
**Castors and wheels — Requirements for
castors for furniture**

Roues et roulettes — Exigences pour roulettes pour meubles

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 22879:2004

<https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 22879:2004

<https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Dimensions and classification	1
4.1 Characteristics	1
4.2 Fixing system	1
4.3 Castor type	2
4.4 Dimensions	3
4.5 Performance level	4
5 Requirements for testing	4
5.1 General	4
5.2 Standard conditions	4
5.3 Impact performance	5
5.4 Electrical resistance test	6
5.5 Manual locking devices	6
5.6 Dynamic test	7
5.7 Rolling resistance	8
5.8 Swivel resistance	8
5.9 Static load performance	9
5.10 Stem retention	10
6 Conformity	10
7 Marking	10
7.1 Product marking	10
7.2 Marking of electrically conductive or antistatic castors/wheels	11
Bibliography	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22879 was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 3, *Castors and wheels*.

iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 22879:2004

<https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

Castors and wheels — Requirements for castors for furniture

1 Scope

This International Standard specifies the technical requirements, the appropriate dimensions and the requirements for testing of castors for furniture.

It is applicable to castors for general furniture applications, but specifically excludes those for swivel chairs and other specialized applications.

NOTE Castors for swivel chairs are specified in ISO 22880.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22877, *Castors and wheels — Vocabulary, symbols and multilingual terminology*

ISO 22878:2004, *Castors and wheels — Test methods and apparatus*
<https://standards.iteh.ai/catalog/standards/sist/42341602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22877 apply. Symbols are given in ISO 22878:2004, Annex A.

4 Dimensions and classification

4.1 Characteristics

The characteristics of a castor are

- fixing system,
- castor type,
- dimensions, and
- performance level.

4.2 Fixing system

The fixing system includes the top plates, stem and circlip, threaded stem and other fixing systems.

Fixings shall be chosen with reference to the application of the castor.

4.3 Castor type

4.3.1 General

Castors are classified into four types (H, W, C and S). These all apply to the castor designs illustrated in Figures 1 to 3.

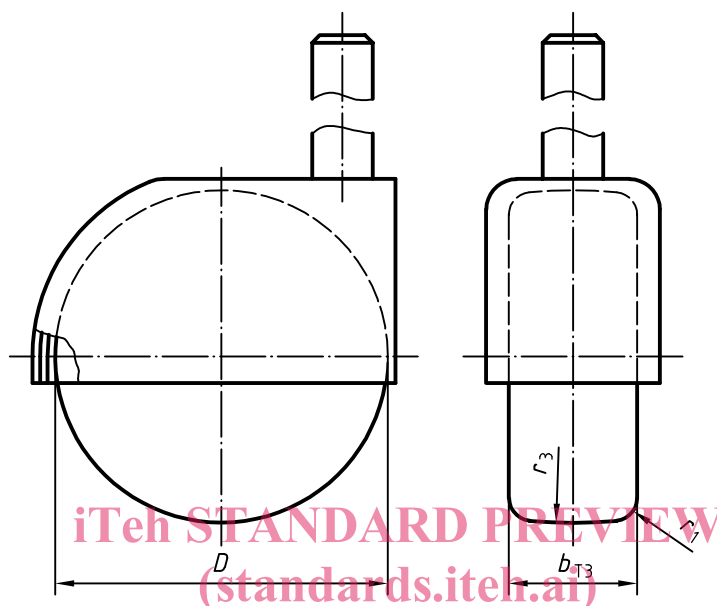


Figure 1 — Single-wheel swivel castor
<https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

