction of the Health Care Standards Policy Committee and supersedes BS 5205:1975, which is withdrawn.

BS 5205 was first published in 1975 and gave requirements for adjustable metal walking sticks based on tests carried out on various types of walking stick that had been found to be satisfactory in use. It was amended in 1985 by the publication of AMD 4707, which introduced a number of minor changes.

This edition of BS 5205 incorporates the published amendment and introduces technical changes to bring the standard up-to-date, but it does not reflect a full review of the standard, which will be undertaken in due course. This edition introduces a wider range of surface finishes for aluminium walking sticks and components, a greater range of length adjustment and requirements for marking the walking stick with the year of manufacture and the batch number.

Attention is drawn to the Manufacturer's Registration Scheme administered by the Department of Health.

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 surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 4, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements and performance tests for metal walking sticks of adjustable height.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definition

For the purposes of this British Standard, the following definition applies.

handle

that part of the walking stick which is normally held in the hand when the stick is in use

3 Construction

3.1 General

Each walking stick shall comprise:

a) telescoping members, with means of length adjustment, a locking device and an "anti-rattle" device;

b) a handle;

c) a non-slip foot rubber.

3.2 Welding or brazing

Where welding or brazing is used in the fabrication it shall be carried out in accordance with the requirements of BS 1723, BS 1724, BS 3019 or BS 5135 as appropriate.

4 Telescoping members

4.1 The telescoping members shall be an easy running fit. The "anti-rattle" device shall provide damping friction between the telescoping members.

4.2 At maximum adjustment the internal and external telescoping members shall have a minimum overlap as shown in Table 1.

4.3 The holes for adjustment shall be jig drilled or precision punched to provide increments, as shown in Table 1, to give the range of adjustments referred to in **4.4**.

4.4 The minimum and maximum heights obtainable using the means provided for adjustment, measured from the bottom of the metal stick to the top of the handle, shall be as shown in Table 1.

4.5 Adjustment devices (see clause **6**) shall be so arranged that positive locking is provided at each increment.

5 Handle

5.1 The handle shall be firmly secured to, or integral with, the upper telescoping member.

5.2 The handle shall have the length and, if cylindrical, the diameter, given in Table 1.

NOTE 1 Handles may be of integral construction or may consist of a shaft fitted with a separate handgrip.
NOTE 2 Handles may be cylindrical or contoured.

6 Adjusting devices

6.1 The device for locking the adjustment of the telescoping members shall be positive.

6.2 The preferred type of locking arrangement is that consisting of a steel "U" spring, fitted at each end with a button of stainless steel or plated mild steel. The design of the button shall be such that adjustment may readily be made without the use of tools and the shape of the outer end of the button shall be hemispherical.

7 Foot rubber

7.1 Sticks shall be supplied with a foot rubber.

7.2 The foot rubber shall be pliable, have a hardness between 45 IRHD and 60 IRHD when tested in accordance with the method described in BS 903-A26, be moulded with a suitable tread not less than 2 mm deep and afford adequate grip.

7.3 The foot rubber shall be an interference fit on the stick.

7.4 The foot rubber shall have a tread diameter of at least 10 mm greater than the internal diameter of the foot rubber.

7.5 An insert shall be incorporated into the foot rubber to prevent the end of the stick piercing the foot rubber. The thickness of rubber, excluding the tread, below this insert shall not be less than 6 mm.

8 Mass

The mass of the stick, including the foot rubber, shall not exceed 700 g.

9 Finish

9.1 General

All parts of the stick shall be free from sharp edges or projections that could cause damage to clothing or discomfort to the user.

9.2 Main members

9.2.1 *Stainless steel.* Stainless steel shall be of bright-drawn, matt or polished finish.

9.2.2 *Mild steel.* Mild steel shall be one of the following:

a) chromium plated in accordance with service condition no. 2 of BS 1224; or

b) stove enamelled in accordance with the process recommended by the manufacturers of the enamel; or

c) plastics coated to a standard of durability at least equal to the finishes specified in a) and b).

