

Test Report EN 12184 Electrically powered wheelchairs, scooters and theirchargers — Requirements and test methods	
Testing laboratory	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Report body.....	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Applicant	Suzhou Jiujiuba Medical Equipment Co., Ltd
Address	No. 86, Renmin Road, Zhaofeng, Leyu Town, Zhangjiagang City
Client No.....	CD1872
Report query	
Standard	EN 12184:2022
Test Result	Compliance with EN 12184:2022
Procedure deviation	N.A.
Non-standard test method	N.A.
Test item description	Electric climbing wheelchair
Trademark	N.A.
Model/type reference	WD58-8
Type class & Maximum speed.....	Class C, 12km/h
Maximum occupant mass.....	120kg
Power Rating	Battery Charger: Input: 100-240V~, 50/60Hz, 2.5A, CLASS II Output: DC 29.4V, 2.8A Battery: 25.5V, 12.5Ah
Manufacturer	Suzhou Jiujiuba Medical Equipment Co., Ltd
Address	No. 86, Renmin Road, Zhaofeng, Leyu Town, Zhangjiagang City
Date of test.....	2025-06-09 to 2025-07-22

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see appended table)" refers to a table appended to the report.

"(see remark #)" refers to a remark appended to the report.

"(see attachment #)" refers to an attachment appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

List of Attachments:

Technical documents:

(See attachment 1)

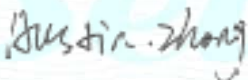
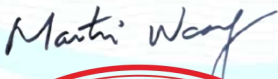
Photos view:

(See attachment 2)

Copy of marking plate:

(See attachment 3)

Remarks:

Possible test case verdicts :	
test case does not apply to the test object	: N (.A.)
test object was not evaluated for the requirement :	N/E
test object does meet the requirement	: P(ass)
test object does not meet the requirement	: F(ail)
Name and address of the testing laboratory: <u>Beide (Shenzhen) Product Service Limited</u> <u>6F, Bldg E, Hourui 3rd Ind Zone, Xixiang,</u> <u>Bao'an Dist, Shenzhen, China</u>	
 Reported by : _____ <u>2025-07-22</u> Signature / Anna Deng / Engineer Date  Checked by : _____ <u>2025-07-22</u> Signature / Austin Zhong / Engineer Date  Approved by : _____ <u>2025-07-22</u> Signature / Martin Wang / Manager Date 	

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Clause	Requirement – Test	Result - Remark	Verdict
5	Type class		P
	Wheelchairs shall be classified in one or more of the following three classes, depending upon their intended use:		P
	— Class A: Class A: wheelchairs intended for driving on flat horizontal surfaces and gentle slopes;		N
	— Class B: wheelchairs intended for driving on moderately uneven surfaces and on moderate slopes, in addition to the intended use described for Class A;		N
	— Class C: wheelchairs intended for driving on uneven terrain and on steeper slopes, in addition to the intended uses described for Classes A and B.		P
6	General requirements		P
6.1	Risk management		N/E
	A risk management process shall be performed in accordance with EN ISO 14971:2019 5 . For conformity with this document, all elements of the risk management process specified in EN ISO 14971:2019 5 shall be applied except:		N/E
	— the planning for, and execution of, production and post-production monitoring (EN ISO 14971:2019 5 , 4.1 fourth indent, 4.4 item g) and Clause 10); and		N/E
	— periodic reviews of the suitability of the risk management process (EN ISO 14971:2019 5 , 4.2 third paragraph).		N/E
6.2	Intended performance and technical documentation		N/E
	a) The wheelchair shall have sufficient strength and durability to sustain all loads expected during intended use. This shall be confirmed by using, where appropriate, references to relevant clinical and scientific literature, strength and/or durability calculations, appropriate test standards and their test results, in addition to the requirements given in this document.		N/E
	b) The intended performance of the wheelchair, including, where appropriate, strength, durability and tipping stability, shall be described in technical documentation which sets out its functional characteristics, its		N/E

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Clause	Requirement – Test	Result - Remark	Verdict
	application(s) and conditions of use.		
	c) The technical documentation shall include, where appropriate, references to relevant clinical and scientific literature, any strength and/or life calculations, appropriate test standards and their test results.		N/E
6.3	Clinical evaluation and investigation		N/E
6.4	Wheelchairs that can be dismantled		P
	If it is intended that the wheelchair can be dismantled for storage or transportation, it shall not be possible to reassemble the wheelchair in a manner that presents a hazard.		P
6.5	Single-use fasteners		P
	If it is intended that the wheelchair can be dismantled for storage or transportation, the fasteners which are loosened or removed to allow this dismantling shall not be single-use fasteners.		P
6.6	Biocompatibility and toxicity		P
6.7	Contaminants and residues		N/E
6.8	Infection and microbiological contamination		N/E
6.8.1	Cleaning and disinfection		N/E
	If any parts of the wheelchair are intended to be cleaned, the method and suitable materials for cleaning shall be described in the instructions for use.		N/E
	If any parts of the wheelchair are intended to be disinfected, the method and suitable materials for disinfection shall be described in the instructions for use.		N/E
	If any parts of the wheelchair are intended to be cleaned by automatic washing systems or hand-held jet stream or steam washing, the details of the procedure, such as temperature, pressure, flow and pH value of cleaning/rinsing solution, shall be described in the instructions for use. Where practicable, the wheelchair shall be labelled with appropriate symbols to represent the method of cleaning.		N/E
6.8.2	Animal tissue		N
	Where the wheelchair has been manufactured utilizing tissues of animal origin or their derivatives, the process specified in EN ISO 22442-1:2020 shall be followed as part of the risk management process (see 6.1).	Not used animal tissue	N

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Clause	Requirement – Test	Result - Remark	Verdict
6.9	Overflow, spillage, leakage, and ingress of liquids		P
6.10	Safety of moving parts		P
6.11	Prevention of traps for parts of the human body		P
6.12	Folding and adjusting mechanisms		P
6.13	Surfaces, corners, edges and protruding parts		P
6.14	Ergonomic principles		N/E
6.15	General modifications to normative references		N
6.16	Applicable provisions for specified types of wheelchair		N/E
6.17	Recommendations		N/E
7	Preparation for testing		P
7.1	General		P
	Unless otherwise specified in Clauses 8, 9, 10, 11 and 12, the wheelchair shall be prepared for testing as specified in ISO 7176-22:2014 with the following modification.		P
	If a test procedure requires the use of a test dummy or human test occupant, they shall be selected and fitted as specified in 7.2 or 7.3.		P
7.2	Test dummy		P
	Select a test dummy, as specified in ISO 7176-11, of mass equal to the maximum occupant mass specified by the wheelchair manufacturer, with a tolerance of 0 kg to +5 kg.	Test dummy: 120kg	P
	Fit the test dummy in the wheelchair as specified in ISO 7176-22:2014.		P
7.3	Human test occupant		P
	Select a human test occupant whose mass, in combination with any supplementary weights as specified in 4.7, is equal to the maximum occupant mass specified by the wheelchair manufacturer, with a tolerance of 0 kg to + 5 kg.	Human test occupant: 60kg Supplementary weights: 60kg	P
	Seat the occupant in the wheelchair and position and secure the supplementary weights to give substantially the same mass distribution as the test dummy when fitted as specified in ISO 7176-22:2014.		P
8	Wheelchair performance		P

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Clause	Requirement – Test	Result - Remark	Verdict
8.1	Driving characteristics		P
8.1.1	General		P
	The loaded wheelchair shall meet the driving performance requirements specified in Table 3 and Table 4 for the type class of the wheelchair as specified in Clause 5.		P
	The rated slope specified by the manufacturer shall be not less than that specified in Table 3 for the type class of the wheelchair.		P
8.1.2	Ability to climb rated slope		P
8.1.2.1	Requirements		P
	The wheelchair shall be capable of climbing at a speed not less than 2 km/h:	> 2 km/h	P
	— the applicable rated slope for the type class of wheelchair specified in Table 3; or	10°	P
	— the rated slope specified by the manufacturer, whichever is greater		N
8.1.2.2	Test method		P
	Use an inclined test plane as specified in 4.2 and the means to measure speed specified in 4.5. Starting on the inclined test plane, drive the loaded wheelchair up the slope using the maximum speed command. When the wheelchair has travelled (5,0 ± 0,1) m up the slope and is inside the test area, measure and record the speed to an accuracy of ±10 %.		P
8.1.3	Ground unevenness		P
8.1.3.1	Principle		P
	It is important that a wheelchair is able to drive on uneven terrain without stopping even if one wheel is at a higher level than the others.		P
8.1.3.2	Requirement		P
	The wheelchair shall be capable of driving when any of its wheels is raised to a height specified in Table 3 for ground unevenness.	50mm	P
8.1.3.3	Test method		P
	a) Place the loaded wheelchair in the test area of the horizontal test plane (4.1). b) Place the test block specified in 4.8 under one wheel, such that one of its largest faces is flat on the test plane with the centre of the block beneath the point of contact with the wheel.	Front wheels and rear wheels complied	P

