

Australian Standard[®]

Wheelchairs

**Part 6: Determination of maximum
speed, acceleration and retardation
of electric wheelchairs**

This Australian Standard was prepared by Committee ME/67, Mobility Appliances for People with Disabilities. It was approved on behalf of the Council of Standards Australia on 11 January 1990 and published on 7 May 1990.

The following interests are represented on Committee ME/67:

ACROD

Attorney-General's Department

Australian Association of Occupational Therapists

Canberra College of Advanced Education

Commercial Vehicle Industry Association of Australia

Confederation of Australian Industry

Crippled Children's Association of South Australia

Department of Health, New South Wales

Department of Health, Queensland

Department of the Premier and Cabinet, South Australia

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Electronics Association of South Australia

Federal Chamber of Automotive Industries

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National Committee Independent Living Centres

Paraplegic and Quadriplegic Association of New South Wales

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Part 6: Determination of maximum speed, acceleration and retardation of electric wheelchairs

First published as AS 3696.6—1990.

PREFACE

This Standard was prepared by the Standards Australia Committee on Mobility Appliances for People with Disabilities. It is identical with and has been reproduced from ISO 7176—6:1988(E) *Wheelchairs—Part 6: Determination of maximum speed, acceleration and retardation of electric wheelchairs*.

This Standard is one of a series of methods of test and measurement of wheelchairs.

For the purposes of this Australian Standard the ISO text should be modified as follows:

- (a) *Clause 0. Delete.*
- (b) *Clause 1. Delete 'part of ISO 7176' and substitute 'Standard'.*
- (c) *Clause 3. Delete 'part of ISO 7176' and substitute 'Standard'.*
- (d) *Cross-references.* The cross-references to other publications should be replaced by references to Australian Standards as follows:

<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO	AS
6440 Wheelchairs—Nomenclature terms and definitions	3693 Wheelchairs—Nomenclature, terms and definitions.
7930 Wheelchairs—Type classification based on appearance characteristics	3694 Wheelchairs—Type classification based on appearance characteristics

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Wheelchairs—

Part 6: Determination of maximum speed, acceleration and retardation of electric wheelchairs

0 Introduction

ISO 7176 at present consists of the following parts:

- Part 1 : Determination of static stability.
- Part 2 : Determination of dynamic stability of electric wheelchairs.
- Part 3 : Determination of efficiency of brakes.
- Part 4 : Determination of energy consumption of electric wheelchairs.
- Part 5 : Determination of overall dimensions, mass and turning space.
- Part 6 : Determination of maximum speed, acceleration and retardation of electric wheelchairs.
- Part 7 : Determination of seating dimensions — Definitions and measuring methods.
- Part 8 : Static, impact and fatigue strength for manual wheelchairs.
- Part 9 : Climatic tests for electric wheelchairs.
- Part 10 : Determination of obstacle-climbing ability of electric wheelchairs.
- Part 11 : Test dummies.
- Part 13 : Determination of coefficient of friction of test surfaces.
- Part 14 : Power and controls.

1 Scope and field of application

This part of ISO 7176 specifies test methods for determining the maximum speed, acceleration and retardation of electric wheelchairs.

2 References

- ISO 6440, *Wheelchairs — Nomenclature, terms and definitions*.
- ISO 7176-11, *Wheelchairs — Part 11: Test dummies*.¹⁾
- ISO 7176-13, *Wheelchairs — Part 13: Determination of coefficient of friction of test surfaces*.¹⁾
- ISO 7930, *Wheelchairs — Type classification based on appearance characteristics*.

3 Definitions

For the purposes of this part of ISO 7176, the definitions given in ISO 6440 apply.

4 Principle

Performance of a number of tests for the determination of the maximum speed, acceleration and retardation of electric wheelchairs.

5 Test plane

The tests shall be carried out on a hard, flat and horizontal plane.

The surface of the plane shall have a coefficient of friction as defined in ISO 7176-13.

6 Test wheelchair

The following conditions shall be fulfilled during testing.

6.1 The wheelchair shall be fully equipped for normal use including armrests and leg supports with footrests, but excluding seat cushions.

1) At present at the stage of draft.