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Specification for

Castors for hospital equipment

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Health Care Standards Committee (HCC/-) to Technical Committee HCC/33, upon which the following bodies were represented:

- Association of Anaesthetists of Great Britain and Ireland
- Association of Clinical Pathologists
- British Medical Association
- British Surgical Trades Association Incorporated
- Castor Manufacturers' (UK) Association
- Department of Health and Social Security
- Department of the Environment (Property Services Agency)
- Joint Committee of Professional Nursing, Midwifery and Health Visiting Associations (England)
- Malaysian Rubber Producers' Research Association
- National Association of Theatre Nurses
- National Health Services
- Royal College of Nursing and National Council for Nurses of the United Kingdom
- Royal College of Surgeons of England

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 Dimensions of castors and top plates	1
4 Means of attachment	1
5 Performance	1
6 Antistatic castors	2
7 Identification and marking	2
Appendix A Method of test for swivel locking of total lock and directional lock castors	6
Appendix B Method of test for wheel lock	6
Appendix C Method of test for tyre wear, wheel rock and swivel rock	6
Appendix D Method of test for electrical resistance	8
Figure 1 — Typical swivel castor	3
Figure 2 — Typical swivel castor with a centrally-operated directional or total lock	5
Figure 3 — Test apparatus for total lock, directional lock and wheel lock	7
Figure 4 — Section through hazard	8
Figure 5 — Wheel rock	8
Figure 6 — Swivel rock	8
Table 1 — Dimensions of all castors, except for swivel castors with a centrally-operated directional or total lock	2
Table 2 — Dimensions of swivel castors with a centrally-operated directional or total lock	4
Table 3 — Dimensions of top plates	5
Table 4 — Maximum wheel rock and swivel rock	5
Table 5 — Test loads and running times	6
Publication referred to	Inside back cover

Foreword

This British Standard has been prepared under the direction of the Health Care Standards Committee. It supersedes BS 2099-1:1970, which is withdrawn. This standard was originally published as BS 2099 and revised in 1970 as Part 1 because, at that time, the intention was to issue further Parts to specify requirements for castors for other purposes. Although that is still the intention, these standards will not now be published as Parts of BS 2099. The Part number has therefore been dropped.

A number of changes have been made to the standard to bring its requirements into line with current practice and the main changes made from the previous edition are as follows.

- a) The scope of the standard has been restricted to castors with wheels having diameters from 63 mm to 250 mm.
- b) The lightweight class of castor has been deleted together with the drive plug type of fitting as this was only used on lightweight castors.
- c) Requirements have been included for castors with a centrally-operated directional or total lock system. Test methods for the locking system have also been introduced.
- d) Requirements are no longer included for materials and finish.
- e) The identification code for castors has been expanded to encompass different locking systems and it is now required that all castors are marked with an identification code.

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.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, 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 for castors having diameters from 63 mm to 250 mm intended for use on items of hospital equipment used for the transport of patients, equipment that is frequently mobile in use and equipment used within the operating theatre, for example patient trolleys, beds, cylinder trolleys and instrument trolleys.

Castors intended for use on hospital furniture which is used only on the ward and which is infrequently mobile, for example bedside lockers and four fold screens, together with castors intended for use on heavy mobile equipment, for example portable X-ray machines and food trolleys, are outside the scope of this standard.

NOTE The title of the publication referred to in this standard is given on the inside back cover.

2 Definitions

For the purposes of this British Standard, the following definitions apply.

2.1

swivel castor

a castor that is free to swivel without restriction about its vertical axis

2.2

fixed castor

a castor that cannot swivel about its vertical axis

NOTE Fixed castors are also known as fixed wheel brackets, rigids, stationary castors and non-swivel castors.

2.3

inclined axle castor

a castor having an axle inclined to the horizontal plane

2.4

twin wheel castor

a castor comprising two wheels that are free to rotate independently

2.5

swept radius

the radius of the circle produced by the outer edge of the wheel of a swivel castor, when swivelling about its vertical axis, measured through the horizontal plane of the axle

NOTE Wheel locks, swivel locks and brake fittings may project beyond the swept radius.

2.6

wheel lock

a device that immobilizes the wheel and is applied when stationary

2.7

directional lock

a device that immobilizes only the swivel action of a swivel castor in each of two positions at 180° to each other

2.8

total lock

a device that immobilizes both the wheel rotation and swivel action and is applied when stationary

3 Dimensions of castors and top plates

3.1 Except for swivel castors with a centrally-operated directional or total lock, the dimensions of castors shall be as given in Table 1.

3.2 The dimensions of swivel castors with a centrally-operated directional or total lock shall be as given in Table 2.

3.3 For castors with plate fittings, the dimensions of top plates shall be as given in Table 3.

4 Means of attachment

The means of attachment of castors to equipment shall be by one of the following fittings:

- a) solid plug;
- b) expansile plug;
- c) screw plug;
- d) plate;
- e) bolt.

5 Performance

5.1 Swivel and movement on lock

5.1.1 For castors with total lock and directional lock, when tested as described in Appendix A, there shall be no movement of the swivel.

5.1.2 For castors with total lock and wheel lock, when tested as described in Appendix B, there shall be no movement of the wheel.

5.2 Tyre wear, wheel rock and swivel rock

When tested as described in Appendix C, all castors shall comply with the following requirements.

- a) The reduction in wheel diameter shall not exceed 3 % of the original diameter.
- b) The maximum wheel rock shall be as given in Table 4.
- c) For swivel castors, the maximum swivel rock shall be as given in Table 4.

For castors with a total lock, directional lock or wheel lock, the test described in Appendix C shall be carried out after testing for compliance with the requirements given in 5.1.1 and/or 5.1.2, as appropriate.