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Clause	Requirement – Test	Result - Remark	Verdict
	c) Attempt to drive the loaded wheelchair off the test block. d) Record the result of the test. e) Repeat for the remaining wheels, one at a time. f) The test is passed if the wheelchair is able to drive off the test block for each wheel.		
8.1.4	Maximum downhill speed		P
8.1.4.1	Requirement		P
	The wheelchair shall not exceed 125 % of its maximum speed on the horizontal, when driving down		P
	— the applicable rated slope for the type class of wheelchair specified in Table 3; or	10°	P
	— the rated slope specified by the manufacturer, whichever is greater		N
8.1.4.2	Test method		P
	a) Drive the loaded wheelchair at maximum speed down the inclined test plane (4.2) with the required slope. b) Measure the speed achieved, using the means specified in 4.5, when the wheelchair is inside the test area. c) Record the measured speed and record whether the wheelchair has met the requirement.	Measured Max. speed on horizontal: 11.7km/h Measured Max. speed on slope specified by manufacturer: 12km/h	P
8.1.5	Dynamic stability		P
8.1.5.1	Requirements		P
	The dynamic response score of the wheelchair shall be 2 or 3 as specified in Table C.1 of ISO 7176-2:2017 when tested on		P
	— the applicable rated slope for the type class of wheelchair specified in Table 3; or	10°	P
	— the rated slope specified by the manufacturer, if it is greater.		N
8.1.5.2	Test method		P
	a) Load the wheelchair with the test dummy in accordance with 7.2. Do not use a human test occupant.		P
	b) Test the loaded wheelchair in accordance with ISO 7176-2:2017 with the following modifications: 1) for tests on slopes the test plane is inclined relative to the horizontal as specified in 8.1.5.1; 2) fixed test planes or adjustable test planes may	Refer to ISO 7176-2 test report.	P

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Clause	Requirement – Test	Result - Remark	Verdict
	be used; 3) if the manufacturer recommends a technique for driving on a slope, test the wheelchair using only the recommended technique; if not, the test methods are unmodified; 4) where the maximum occupant mass is greater than 100 kg, repeat the rearward dynamic stability tests with a 100 kg dummy fitted to the wheelchair.		
8.1.6	Obstacle climbing and descending		P
8.1.6.1	Requirements		P
	The wheelchair shall be capable of climbing and descending obstacles of the height specified in Table 3 for the type class of the wheelchair or the maximum obstacle height specified by the manufacturer, whichever is greater, without any part of the wheelchair other than wheels or a kerb climbing device contacting the obstacle or the test plane.		P
8.1.6.2	Test method		P
	Test the wheelchair as specified in ISO 7176-10:2008 for climbing and descending a test obstacle of the height specified in Table 3 for the type class of the wheelchair or the maximum obstacle height specified by the manufacturer, whichever is greater.		P
	If the manufacturer specifies a method for climbing and descending steps, kerbs or obstacles, test as specified in ISO 7176-10:2008 using only the manufacturer's method. If the manufacturer specifies a run-up distance greater than that specified in ISO 7176-10:2008, limit the run-up distance to the maximum specified in that document. If the manufacturer of the wheelchair does not specify a method for climbing and descending steps, kerbs or obstacles, test as specified in ISO 7176-10:2008 using the methods specified in that document.	Refer to ISO 7176-10 test report.	P
8.1.7	Static stability		P
8.1.7.1	Requirements		P
	The wheelchair shall meet or exceed the minimum requirements for static stability specified in Table 3 for the type class of the wheelchair.		P
8.1.7.2	Test method		P
	Test the loaded wheelchair in the least-stable configuration for each direction as specified in ISO 7176-1:2014 to determine whether it meets or	Refer to ISO 7176-1 test report.	P

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Clause	Requirement – Test	Result - Remark	Verdict
	exceeds the angles in Table 3 for the type class of the wheelchair.		
	Where the maximum occupant mass is greater than 100 kg, repeat the rearward static stability test with a 100 kg dummy fitted to the wheelchair.		P
8.1.8	Maximum speed		P
8.1.8.1	Requirements	Complied	P
	The maximum speed of the wheelchair when travelling forwards and travelling in reverse on the horizontal shall not exceed the maximum speed requirements specified in Table 3 for the type class of the wheelchair.		P
8.1.8.2	Test method		P
	Test the loaded wheelchair as specified in ISO 7176-6:2018 for the maximum forward speed and maximum reverse speed on a horizontal surface.		P
	Record the results and determine whether the requirement has been met.	Refer to ISO 7176-6 test report.	P
8.1.9	Distance range		P
8.1.9.1	Requirements		P
	The theoretical continuous driving distance range for the wheelchair shall not be less than the requirement specified in Table 3 for the type class of the wheelchair.		P
8.1.9.2	Test method		P
	Load the wheelchair as specified in ISO 7176-4:2008, except that the mass of the load shall be the maximum occupant mass or 100 kg, whichever is the lower.	Test person: 60kg Supplements weights: 40kg Total 100kg loaded	P
8.2	Static, impact and fatigue strength		P
8.2.1	Requirements		
	The wheelchair shall conform to the requirements of ISO 7176-8:2014 with the exception that wheelchairs of Class A are not required to be tested as specified in ISO 7176-8:2014, 10.4, drop test.	Refer to ISO 7176-8 test report.	P
	Arm supports shall conform to the static loading requirements of ISO 7176-8:2014 in the favourable intended operating position.	Refer to ISO 7176-8 test report.	P
8.2.2	Test method		P
	Test the wheelchair in accordance with ISO 7176-8:2014 with modifications as specified in 8.2.1.		P

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Clause	Requirement – Test	Result - Remark	Verdict
8.3	Wheelchairs for use as seats in motor vehicles		N
	If the manufacturer specifies that the intended use of the wheelchair includes use as a seat in a motor vehicle, the wheelchair shall conform to the requirements of ISO 7176-19:2008, with the following modifications to subclauses of ISO 7176-19:2008.	Not such wheelchair	N
	— 4.1.2 is replaced by the following: If a wheelchair is intended by the manufacturer to also be secured by a docking securement device in public transportation and/or different private vehicles, the securement points on the wheelchair and/or of the wheelchair tiedown adaptors shall conform to the performance requirements in Clause 5.		N
	— 5.1 second paragraph is replaced by the following: All webbing of wheelchair-anchored belt restraints shall have a burning rate not exceeding 100 mm/min when tested as specified in ISO 3795.		N
	— 5.2.1 a) is replaced by the following: If the wheelchair has a head restraint, the horizontal excursions of the ATD and the wheelchair, with respect to the impact sled, shall not exceed the limits in Table 7 at any time during the test.		N
	If the wheelchair does not have a head restraint, the horizontal excursions of the ATD and the wheelchair, with respect to the impact sled, shall not exceed the limits in Table 7 at any time during the test with the exception that the excursion of the back of the head of the ATD, Xhead, R, shall not be measured.		N
	— 5.2.2 e) is replaced by the following: Primary occupant-load-carrying components of the wheelchair shall not show visible signs of failure, unless there is a backup system to provide support.		N
8.4	Climatic performance		P
	The wheelchair shall conform to the requirements of ISO 7176-9:2009.	Refer to 7176-9 test report.	P
9	Component properties		P
9.1	Foot supports, lower leg support assemblies and arm supports		P
9.1.1	Requirements		P
	The wheelchair was fitted with foot supports		P

