
Wheelchairs —

Part 6:
**Determination of maximum speed of
electrically powered wheelchairs**

*Fauteuils roulants —
Partie 6: Titre manqué*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 173, *Assistive products*, Subcommittee SC 1, *Wheelchairs*.

This third edition cancels and replaces the second edition (ISO 7176-6:2001), which has been technically revised.

The main changes compared to the previous edition are as follows:

- requirements concerning acceleration, deceleration and speed on ramps have been removed.

A list of all parts in the ISO 7176 series can be found on the ISO website.

Introduction

Maximum speed can be an important factor in the selection of the most appropriate wheelchair for individual people.

Maximum speed can have an influence on whether an electrically powered mobility device may be used on or off footpaths, or both, depending upon local legislation. Some people's main concern may be to travel as fast as possible, whereas other people may be apprehensive of higher speeds. In addition, other tests in the ISO 7176 series may require the determination of maximum speed in order to carry out their procedures.

These tests specify a consistent method of determining maximum values of speed to provide comparable results.

Wheelchairs —

Part 6:

Determination of maximum speed of electrically powered wheelchairs

1 Scope

This document specifies test methods for determining the maximum speed of electrically powered wheelchairs, including scooters, intended to carry one person with a maximum nominal speed not exceeding 15 km/h (4,167 m/s) on a level surface.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 7176-11, *Wheelchairs — Part 11: Test dummies*

ISO 7176-13, *Wheelchairs — Part 13: Determination of coefficient of friction of test surfaces*

ISO 7176-15, *Wheelchairs — Part 15: Requirements for information disclosure, documentation and labelling*

ISO 7176-22, *Wheelchairs — Part 22: Set-up procedures*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Apparatus

4.1 Instrumentation, that may need to be added to the test dummy, in which case its mass shall not exceed 5 % of the total dummy mass.

4.2 Horizontal test plane, made up of a rigid, flat, horizontal surface of sufficient size to conduct the tests and with a coefficient of friction that meets the requirements of ISO 7176-13.

NOTE The floor of a typical large building used for manufacturing or indoor leisure with, for example, a concrete, asphalt or wooden floor is acceptable.

4.3 Speed measurement device, to measure and record speed up to 5 m/s with an accuracy of $\pm 0,1$ m/s and a sample rate of at least 60 Hz.