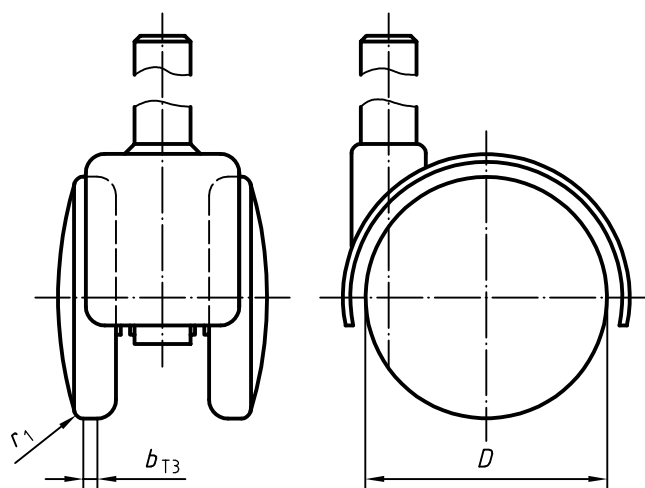


Figure 2 — Twin-wheel swivel castor

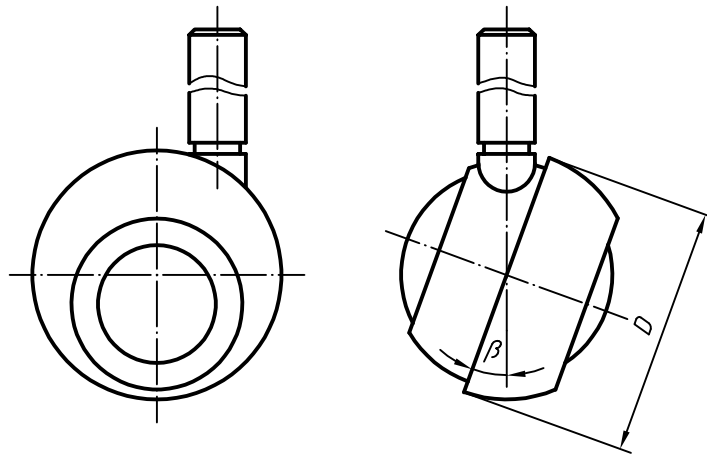


Figure 3 — Inclined axle castor

4.3.2 Type H

Castors with plain wheels are defined as Type H, hard tread.

These castors are suitable for carpeted floors.

4.3.3 Type W

Castors with resilient tyred wheels are defined as Type W, soft tread.

These castors are suitable for hard stone, wooden or tiled floors, or those featuring non-textiled covering.

4.3.4 Type C

These castors are electrically conductive. Type C castors may have a hard or soft tread.

These castors should have either modified Type H or Type W wheels.

4.3.5 Type S

These are inclined axle castors.

4.4 Dimensions

Figures 1 to 3 show typical castor designs. Table 1 shows the specified dimensions and the corresponding symbols.

Table 1

Dimensions in millimetres and angles in degrees

Description	Castor designs	Symbol	Dimension
Wheel diameter	all	D	min. 20
Tread width	single wheel castors	b_{T3}	min. 7,5
	twin wheel castors		min. 2×5
External corner radius	all	r_1	min. 1,5
Tread curvature	single wheel castors	r_3	min. 110
Angle of inclination	inclined axle castors	β	max. 25

The wheel(s) of a fixed castor shall conform to the dimensions shown in Figure 1, 2 or 3 (as appropriate).

4.5 Performance level

The requirements for castors will vary depending on the environment in which they are intended to be used. The levels are shown in Table 2.

Table 2

Level	Load capacity, F_{max} N
1	100
2	200
3	300
4	400

ISO 22879:2004
<https://standards.itech.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

5 Requirements for testing

5.1 General

Test apparatus and procedures shall be as specified in ISO 22878.

5.2 Standard conditions

5.2.1 Environmental conditions

Tests shall be carried out at a temperature between 17 °C and 23 °C. During the 24 h prior to the test, the samples shall remain at the specified temperature, in an environment with a relative humidity between 40 % and 70 %.

Samples shall not be artificially cooled during testing.

5.2.2 Test sequence

A new castor shall be taken and the impact test performed.

A second new castor shall be taken and the remaining tests performed in the sequence shown in Table 3.

Table 3

Reference in this International Standard	Test sequence	Castor designs	Test procedure given in ISO 22878:2004, subclause
5.3	Impact performance	all	4.12
5.4	Electrical resistance	Type C castors	4.4
5.5	Manual locking device	castors with manual locking devices	4.6
5.6	Dynamic	all	4.13
5.7	Rolling resistance	all	4.15
5.8	Swivel resistance	swivel castors	4.16
5.10	Stem retention	all	4.17
5.9	Static load	all	4.9

5.3 Impact performance

5.3.1 Test objectives, apparatus and procedures

These shall be as specified in ISO 22878:2004, 4.12.

5.3.2 Test values

Test values shall be as listed in Table 4. [ISO 22879:2004](https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004)
<https://standards.iteh.ai/catalog/standards/sist/4234f602-2ed6-461a-a0d8-cfd951fc41d7/iso-22879-2004>

Performance level	Mass of free-falling weight, m	Drop height, h_2
	kg	mm
1	2,5	150
2	5,0	150
3	5,0	200
4	5,0	300

5.3.3 Tolerances

The tolerances shall be as shown in Table 5.

Table 5

Symbol	Unit	Tolerance	
		Acceptable	Unit
m	kg	$\begin{matrix} +2\% \\ 0 \end{matrix}$	kg
h_2	mm	$\begin{matrix} +3 \\ 0 \end{matrix}$	mm

5.3.4 Acceptance criteria

No part of a castor shall become detached during the tests with the loads and drop heights specified in Table 4. On completion of the test, the rolling, pivoting or braking performance shall not be impaired.