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Clause	Requirement – Test	Result - Remark	Verdict
	that have a means of positioning the occupant's feet at the required height and prevent the occupant's feet from sliding backwards.		
	Any swing away, movable or removable foot support, lower leg support assembly or arm support fitted on the wheelchair shall:	No such part	N
	a) incorporate a means to locate it securely in any intended operating position,		N
	b) be adjustable in increments not exceeding 25 mm in any direction		N
	c) be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair,		N
	d) be within the reach space shown in Figure 1, and		N
	e) be operable without the use of tools.		N
	Where the wheelchair has separate foot supports which have a gap between them or the possibility of a gap being formed when they are loaded,	No such foot support	N
	f) means to prevent the occupant's feet from sliding into the gap shall be provided, or		N
	g) when the foot supports are tested in accordance with 9.1.2.2, any gap between them shall be less than:		N
	— 25 mm if the wheelchair is intended for use by a child;		N
	— 35 mm if the wheelchair is not intended for use by a child.		N
9.1.2	Test methods		N
9.1.2.1	General performance		N
	a) Fit foot supports, lower leg support assemblies and arm supports in the operating position(s) specified in the manufacturer's instructions. b) Adjust the foot supports, lower leg support assemblies and arm supports as specified in the manufacturer's instructions. c) Record whether the foot supports, lower leg support assemblies and arm supports have met the requirements.	No such foot support, lower leg support assemblies and arm supports	N
9.1.2.2	Foot support gap		N

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Clause	Requirement – Test	Result - Remark	Verdict
	a) Simultaneously apply a force $F \pm 50$ N to the centroid of each foot support, normal to the plane of the unloaded foot support. In cases where the foot support has no identifiable plane, apply the force within 5° of vertical. The force F is calculated from the following equation: $F = 0,125 \times m \times g$ where F is the force applied to each foot support, expressed in newtons; m is the maximum occupant mass specified by the manufacturer, expressed in kilograms; g is the acceleration due to gravity, $9,81 \text{ m/s}^2$. b) Apply the force for 5 s to 10 s. c) While the force is being applied measure the largest distance between the foot supports. d) Record whether the foot supports have met the requirements.		N
9.2	Component mass		P
	If the wheelchair is intended to be dismantled for storage or transportation, any component that requires moving or handling and that has a mass greater than 10 kg shall be provided with suitable handling devices (e.g. handles). The manufacturer shall provide information indicating the points where such components can be lifted and describing how they shall be handled during disassembly, lifting, carrying, and assembly to reduce risks to the person or persons moving or handling them.	See user manual	P
9.3	Pneumatic tyres		N
	All pneumatic tyres on the wheelchair shall have the same type of valve connection. Valves should be readily accessible when using the intended inflating tool.	Solid tyres	N
	The tyres or the rims shall be marked with the maximum pressure in kPa, bar or PSI.		N
9.4	Means for maintaining a sitting posture		P
	The wheelchair shall have provision for a means to be fitted that enables the occupant to maintain a sitting posture.		P
	If the risk management process (6.1) indicates a risk of the occupant tipping or sliding forwards when the wheelchair is decelerating, the means		P

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Clause	Requirement – Test	Result - Remark	Verdict
	shall be provided with the wheelchair; otherwise the manufacturer of the wheelchair shall make available such means as an option.		
9.5	Resistance to ignition		N/E
9.5.1	General		N/E
	The surfaces of components which support the occupant, or which stay in contact with the occupant or the occupant's clothing, shall be tested as specified in 9.5.2. Progressive smouldering ignition or flaming ignition as defined in the standard applied shall not occur.		N/E
	This requirement does not apply to components of the power and control system, which are covered by 9.5.3.		N/E
9.5.2	Test methods		N/E
9.5.2.1	Selection of test method		N/E
	The test method specified in 9.5.2.2 is the preferred test method. It is the referee test method, which is used to resolve doubts or dispute.		N/E
	The test methods specified in 9.5.2.3 may be used as alternatives.		N/E
9.5.2.2	Referee test method		N/E
	Select and test a sample of the component as specified in ISO 16840-10:2021.		N/E
9.5.2.3	Alternative test methods		N/E
	Test the material of each component in accordance with EN 1021-2:2014 or ISO 8191-2:1988.		N/E
9.5.3	Power and control systems		N/E
	Either of the following options a) or b) apply.		N/E
	a) The manufacturer adopt appropriate means to eliminate or reduce as far as reasonably practicable the risk of a hazardous situation developing from the ignition of any part of the power and control system of the wheelchair. The manufacturer shall apply the risk management process (6.1) to manage that risk.		N/E
	b) The power and control system of the wheelchair meet the requirements of ISO 7176-14:2008, 9.7, resistance to ignition.		N/E
10	Propulsion and braking systems		P

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Clause	Requirement – Test	Result - Remark	Verdict
10.1	Means for operating brakes		P
10.1.1	Requirement		P
	a) Means for operating brakes shall: 1) be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair; 2) be within the reach space shown in Figure 1, if the wheelchair is intended to be operated by the occupant; 3) be within the reach space shown in Figure 2, if the wheelchair is intended to be operated solely by an assistant; 4) have operating forces for engaging and disengaging that do not exceed those stated in Table 3 when tested in accordance with 10.1.2.		P
	b) If one or more brake levers are fitted to a wheelchair in the form used on bicycles and mopeds: 1) for wheelchairs with a maximum occupant mass not greater than 150 kg, the force applied to each lever to hold the loaded wheelchair stationary on the rated slope shall not exceed 60 N; 2) for wheelchairs with a maximum occupant mass greater than 150 kg, the force applied to each lever to hold the loaded wheelchair stationary on the rated slope should not exceed 60 N; 3) the handgrip width of such brake levers when no force is applied, measured 15 mm from the end of the brake lever, shall not be greater than 100 mm and should not be greater than 80 mm (see Figure 4).	Not greater than 150 kg	P
	c) Means for releasing parking brakes shall be protected against activation caused by accidental contact.		N/E
10.1.2	Test for determination of brake operating forces		P
	a) Adjust the brakes as specified by the manufacturer.		P
	b) Select the part of the lever through which the force is to be applied as shown in Figure 5.		P
	1) If the lever is fitted with a generally spherical knob, apply the force through the centre of the knob.		P
	2) If the lever is tapered, apply the force through the point where the largest cross section intersects the centre line of the		N

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Clause	Requirement – Test	Result - Remark	Verdict
	lever.		
	3) If the lever is parallel or any shape other than those above, apply the force through a point on the centre line of the lever 15 mm from the end.		N
	4) If the form of the lever is such that the lever is gripped by the whole hand apply the force through the centre line of the lever 15 mm from the end.		N
	5) If the brake is operated by pushing or pulling a bar or pad, apply the force to the centroid of the bar or pad.		N
	c) Apply the brakes while measuring the force with the device specified in 4.4 aligned in the direction of travel of the point of application of the force in order to measure the maximum application force required. d) Release the brakes while measuring the force with the device specified in 4.4 aligned in the direction of travel of the point of application of the force in order to measure the maximum releasing force required. e) Perform c) and d) three times in total and record the measurements. f) Calculate and record the arithmetic mean value of the application and the release forces measured separately. g) Determine whether or not the requirements for operating forces stated in Table 1 have been met.		P
10.2	Braking functions		P
10.2.1	Requirements		P
	a) The wheelchair have a running brake which operates independently of tyre wear and tyre inflation pressure and which does not exceed the maximum stopping distance specified in Table 4 when tested in accordance with 10.2.2.1.		P
	b) The wheelchair have a running brake which, when operated after the wheelchair has been put into freewheel mode, shall bring the wheelchair to a stop. The maximum stopping distances of Table 4 do not apply for a running brake operated after the wheelchair has been put into freewheel mode.		N
	c) The risk management process shall address risks due to loss of braking if a wheel loses		P

