

Australian Standard[®]

Wheelchairs

**Part 10: Determination of
obstacle-climbing ability 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

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Disabled Peoples' International (Australia)

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National Committee Independent Living Centres

Paraplegic and Quadriplegic Association of New South Wales

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Part 10: Determination of obstacle-climbing ability of electric wheelchairs

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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 7176-10:1988(E) *Wheelchairs—Part 10: Determination of obstacle-climbing ability of electric wheelchairs*.

This Standard is one of a series of methods of test and measurement for 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) *Decimal marker.* A dot on the line should replace the comma wherever it appears as a decimal marker.
- (e) *Cross-references.* The cross-references to other publications should be replaced by reference 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 10: Determination of obstacle-climbing ability 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 a method for determining the obstacle-climbing ability 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 determination of the ability of electric wheelchairs to negotiate obstacles such as kerbs and steps.

5 Test equipment

5.1 Test plane

The tests shall be carried out on a flat and hard plane. The surface of the plane shall have a coefficient of friction as defined in ISO 7176-13.

1) At present at the stage of draft.