The resulting finish shall not readily chip or flake.

The external surface of the internal telescoping member shall be electroplated.

9.2.3 *Aluminium alloy*. Aluminium alloy shall have a surface coating.

NOTE The purpose of the coating is to prevent discoloration of the skin and clothes of the user that might otherwise occur owing to the transfer of aluminium compounds from the component.

If the coating is an anodic oxidation coating, it shall be of thickness grade AA3 or greater, specified in accordance with BS 1615.

9.3 Fittings

9.3.1 All mild steel components shall be electroplated with zinc to classification no. Zn3 or Cd3 of BS 1706 or with nickel and chromium to BS 1224 service condition no. 2.

9.3.2 Aluminium alloy components shall have a surface coating.

NOTE The purpose of the coating is to prevent discoloration of the skin and clothes of the user that might otherwise occur owing to the transfer of aluminium compounds from the component.

If the coating is an anodic oxidation coating, it shall be of thickness grade AA3 or greater, specified in accordance with BS 1615.

10 Performance requirements

10.1 Static loading

When the stick is tested by the method described in **A.2**, the performance of the adjustment device shall not be significantly affected nor shall the adjustment device become insecure as a result of the test. The maximum deflection of any part of the stick when under load shall not exceed 12 mm and there shall be no permanent set in any part after the load is removed.

10.2 Cyclic loading

When tested by the method described in **A.3** the stick shall not be damaged to a degree which would render it unsafe in use. Wear on the handle and foot rubber shall not be considered as damage for the purposes of this test.

11 Marking

Sticks complying with this British Standard shall be clearly and indelibly marked with the following:

a) the year of manufacture;

b) the batch number;

c) the manufacturer's name or other means of identification;

d) the number of this British Standard, i.e. BS 5205[1)].

Direct punch marking on the stick shall not be used.

Table 1 — Dimensions

Feature	References in Figure 1	Dimensions
		mm
Height when adjusted to maximum height (see **4.4**)	*A*	965 min.
Height when adjusted to minimum height (see **4.4**)	*B*	710 max.
Increments of height adjustment	*C*	25 max.
Minimum length of handle (see **5.2**)	*D*	100
Minimum diameter of handle, if cylindrical	*E*	30
Minimum overlap of telescoping members (see **4.2**)	*F*	65