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Clause	Requirement – Test	Result - Remark	Verdict
	contact with the ground (see 6.1).		
	d) The wheelchair shall have an automatic brake, which operates independently of tyre wear and tyre inflation pressure and which is operated by releasing the control device to achieve a zero speed command.		P
	e) The wheelchair shall have a parking brake which operates independently of tyre wear and tyre inflation pressure.		N/E
	f) Parking brakes shall meet the parking brake effectiveness requirement in Table 3 when tested in accordance with 10.2.2.2.		N/E
	g) Parking brakes shall be operable when there is no power from the battery supplying the drive system.		N/E
	h) Parking brakes shall be operable when the wheelchair is in freewheel mode (see Note 1).		N/E
	i) If they are subject to wear, parking brakes have provision for adjustment and/or replacement as specified by the manufacturer.		N/E
	j) If the wheelchair is fitted with arm supports that can be moved or removed to enable transfer, when tested in accordance with 10.2.2.3, engaged parking brakes shall not have parts that protrude above the level of the occupied seat.		N/E
	k) When parking brakes are tested in accordance with 10.2.2.4, no parking brake mechanism shall move from the pre-set position and no component or assembly of parts shall show visible signs of cracks, breakages, gross deformations, free play, loss of adjustment or any other damage that adversely affects the function of the wheelchair.		N/E
	l) After testing of the parking brake in accordance with 10.2.2.4, parking brakes shall meet the parking brake effectiveness requirement in Table 3 when tested again in accordance with 10.2.2.2.		N/E
10.2.2	Test methods		P
10.2.2.1	Test for determination of the effectiveness of running brakes		P
	Perform the tests for normal, reverse command and emergency operation specified in 7.3, 7.4 and 7.5 of ISO 7176-3:2012 using the loaded wheelchair on the horizontal and on the steepest		P

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Clause	Requirement – Test	Result - Remark	Verdict
	slope specified in ISO 7176-3:2012 or the rated slope, whichever is steepest. The wheelchair fails the requirement if the maximum stopping distance specified in Table 4 of this document is exceeded on the horizontal, or if the wheelchair fails to stop on the test slope.		
10.2.2.2	Test for determination of effectiveness of parking brakes		N/E
	a) Adjust the parking brake in accordance with the manufacturer's instructions without exceeding the operating force requirements stated in Table 1. b) Test the loaded wheelchair facing uphill in accordance with ISO 7176-3:2012, with the test plane inclined to the horizontal at the applicable angle stated in Table 1 for the type class of the wheelchair or at the rated slope specified by the manufacturer, whichever is greater. c) Repeat b) with the wheelchair facing downhill. d) Determine whether the parking brake holds the loaded wheelchair stationary on the slope.	Refer to ISO 7176-3 test report	N/E
10.2.2.3	Test for protrusion of parts of the parking brakes		N/E
	a) Engage the parking brake. b) Move or remove the arm support to enable transfer. c) Identify any parts of the parking brake that protrude above the plane of the lower surface of the thigh loading plate of the test dummy. d) Determine whether the parking brake meets the requirement.		N/E
10.2.2.4	Fatigue strength of parking brakes		N/E
	a) The parking brake may be tested in accordance with b) to g) below, or as specified in ISO 7176-8:2014, 10.5. b) Carry out the test with the parking brake mounted on the wheelchair or mounted on a suitable test fixture that simulates mounting on the wheelchair. If the wheelchair is fitted with two identical brakes (left and right), test only one of the brakes. c) Adjust the parking brake in accordance with the manufacturer's instructions without exceeding the operating force requirements stated in Table 3. d) Set up the means for moving the brake lever (4.12) so that no twisting or bending forces are applied to the brake lever. e) Move the lever operating the brake smoothly		N/E

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Clause	Requirement – Test	Result - Remark	Verdict
	from the non-braking position to the braking position for 60 000 cycles at a frequency not greater than 0,5 Hz. Carry out maintenance during testing only in accordance with the manufacturer's instructions. f) Inspect the brake mechanism and determine whether it has met the requirement. g) If a test fixture was used, return the brake mechanism to the wheelchair.		
10.3	Freewheel device	No freewheel device	N
	The wheelchair shall be fitted with a freewheel device that shall: — be accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair; — be within the reach space shown in Figure 1, if the wheelchair is intended to be operated by the occupant; — be within the reach space shown in Figure 2, if the wheelchair is intended to be operated solely by an assistant; — have operating forces for engaging and disengaging that do not exceed those stated in Table 3; — be operable without detaching any parts; — not depend on the battery power supplying the motor drive system; — have two defined positions including clear indication of freewheel mode and drive mode; — prevent use of the wheelchair's drive system, if the freewheel device is activated.		N
	A battery independent from the motor drive battery may be used to supply energy to enable freewheel mode.	No such independent battery	N
	Freewheel devices shall be protected against activation caused by accidental contact.		N
11	Operations		P
11.1	Operations intended to be carried out by the occupant and/or assistant	Information provided in user manual	P
	Wheelchairs shall be designed to facilitate ease of operation by the occupant and/or assistant as specified in the manufacturer's instructions. Examples include:		P
	— operation of adjustable seating and adjustment of postural supports,		P

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Clause	Requirement – Test	Result - Remark	Verdict
	— use of detachable components, including removable arm supports, lower leg support assemblies, etc., to facilitate safe transfers into and out of the wheelchair,		P
	— use of folding mechanisms, including folding frames, etc., to facilitate storage and transportation of unoccupied wheelchairs,		P
	— carrying out maintenance, including use of tools, etc.,		P
	— use of manual steering controls,		P
	— use of braking systems and freewheel devices,		P
	— use of assistant controls,		P
	— use of control devices.		P
11.2	Controls intended for operation by the occupant		P
	Controls intended to be operated by the occupant while seated shall be within the occupant reach space shown in Figure 1.		P
	The following controls, if fitted, are included:		P
	— on/off switch or key,	Start key	P
	— speed regulator,		P
	— speed pre-setting,		N
	— running brake,		P
	— parking brake,		N
	— acoustic warning device,		P
	— direction indicator,	No such direction indicator	N
	— direction switch,	No such direction switch	N
	— control device,		P
	— manual steering controls,		P
	— lighting controls,		N
	— seating adjustments,	No seating adjustments	N
	— detachable components, including removable arm supports, lower leg support assemblies, etc., to facilitate safe transfers into and out of the wheelchair,		P
	— steering controls,		P
	— freewheel device.		N
11.3	Controls intended for operation by an assistant		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Controls intended to be operated by an assistant shall be within the reach space shown in Figure 2. Example include:		P
	— brakes,		P
	— control devices,		P
	— push handles, and		P
	— electrical ancillary equipment.		P
11.4	Assistant control unit, push handles and handgrips		P
11.4.1	Requirements		P
	Switches intended to be operated by an assistant while driving the wheelchair shall be attached to an assistant control unit.		P
	When an assistant control unit is fitted,		P
	— the unit shall be positioned behind the wheelchair's back support, between 900 mm and 1 200 mm from the floor to the centre of the operating means for the control device (e.g. joystick handle), and		P
	— there shall be a means to support the assistant's hand or hands used to operate the control device.		P
	When push handles are fitted, no part of the wheelchair shall lie within a space to the rear of the wheelchair bounded by the following:		P
	— a plane at 85° to the horizontal, that touches the rearmost points of the push handles as shown in Figure 5;		P
	— two planes not less than 350 mm apart equidistant from a vertical plane parallel to the forward direction of travel that bisects the wheelchair, unless the intended occupant is a child;		P
	— the horizontal test plane.		P
	When the wheelchair is fitted with push handles, the handgrips shall be at least 75 mm in length and between 20 mm and 50 mm in diameter.		P
	When push handles are fitted with controls that are intended to be used by being gripped by one hand, the grip width when no force is applied shall not be greater than 100 mm and should not be greater than 80 mm (see Figure 3).		N

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Clause	Requirement – Test	Result - Remark	Verdict
11.4.2	Test method		P
	a) Place the wheelchair in the test area of the horizontal test plane. b) If an assistant control device is fitted, note its position and measure the height of its operating means above the test plane. c) Project the planes specified in 11.4.1 and determine whether any part of the wheelchair lies within the enclosed space. d) Measure the dimensions of the handgrips on the push handles. e) Where applicable, measure the grip width of the controls fitted to the push handles that are intended to be used by being gripped by one hand. f) Inspect the wheelchair for means to support the assistant's hand or hands used to operate the control device while the wheelchair is being driven. g) Record whether the wheelchair has met the requirements.		P
11.5	Operating forces		P
11.5.1	Requirements		P
	All controls, except for means to operate brakes, shall have operating forces for engaging and releasing that do not exceed those stated in Table 3 when tested in accordance with 11.5.2.		P
	In addition, to achieve the intended function of the system or device being operated, for knobs intended to be gripped and turned by one hand		P
	— where the diameter of the knob is greater than or equal to 25 mm and the force is transmitted by friction, the numerical value of the torque, expressed in Nm, shall not be greater than 0,05 times the numerical value of the diameter of the knob, expressed in mm, and		P
	— where the diameter of the knob is less than 25 mm diameter, the numerical value of the torque, expressed in Nm, shall not be greater than 0,025 times the numerical value of the diameter of knob, expressed in mm.		N
11.5.2	Test method		P
	a) Position a means to apply force or torque as		P

