



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 18029.9-2021

**Wheelchairs - Part 9: Climatic tests for electric wheelchairs
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Principle
5 Test Facility
6 Preparation of the test wheelchair
7 Requirements
8 Test method
9 Functional check
10 Inspection report
11 Announcement of results
Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted:

This document is part 3 of GB/T 18029 "Wheelchair Vehicles": GB/T 18029 has released the following parts:

- Part 1: Determination of static stability;
- Part 2: Determination of dynamic stability of electric wheelchairs;
- Part 3: Determination of braking performance;
- Part 4: Determination of theoretical energy consumption of electric wheelchairs and electric scooters;
- Part 5: Determination of dimensions, mass and operating space;
- Part 6: Determination of the maximum speed, acceleration and deceleration of electric wheelchairs;
- Part 7: Measurement of seat and wheel dimensions;

- Part 8: Requirements and test methods for static strength, impact strength and fatigue strength;
- Part 9: Electric wheelchair climatic test method;
- Part 10: Determination of the obstacle-surmounting ability of electric wheelchairs;
- Part 11: Test dummies;
- Part 13: Determination of the coefficient of friction of the test surface;
- Part 14: Requirements and test methods for power and control systems for electric wheelchairs and electric scooters;
- Part 15: Requirements for information release, document issuance and identification;
- Part 16: Flame retardancy of postural fixation devices;
- Part 19: Wheeled mobile devices that can be used as motor vehicle seats;
- Part 21: Electromagnetic compatibility requirements and test methods for electric wheelchairs, electric scooters and battery chargers;
- Part 22: Adjustment procedures;
- Part 26: Terminology;
- Part 28: Requirements and test methods for stair climbing appliances;

This document replaces GB/T 18029.9-2008 "Wheelchairs - Part 9: Climatic test methods for electric wheelchairs":

Compared with GB/T 18029.9-2008, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- Increased the sequence of each item of the climate test (see 8.1);
- Increased the anti-condensation test (repeat the low-temperature working environment twice, so that condensation is formed inside the enclosure) (see 8.2);
- Changed the methods and requirements for water spraying (see 8.6, 7:3 of the:2008 edition):

This document is equivalent to ISO 7176-9:2009 "Wheelchairs - Part 9: Climate Test Methods for Electric Wheelchairs", the type of document is the ISO standard is adjusted as my country's guiding technical document:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

According to the document user principle, GB/T 18029 "Wheelchair Vehicles" stipulates that wheelchair users, manufacturers, testing institutions and other relevant parties should pay attention requirements for the design, performance, testing, infrastructure, and information release of wheelchair vehicles: GB/T 18029 is intended to consist of 22 parts:

- Part 1: Determination of static stability;
- Part 2: Determination of dynamic stability of electric wheelchairs;
- Part 3: Determination of braking performance;
- Part 4: Determination of theoretical energy consumption of electric wheelchairs and electric scooters;
- Part 5: Determination of dimensions, mass and operating space;
- Part 6: Determination of the maximum speed, acceleration and deceleration of electric wheelchairs;
- Part 7: Measurement of seat and wheel dimensions;
- Part 8: Requirements and test methods for static strength, impact strength and fatigue strength;
- Part 9: Electric wheelchair climatic test method;
- Part 10: Determination of the obstacle-surmounting ability of electric wheelchairs;
- Part 11: Test dummies;
- Part 13: Determination of the coefficient of friction of the test surface;
- Part 14: Requirements and test methods for power and control systems for electric wheelchairs and electric scooters;
- Part 15: Requirements for information release, document issuance and identification;
- Part 16: Flame retardancy of postural fixation devices;
- Part 19: Wheeled mobile devices that can be used as motor vehicle seats;
- Part 21: Electromagnetic compatibility requirements and test methods for electric wheelchairs, electric scooters and battery chargers;
- Part 22: Adjustment procedures;
- Part 25: Batteries and chargers for electric wheelchairs;
- Part 26: Terminology;

--- Part 28: Requirements and test methods for stair climbing appliances;

--- Part 30: Wheelchair test methods and requirements for changing the occupant's posture:

Among them, Part 26 is the term; Part 11, Part 13 stipulates the infrastructure requirements for wheelchair testing; Part 22 stipulates Sets test preparation requirements; Part 15 sets out information release requirements; Parts 1, 3, 5, 7, 8 Part, Part 10, Part 16 specifies the general requirements and test methods for all wheelchairs (including manual and electric); Part 2, Part 4, Part 6, Part 9, Part 14, Part 21, Part 25 set out the requirements and Test methods; Parts 19, 28, and 30 specify requirements for special functional wheelchairs:

Wheelchairs may be used or stored in harsh environments, which can seriously affect the function of wheelchairs and can sometimes be dangerous: Book the test methods specified in the document are used to determine whether and to what extent the wheelchair is affected by environmental conditions: Trials to simulate wheelchairs on Earth Use under extensive climate change:

The electrical system of the wheelchair may be exposed to liquids, including those containing salt: Due to the impact of salt-contaminated water on electrical systems, it is difficult to the evaluation, therefore, of the waterproof performance of the electrical system is based on fresh water spraying:

Wheelchairs Part 9:

Electric wheelchair climatic test method

1 Scope

This document describes the requirements and test methods to determine the effect of rain, condensation, dust and temperature changes on the basic functions of electric wheelchairs ring: It is suitable for wheelchairs (including electric scooters) that are rated for one person and whose maximum speed does not exceed 15km/h:

This document does not cover corrosion resistance requirements:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document:

ISO 7176-11 Wheelchairs - Part 11: Test dummies (Wheelchairs-Part 11: Testdummies)
Note: GB/Z 18029.11-2021 Wheelchair Part 11: Dummy for testing (ISO 7176-11:2012, IDT) ISO 7176-15 Wheelchairs Part 15: Requirements for information release, documentation and marking (Wheelchairs-Part