[1)] Marking BS 5205 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

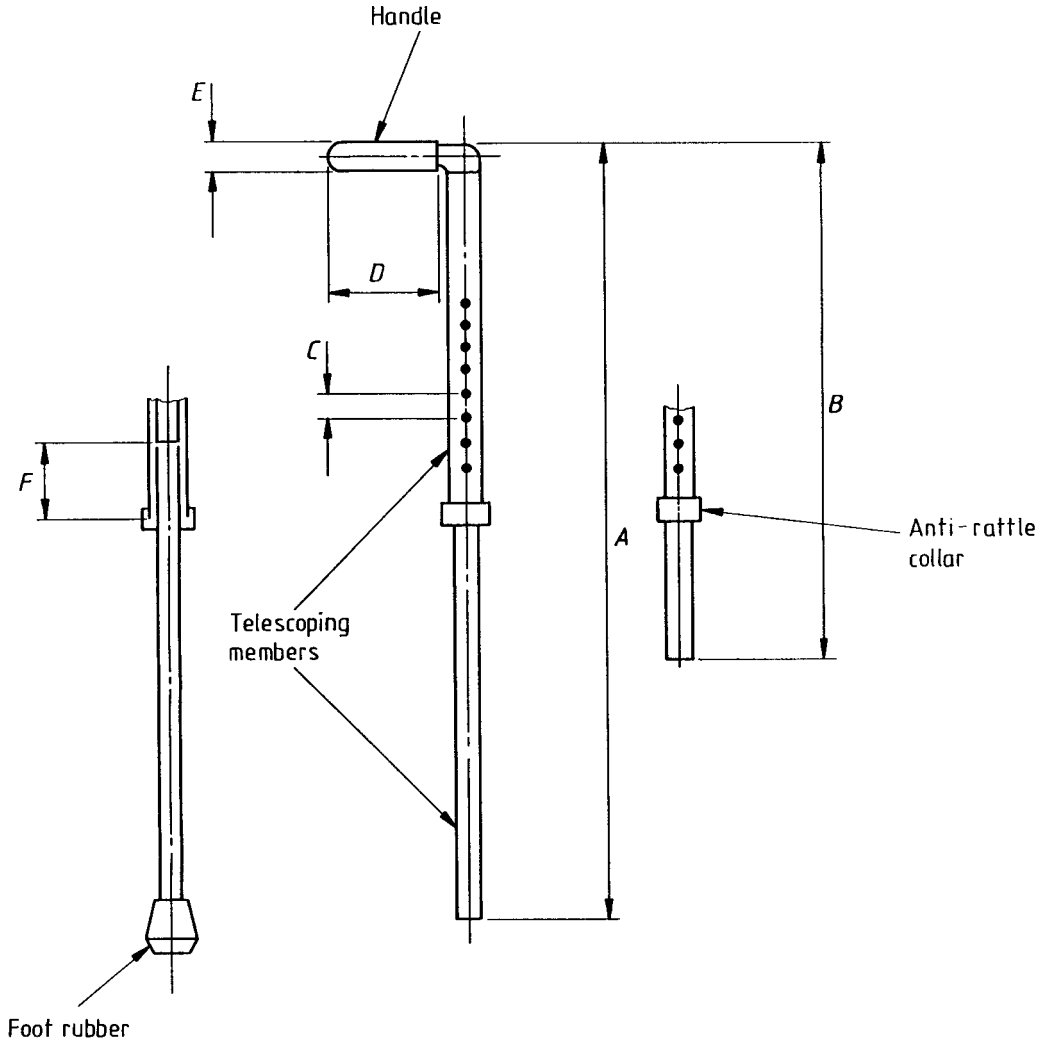

Figure 1 — Metal walking stick

Appendix A Methods of test

A.1 General conditions of testing

A.1.1 The stick shall be set for maximum height.

A.1.2 The accuracy of dimensional measurement shall be ± 2 mm.

A.1.3 The accuracy of load measurements shall be ± 1 %.

A.1.4 The rate of application of the load shall be such that there is no significant risk of shock.

A.1.5 All tests shall be carried out with the foot rubber in position.

A.1.6 Immediately before being tested, each stick shall be inspected to check the dimensions and to note and record any apparent defects in the stick so that they are not later recorded as having been caused by the tests.

A.2 Static loading test

A.2.1 Examine the performance of the adjustment device before and after this test.

A.2.2 Place the stick upright on a level surface and apply a load of 40 kg to the centre of the handle. Measure the maximum deflection of any part of the stick due to this loading.

A.2.3 Remove the load after 5 min and after a further 10 min measure the set.

A.3 Cyclic loading test

A.3.1 Place the stick upright on a level surface.

A.3.2 Apply a force of 200 N vertically to the handle. Apply and remove this force 500 000 times at a frequency of between 20 cycles/min and 40 cycles/min.

Publications referred to

BS 903, *Methods of testing vulcanized rubber.*
BS 903-A26, *Determination of hardness.*
BS 1224, *Specification for electroplated coatings of nickel and chromium.*
BS 1615, *Method for specifying anodic oxidation coatings on aluminium and its alloys.*
BS 1706, *Specification for electroplated coatings of cadmium and zinc on iron and steel.*
BS 1723, *Brazing.*
BS 1724, *Specification for bronze welding by gas.*
BS 3019, *TIG welding.*
BS 5135, *Specification for arc welding of carbon and carbon manganese steels.*
BS 5750, *Quality systems*[2)].

[2)] Referred to in the foreword only.

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