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Clause	Requirement – Test	Result - Remark	Verdict
	applicable: 1) where the operation is performed by pushing or pulling, position the means to apply force parallel to the direction of operation and in the middle of the knob or button; 2) in the case of a lever of length 30 mm or greater, position the means to apply force at a distance of 15 mm from the end of the operating lever; 3) in the case of a lever of length less than 30 mm, position the means to apply force at the midpoint of the lever; 4) for a turning knob, use a suitable means (e.g. a force gauge) to measure torque concentrically on the knob. b) Gradually increase the force or torque until the intended function of the system or device as specified by the manufacturer's instructions is achieved. c) Measure and record the maximum operating force. d) Perform b) to c) three times in total. e) Calculate and record the arithmetic mean of the three recorded measurements.		
11.6	Occupied seating adjustments		N
11.6.1	Requirements		N
	If the manufacturer specifies that the seating can be adjusted by an assistant or the occupant or both while the occupant is seated:	Seating can not be adjusted while the occupant is seated	N
	— the assistant and/or the occupant shall not have to apply or withstand a force (e.g. the combined weight of the occupant and the seating) which presents a moving and handling safety hazard to the assistant and/or the occupant; and		N
	— movement of the seating, whether continuous or incremental, shall automatically be prevented when the assistant or occupant releases the means of operation.		N
	Controls for seating adjustments intended to be operated by the occupant shall be accessible to the occupant from all seating positions.		N
11.6.2	Test method		N
	a) Adjust the seating as specified in the manufacturer's instructions. b) Record whether the wheelchair has met the		N

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Clause	Requirement – Test	Result - Remark	Verdict
	requirements.		
12	Electrical systems		P
12.1	General requirements		P
	The wheelchair shall conform to the requirements of ISO 7176-14:2008, except as specified in 9.5.4.		P
	The wheelchair shall conform to the requirements of ISO 7176-21:2009.		P
12.2	Circuit protection		P
12.2.1	Requirement		P
	Operation of the circuit protection for each of the following functions shall not affect the operation of the remaining functions:		P
	a) electrically powered driving, braking and steering; b) electrically powered parts of the body support system; c) electrically powered lights, direction indicators and hazard warning flashers.		P
12.2.2	Preparation		P
	Examine the wheelchair and its circuit diagram to locate:		P
	a) conductors for each motor and actuator used to drive, brake and/or steer the wheelchair;		P
	b) conductors for each motor and actuator used to move parts of the body support system;		P
	c) conductors for each light, direction indicator and hazard warning flasher.		P
12.2.3	Test method		P
	a) For each pair of conductors identified in 12.2.2 a) in turn, apply a short circuit between them and operate the control device so that any related circuit protection can operate, then attempt to operate the functions identified in 12.2.1 b) and c) and observe whether their operation is affected.		P
	b) For each pair of conductors identified in 12.2.2 b) in turn, apply a short circuit between them and operate the controls for the body support system so that any related circuit protection can operate, then attempt to operate the functions identified in 12.2.1 a) and c) and observe whether their operation is affected. c) For each pair of		P

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Clause	Requirement – Test	Result - Remark	Verdict
	conductors identified in 12.2.2		
	c) in turn, apply a short circuit between them and operate the lighting controls so that any related circuit protection can operate, then attempt to operate the functions identified in 12.2.1 a) and b) and observe whether their operation is affected.		P
12.3	Battery chargers		P
12.3.1	General		P
	Battery chargers for wheelchairs shall conform to the requirements of ISO 7176-25:2013, with the following modification.		P
	5.1.2.2 is replaced by the following:		P
	— Battery chargers shall meet the requirements of EN 60335-2-29:2004 for class II appliances. The applicable electrical requirements of EN 60601-1:2006 for class II ME equipment may be applied as an alternative to the applicable electrical requirements of EN 60335-2-29:2004.		P
	— In addition, wheelchairs that include an on-board battery charger shall conform to the applicable electrical requirements of EN 60601-1:2006.		P
	— Battery chargers shall conform to the requirements of ISO 7176-21:2009.		P
12.3.2	Operation		P
	Battery chargers shall operate without the need for intervention or supervision apart from connecting and turning on at the start of charging, and turning off and disconnecting at the end of charging.		P
12.3.3	Manual adjustment for battery type		N
	Where a battery charger is intended for use with more than one type of battery, and a manual operation is necessary to select the battery type:	One type battery with one charger	N
	— the selected battery type shall be conspicuously visible from the exterior of the battery charger;		N
	— it shall not be possible to select the battery type without a tool, key entry combination or similar means for restricting access; and		N
	— the method for selecting the battery type shall not consist of operations which are performed in normal use of the charger.		N

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Clause	Requirement – Test	Result - Remark	Verdict
12.4	Charging connector		P
	The wheelchair shall have a charging connector that is readily accessible and operable by the occupant or an assistant or both in accordance with the manufacturer's intended use of the wheelchair.		P
12.5	Battery enclosures and containers		P
	Battery enclosures and containers shall provide protection so that it should not be possible for liquids dropping from above to enter into them and onto any cell or battery they contain.		P
12.6	Emergency stop		P
	The wheelchair was fitted with one or more emergency stop devices to enable actual or impending danger to be averted.	Start key	P
	Each emergency stop device shall:		P
	— be clearly identifiable, clearly visible and quickly accessible by the intended operator, and		P
	— stop the hazardous process as quickly as practicable, without creating additional risks.		P
	Once active operation of the emergency stop device has ceased following a stop command, that command shall be sustained by the wheelchair until that engagement is specifically overridden. It was not possible to engage the device without triggering a stop command. It shall be possible to disengage the device only by an appropriate operation, and disengaging the device shall not restart the wheelchair but only permit restarting.		P
	The emergency stop function was available and operational at all times, regardless of the operating mode.		P
	Emergency stop devices were a back-up to other safeguarding measures and not a substitute for them.		P
	Additional emergency stop devices may be attached to a wheelchair to be operated by an assistant. Where the intended occupant has an impairment which restricts their ability to operate an emergency stop device, the risk management process(6.1) should take this into account.		P
12.7	Lighting		N
	Wheelchairs intended by the manufacturer for outdoor use shall be supplied with integral		N

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Clause	Requirement – Test	Result - Remark	Verdict
	lighting suitable for the operations concerned where the absence thereof is likely to cause a risk despite ambient lighting of normal intensity		
	Wheelchairs can be subject to national requirements for lighting and reflectors.		N
	If there are no national requirements, the Wheelchair is expected to conform to relevant lighting requirements in automotive Regulations of the European Union (e.g. Regulation 661/2009 [18]).		N
12.8	Switching off while driving		P
	If the wheelchair is switched off while driving on the horizontal, it shall come to a stop within the maximum stopping distances specified in Table 4.		P
12.9	Software		N/E
	Software that is embedded in the wheelchair or is an integral part of the wheelchair, and the malfunction of which can give rise to a hazardous situation, shall be developed and maintained in accordance with EN 62304:2006.		N/E
12.10	Lithium cells and batteries		P
	Sealed secondary lithium cells and batteries containing non-acid electrolyte shall conform to the requirements of EN 62133-2:2017		N/E
12.11	Remote control	No remote control function for such wheelchair	N
	Where remote control is used for any moving part of the wheelchair or any lighting function, the following aspects shall be included in the risk management process:		N
	— loss of signal;		N
	— signal errors;;		N
	— reliability level;		N
	— correct pairing between the remote control and the wheelchair;		N
	— correct identification of the paired remote control and wheelchair to the operator;		N
	— interference from multiple remote controls;		N
	— security and malicious interference;		N
	— reliability of software in the remote control:		N
	— gradual loss of power in the remote control;		N

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Clause	Requirement – Test	Result - Remark	Verdict
	— range.		N
13	Information supplied by the manufacturer		P
13.1	General		P
	Each wheelchair shall be provided with documentation and labelling that conform to the applicable requirements in EN ISO 20417:2021 in addition to the requirements specified in this document.		P
	The manufacturer shall provide the documentation in three separate sections: pre-sale, user and servicing information, as specified in 13.2, 13.3 and 13.4 respectively. These may be provided as separate printed documents or in other forms of media to meet the needs of individual occupants or their assistants.		P
13.2	Pre-sale information		P
	Pre-sale information shall include the following:		P
	a) information on how to obtain the user information in a format appropriate for use by visually impaired people;	This device is not intended to be used by visually impaired people	N
	b) a description of the intended occupant of the wheelchair, including the occupant's mass;	Refer to user manual	P
	c) the intended operator (occupant, assistant or both), intended use and the intended environment;		P
	d) the type class of the wheelchair: Class A, Class B or Class C;		P
	e) the overall dimensions (width, length and height) of the wheelchair and its mass when it is ready for use and, if applicable, when it is folded and/or dismantled for storage or transportation;		P
	f) the minimum width of corridor in which the wheelchair can be turned to face the opposite direction;		P
	g) the rated slope, expressed in degrees;		P
	h) the standard options that are available for the wheelchair;		N
	i) if the wheelchair can be dismantled or has any removable parts, the mass of the heaviest part;		P
	j) a statement that the wheelchair is intended to be used as a seat in a motor vehicle, or a warning that the wheelchair is not intended to be used as a seat in a motor vehicle;		P

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Clause	Requirement – Test	Result - Remark	Verdict
	k) the theoretical continuous driving distance range, expressed in kilometres, that the wheelchair can travel under its own power on the horizontal when tested in accordance with ISO 7176-4:2008, with the addition of a note explaining that the distance will be reduced if the wheelchair is used frequently on slopes, rough ground or to climb kerbs, etc.;		P
	l) the maximum height of kerb which the wheelchair can descend safely;		P
	m) if a programmable controller is fitted, information on the method of programming, the competency required to carry out the programming and the effects it can have on driving performance.	Not programmable	N
13.3	User information		P
	User information shall be provided by the manufacturer with each wheelchair. Further copies shall also be available for any subsequent user of the wheelchair. User information shall contain the following where applicable:	Refer to user manual	P
	a) the unique identification number of the wheelchair or information on the location of the unique identification number on the wheelchair;	Marking plate	P
	b) any adjustment or settings required before the wheelchair can be used and warnings of how adjustments or settings affect stability;		P
	c) information on any adjustments that can be made, and the competency required to carry out these adjustments;		P
	d) instructions on operation of all controls, including brakes;		P
	e) instructions on how to engage and disengage the drive system;		N
	f) the wheelchair manufacturer's recommended tyre pressure(s), expressed in kPa, bar or PSI;		N
	g) instructions for dealing with tyre punctures;		N
	h) the battery type and nominal voltage;	Refer to user manual	P
	i) instructions for battery maintenance;	Refer to user manual	P
	j) instructions for operating the battery charger, including warnings regarding any potential safety hazards (e.g. a possibility of gas accumulating in the charging area, use of the wrong type of battery charger);		P
	k) if required by the risk analysis, instructions for		P

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Clause	Requirement – Test	Result - Remark	Verdict
	fitting an additional emergency stop device where the intended occupant has an impairment which can restrict their ability to operate one;		
	l) instructions on whether and how the wheelchair can be folded to assist in storage or transport;	Refer to user manual	P
	m) instructions on dismantling and re-assembly of the wheelchair or any removable parts;	Refer to user manual	P
	n) instructions regarding transport of the wheelchair when it is unoccupied (e.g. in a car or aeroplane);		N
	o) if the manufacturer specifies that the wheelchair is intended for use as a seat in a motor vehicle, the method of attaching wheelchair tiedown and occupant restraints, and recommendations about suitable tiedown and restraint systems;		N
	p) if the manufacturer specifies that the wheelchair is not intended for use in the motor vehicle, a warning to that effect;		P
	q) instructions on how to use the means for maintaining a sitting posture (see 9.4) and the circumstances in which it should be used;		P
	r) instructions on how to obtain and fit the means for maintaining a sitting posture (see 9.4) if it is not supplied with the wheelchair;		N
	s) the positions of points intended to carry additional loads;		N
	t) instructions for preparing the wheelchair for long-term storage (e.g. longer than four months) and for preparing it for use afterward;		P
	u) warning that the wheelchair can disturb the operation of devices in its environment that emit electromagnetic fields (e.g. alarm systems of shops, automatic doors, etc.);	Refer to user manual	P
	v) a warning that the driving performance of the wheelchair can be influenced by electromagnetic fields (e.g. those emitted by electricity generators or high-power sources);	Refer to user manual	P
	w) a warning that the stopping distance on slopes can be significantly greater than on level ground;		P
	x) information on the recycling of used batteries and of the wheelchair;		P
	y) if the characteristics of the wheelchair (including the occupant as applicable) exceed	Not exceed the limits	N

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Clause	Requirement – Test	Result - Remark	Verdict
	the limits specified in Appendix M of Commission Regulation (EU) No 1300/2014 [19], a statement to that effect (see Annex D for additional information);		
	z) information on how to find out about product safety notices and product recalls, for example by ensuring the supplier has up-to-date contact details;		P
	aa) the expected service life of the wheelchair;		P
	bb) information on how to get repairs and servicing;		P
	cc) warranty information.		P
13.4	Service information		P
	The service information shall contain all the pre-sale information, user information and instructions necessary for the maintenance, adjustment and repair of the wheelchair and for the replacement of parts.		P
13.5	Labelling		P
	The manufacturer shall apply permanent labelling for the following:		P
	a) the maximum load of the wheelchair, i.e. the total of the maximum occupant mass and the maximum mass of any other items intended to be carried by the wheelchair;		P
	b) devices for disengagement of the drive system, showing engaged and disengaged positions, including a warning that the drive system should be re-engaged before an occupant is left unattended or attempts to operate the wheelchair;		P
	c) for wheelchairs where the intended use includes use as a seat in a motor vehicle, the position of attachment points for wheelchair tie-down and occupant restraint systems (WTORS);	Not use as a set in a use as a seat in a motor vehicle	N
	d) for wheelchairs not intended to be used as a seat in a motor vehicle, a warning to that effect;		P
	e) for Class A wheelchairs not intended for use outdoors, a warning to that effect.		N
14	Test report, tables and figures		P
	The test report shall contain the following information:		P

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Clause	Requirement – Test	Result - Remark	Verdict
	a) a unique report number;		P
	b) the name and address of the testing institution;		P
	c) the date of issue of the test report;		P
	d) a reference to this document, i.e. EN 12184:2022;		P
	e) the name and address of the manufacturer of the wheelchair;		P
	f) a description of the sample including the manufacturer's or vendor's trademark, model or type, unique identification number and any variations or accessories fitted;		P
	g) the manufacturer, type and model of controller and motors and the type and capacity of the batteries fitted to the wheelchair during the tests;		P
	h) the supplier of the sample;		P
	i) details of the set-up of the wheelchair as specified in ISO 7176-22:2014, including details of how it was equipped and adjustments;		P
	j) the masses of the dummies or human test occupants and weights used;		P
	k) where the controller is programmable, the settings used while testing;		N
	l) a photograph of the sample equipped as during the test;		P
	m) the results of the tests;		P
	n) if not all of the requirements of this document have been applied (see Annex G), a list of the requirements that have been applied and those that have not;		P
	o) a statement as to whether or not the tested sample has met all of the applicable requirements of this document and a list of all the applicable requirements it has not met.		P

---End of EN 12184 test report, continued with attachment 1---

Attachment 1

Technical Documentation of Electric climbing wheelchair



Attachment 1

Technical Documentation of Electric climbing wheelchair

1. Method of unfolding the climbing machine

Grasp the backrest of the climbing machine with your hand and unfold it backwards to 90 degrees, lock the plum blossom screw, and complete the unfolding (Figure 1).



2. The use of climbing machines

Upstairs operation

① The passenger lifts the armrest (Figure 2), climbs up the stairs from the side, fasten the seat belt, lean on the headrest, and waits for the operator to operate.



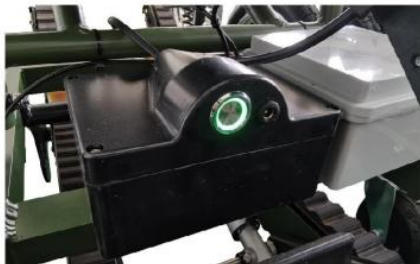
② The operator pushes the climbing machine to the edge of the stairs, with the backrest parallel to the stairs, and holds the support rod with both hands (Figure 3).



Attachment 1

Technical Documentation of Electric climbing wheelchair

③ Press the power button, and the green light of the power button will turn on (Figure 4). Check if the battery level displayed on the control panel is sufficient (Figure 5).



④ Press and hold the "Extend" button on the control panel (Figure 6), lower the track until the climbing machine is fully supported (Figure 7).



⑤ The operator holds the handrail with both hands and then presses the "upstairs" button (Figure 8). At this point, the track automatically tilts and fits the stairs when starting to climb the stairs, the seats will automatically adjust to a horizontal position to ensure a smooth ride for passengers (Figure 9).



⑥ When the climbing machine reaches the last step of the stairs above (Figure 10) and the track is halfway through, stop pressing the "up" button, operate the frame, and wait for the track to automatically level (Figure 11).



Attachment 1

Technical Documentation of Electric climbing wheelchair

⑦ After flattening the track, continue pressing the "up" button (Figure 12), and stop pressing the "up" button when all the wheels are in the platform position (Figure 13).



⑧ Press and hold the "shrink" button (Figure 14), wait for the track to fully retract, and then push the climbing machine to complete the upstairs operation (Figure 15).



2. The use of climbing machines

Going downstairs operation

① The passenger lifts the armrest, climbs up the stairs from the side, fastens their seat belt, leans on their headrest, and waits for the operator to operate (Figure 16).

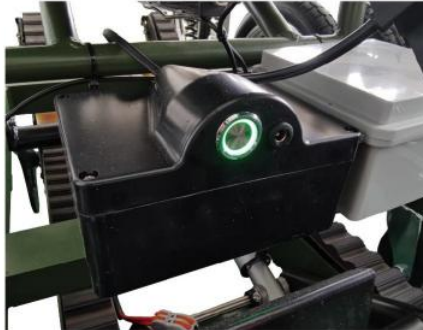


Attachment 1

Technical Documentation of Electric climbing wheelchair

② The operator pushes the climbing machine to the edge of the stairs, facing parallel to the stairs, and holds the support rod with both hands (Figure 17).

③ Press the power button, the green light of the power button will turn on (Figure 18), and check if the battery level displayed on the control panel is sufficient (Figure 19).



④ Press and hold the "Extend" button on the control panel (Figure 20), lower the track until the climbing machine is fully supported (Figure 21).



⑤ The operator holds the handrail with both hands and then presses the "downstairs" button (Figure 22), and the climbing machine will automatically move forward (Figure 23).



Attachment 1

Technical Documentation of Electric climbing wheelchair

⑥ When the radar detects a suitable location, the climbing machine will automatically stop (Figure 24), and then release the "downstairs" button, hold onto the support rod with both hands, slowly push forward, and the track will automatically adhere to the stairs. The seat will automatically adjust to a horizontal position to ensure a smooth ride for passengers (Figure 25).



⑦ When the track is fully attached to the stairs, press and hold the "downstairs" button (Figure 26) to start going downstairs.

⑧ When the climbing machine reaches the flat ground completely, press and hold the "shrink" button (Figure 27), wait for the tracks to fully retract, and then push the climbing machine to complete the downstairs operation.

Attention: Before carrying passengers, it is necessary to be proficient in operating the empty vehicle.



3. Battery charging

When the battery level on the monitor is less than 2 bars, it is necessary to charge it in a timely manner (Figure 28), otherwise it will affect the battery life.

① Extend the four fingers of your right hand to the empty space below the battery holder, lift the battery up and down with your fingers for easy lifting (Figure 29), and then grab the upper end of the battery with your left hand to remove it.



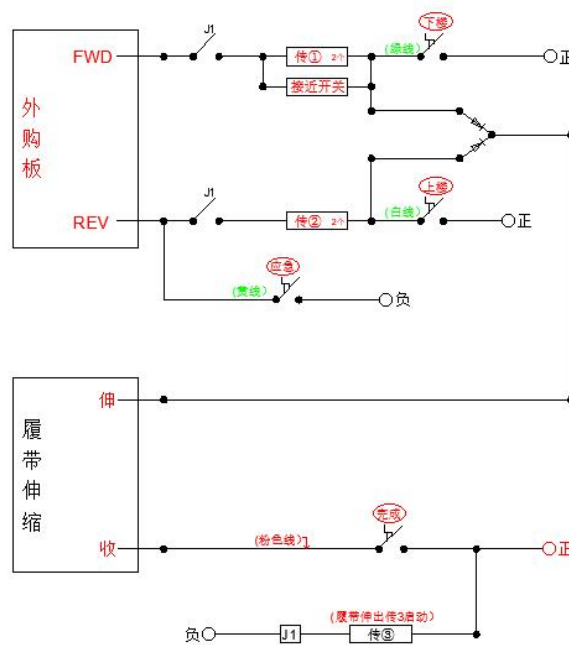
Attachment 1

Technical Documentation of Electric climbing wheelchair

② The charging plug of the charger is inserted into the charging port of the battery, and the 220V power plug of the charger is plugged into the socket at home. The power button should be turned off during charging, and the red light on the charger will start charging (Figure 30). When fully charged, the green light will light up (Figure 31).



WD58-9（外购线路板）接线图



注意：调速器黑线上加100Ω电阻。

设计原理：当按住上楼或下楼按钮，会先伸出履带后才开始上或下，当车子到预定位置时会停止，而停止后再启动则有16秒缓起，这样上下平台就会安全系数增加与易操控系数增加。

Attachment 1

Technical Documentation of Electric climbing wheelchair

 Pony Testing International Group		 CNAS L3192		报告编号(Report ID): MRIV4S7G2954747U5	
				中国认可 国际互认 检测 TESTING CNAS L3192	
UN38.3 测试报告 UN38.3 Test Report					
样品名称及型号 Sample Name & Model		可充式锂离子电池 型号: ICR18650 /26V Rechargeable Li-ion Cell Model: ICR18650 /26V (3.6V 2550mAh 9.18Wh)			
委托单位 Applicant		惠州亿纬锂能股份有限公司 EVE Energy Co., Ltd.			
生产单位 Manufacturer		荆门亿纬创能锂电池有限公司 EVE Innovation Energy Co.,Ltd.			
P O N Y 普尼测试 Pony Testing International Group www.ponytest.com				 No.: MRIV4S7G2954747U5 Code: 8pyegy	

Attachment 1

Technical Documentation of Electric climbing wheelchair

DCNY



Pony Testing International Group



报告编号 Report ID: MRIV4S7G2954757U4 Page 1 of 2

锂电池或锂电池组 UN38.3 试验概要 Lithium Cell or Battery UN38.3 Test Summary

单位信息 Company information:

委托单位 Applicant	惠州亿纬锂能股份有限公司 EVE Energy Co., Ltd.		
生产商 Manufacturer	名称 Name	荆门亿纬创新锂电池有限公司 EVE Innovation Energy Co., Ltd.	
	地址 Address	中国湖北省荆门市高新区掇刀区高新路 13 号	
	电话 Tel.	18948568967	
	邮箱 E-mail	098407@evebattery.com	
	网址 Website	www.evebattery.com	
测试单位 Test Lab.	名称 Name	谱尼测试集团深圳有限公司 Pony Testing Group Shenzhen Co., Ltd.	
	地址 Address	深圳市宝安区福海街道桥头社区永和路鑫豪盛工业园 1 栋、2 栋 3 层	
	电话 Tel.	86-755-26050909	
	邮箱 E-mail	est@ponytest.com	
	网址 Website	www.ponytest.com	

样品信息 Sample information:

样品名称 Sample name	可充式锂离子电池 Rechargeable Li-ion Cell	样品型号 Sample model	ICR18650 /26V
原始测试型号 Original tested type	/	产品参数 Sample parameter	3.6V 2550mAh
样品质量 Sample mass	44.59g	额定瓦时 Watt-hour rating	9.18Wh
电池或电池组类型 cell or battery type	锂离子电池芯 Lithium ion cell	物理形状 Physical description	蓝色圆柱形 Blue Cylindrical
原 UN38.3 报告编号 Original UN38.3 report No.	/	测试报告日期 Test report date	/
UN38.3 报告编号 UN38.3 Report No.	MRIV4S7G2954747U5	报告日期 Report date	2023-03-29



No.: MRIV4S7G2954757U4
Code: 6w3idm5mg8



谱尼测试集团
Pony Testing Group
Hotline 400-888-8888

北京实验室: (010) 83055009 郑州实验室: (0371) 69255670 成都实验室: (028) 87702708 宁波实验室: (0574) 87736499
 天津实验室: (022) 88706886 烟台实验室: (0535) 6664186 上海实验室: (021) 64851999 合肥实验室: (0551) 62043474
 青岛实验室: (0532) 88706886 石家庄实验室: (0311) 85376660 苏州实验室: (0512) 62997508 深圳实验室: (0755) 26050909
 杭州实验室: (0571) 86530198 西安实验室: (029) 89608785 苏州汽车检测实验室: 苏州工业园区 谱尼检测(苏州)有限公司
 长春实验室: (0431) 22811886 济南实验室: (0531) 85000079 无锡实验室: (0510) 62997908 广州实验室: (020) 89224310
 沈阳实验室: (024) 87336618 呼和浩特实验室: (0471) 3450025 武汉实验室: (027) 83997127 咸宁实验室: (0513) 5518818
 佛山实验室: (0431) 58627755 成都实验室: (028) 87702708 杭州实验室: (0571) 87219096

Attachment 1

Technical Documentation of Electric climbing wheelchair

			
			
Pony Testing International Group		报告编号(Report ID): MRIV4S7G2954787U6	
		中国认可 国际互认 检测 TESTING CNAS L3192	
1.2 米跌落测试报告 1.2m Drop Test Report			
样品名称及型号 Sample Name & Model	可充式锂离子电芯 型号: ICR18650 /26V Rechargeable Li-ion Cell Model: ICR18650 /26V		
委托单位 Applicant	惠州亿纬锂能股份有限公司 EVE Energy Co., Ltd.		
生产单位 Manufacturer	荆门亿纬创能锂电池有限公司 EVE Innovation Energy Co.,Ltd.		

Attachment 1

Technical Documentation of Electric climbing wheelchair

Pony Testing International Group

中国认可
国际互认
检测
TESTING
CNAS L3192

集团微信订阅号

集团微信服务号

报告编号(Report ID): MRIV4S7G2954767U6

1.2 米跌落测试报告 1.2m Drop Test Report

样品名称及型号

Sample Name &
Model

可充电锂离子电芯 型号: ICR18650 /26V
Rechargeable Li-ion Cell Model: ICR18650 /26V

委托单位
Applicant

惠州亿纬锂能股份有限公司
EVE Energy Co., Ltd.

生产单位
Manufacturer

荆门亿纬创能锂电池有限公司
EVE Innovation Energy Co.,Ltd.

Attachment 1

Technical Documentation of Electric climbing wheelchair

		Ref. Certif. No. JPTUV-071840
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME		SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC
CB TEST CERTIFICATE		
CERTIFICAT D'ESSAI OC		
Product Produit	Lithium-ion Rechargeable Cell	
Name and address of the applicant Nom et adresse du demandeur	EVE Energy Co., Ltd. No. 36, Hua Feng 7th Road Zhongkai Hi-Tech Zone, Huizhou, Guangdong, P.R. China	
Name and address of the manufacturer Nom et adresse du fabricant	EVE Energy Co., Ltd. No. 36, Hua Feng 7th Road Zhongkai Hi-Tech Zone, Huizhou, Guangdong, P.R. China	
Name and address of the factory Nom et adresse de l'usine	EVE Energy Co., Ltd. No. 36, Hua Feng 7th Road Zhongkai Hi-Tech Zone, Huizhou, Guangdong, P.R. China	
Rating and principal characteristics Valeurs nominales et caractéristiques principales	3.6V, 2550mAh, 9.18Wh	
Trademark (if any) Marque de fabrique (si elle existe)		
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A	
Model / Type Ref. Ref. de type	EVE ICR18650/26V	
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2 ^{ème} page)		
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la		
IEC 62133:2012 National differences see test report		
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essai numéro de référence qui constitue partie de ce Certificat		
17057919 001		
This CB Test Certificate is issued by the National Certification Body Ce Certificat d'essai OC est établi par l'Organisme National de Certification		
		TÜV Rheinland Japan Ltd. Global Technology Assessment Center 4-25-2 Kite-Yamata, Tsuzuki-ku Yokohama 224-0021 Japan Phone + 81 45 914-3888 Fax + 81 45 914-3354 Mail: info@jp.tuv.com Web: www.tuv.com
Date: 09.05.2016	Signature: 	
		Dipl.-Ing. (FH) C. Padel

---End of attachment 1, continued with attachment 2---

Attachment 2

Photos of Electric climbing wheelchair

Photo 1
Front view



Photo 2
Rear view



Attachment 2

Photos of Electric climbing wheelchair

Photo 3
Side View:



Photo 4
Side View:



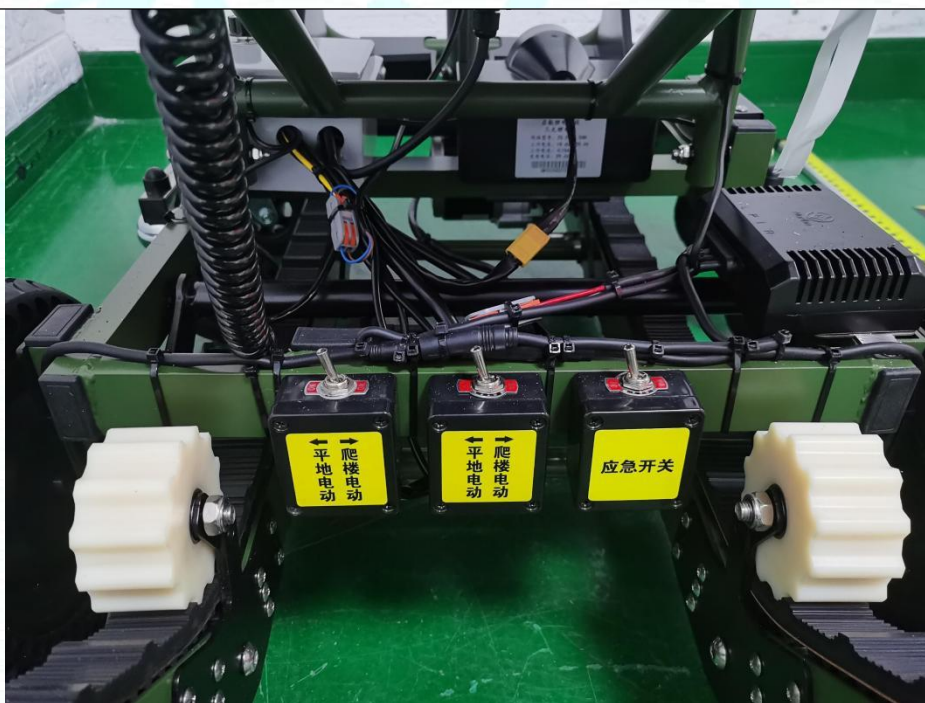
Attachment 2

Photos of Electric climbing wheelchair

Photo 5
Function panel



Photo 6
Switch



Attachment 2

Photos of Electric climbing wheelchair

Photo 7
Dashboard and tiller
handlebar:



Photo 8
Transmission



Attachment 2

Photos of Electric climbing wheelchair

Photo 9
Battery Pack:



Photo 10
Battery charger:



Attachment 2

Photos of Electric climbing wheelchair

Photo 11
Battery charger:



---End of attachment 2, continued with attachment 3---

Attachment 3 **Marking Plate**

Electric climbing wheelchair
Model: WD58-8

Battery Charger:

Input: 100-240V~, 50/60Hz, 2.5A, CLASS II

Output: DC 29.4V, 2.8A

Battery: 25.5V, 12.5Ah

Suzhou Jiujiuba Medical Equipment Co., Ltd

No. 86, Renmin Road, Zhaofeng, Leyu Town, Zhangjiagang City

MADE IN CHINA

Marking plate of Electric climbing wheelchair

---End of attachment 3---

