

decon
mobility



SMARTCHAIR
TRAVEL

Owner's Manual

Contents

1. Guidance for Use	3	14. Folding and Unfolding	26
2. Introduction	4	14.1 Unfolding Steps	26
3. Safety Signs	5	14.2 Folding Steps	27
4. Features	6	15. Getting On from the Side	28
5. Technical Specifications	8	16. Controller	29
6. Electromagnetic Interference Warning	9	16.1 Controller Overview	29
7. Safety	10	17. Troubleshooting	30
7.1 Users	10	18. Warranty	32
7.2 Caregivers	10	18.1 Warranty Exclusions	32
7.3 Control Panel	10	19. Packing List	33
7.4 Static Position	11	20. Guidance and Manufacturer's Declaration	34
7.5 Usage Environment	11	20.1 Cables Provided for EMC Reference	34
7.6 Road Surfaces	12	20.2 Table 1 – Emissions	34
7.7 Driving in Traffic Environments	12	20.3 Table 2 – Enclosure Ports	35
7.8 Driving in Motor Vehicle Environments	12	20.4 Table 3 – Additional Ports	35
7.9 Driving Balance	13	20.5 Table 4 – AC Power Input Ports	36
7.10 Wheelchair Handling	13	20.6 Table 5 – Signal Input/Output Ports	36
• Getting On/Off	13		
• Body Lean and Stretching	14		
• Dressing on the Wheelchair	14		
• Crossing Obstacles	15		
• Reverse Driving	15		
• Driving on Inclines	15		
7.11 Load Limit	16		
7.12 Getting Up/Down Escalators	16		
8. Installation Guide	17		
8.1 Seat Belt Installation	17		
8.2 Control Panel Installation	18		
9. Operation Guide	19		
9.1 Control Panel	19		
9.2 Power On/Off Button	20		
10. Electromagnetic Unlock Valve	20		
10.1 Control Joystick	21		
10.2 Electromagnetic Unlock Valve Operation	21		
11. Trolley Wheel Usage	22		
12. How to Move the Wheelchair into the Trunk	22		
13. Battery	23		
13.1 Mounting/Removing the Battery	24		
13.2 Charging the Battery	24		
13.3 Over-Discharge Protector	25		
13.4 Over-Current Protector	25		

1. Guidance for Use

This product is powered by a DC motor and designed for use in ambient temperatures from -5°C to 45°C. It is intended as a travel aid for elderly and disabled users. The power wheelchair is compact, lightweight, portable, safe, and comfortable.

WARNING

To Users:

Do not operate the power wheelchair without first reading and understanding this owner's manual. If you have difficulty understanding the warnings, notes, or instructions, please contact your distributor for professional assistance. Improper use may result in injury. You may also operate the wheelchair under the guidance of a qualified technician.

To Distributors and Technicians:

Do not operate the power wheelchair without first reading and understanding this owner's manual. If you have difficulty understanding the warnings, notes, or instructions, please contact Suzhou KD Intelligent Device Co., Ltd for professional assistance. Improper use may cause injury to users.

2. Introduction

Dear Customer,

Thank you for choosing Decon's SmartChair Travel, designed and manufactured with safety, comfort, and portability in mind.

SmartChair Travel is built to help you regain mobility and independence..

★ Please read all instructions in this manual carefully before using the wheelchair for the first time. This manual will help you understand the features, operation, and proper maintenance of your SmartChair Travel. If you need further assistance or experience difficulties operating the wheelchair, please contact your distributor or importer for support.

Decon

3. Safety Signs

These symbols indicate warnings, required actions, and prohibited actions. It is essential that you fully understand and familiarize yourself with them before using the wheelchair.



Read and follow all instructions carefully before using the device.



Warning: Indicates a potentially dangerous operation that may cause injury to yourself or others.



Class II (double-insulated) equipment.



General-applied part – safe to touch during normal operation



Parts that can be easily squeezed or crushed – handle with care.



Storage: Keep in a clean, dry place, away from rain, snow, ice, salt, and water.



EMI/RFI Compliance: Device passes tests at an immunity level of 30 V/m.



Battery contains corrosive substances – handle with care.



Explosion hazard – improper handling may cause the battery to explode.



Keep tools and metal objects away from battery terminals. Contact may cause short-circuit or electric shock, resulting in injury.



Flammable material: Keep away from heat sources such as open flames or sparks. Do not transport with flammable, explosive, or combustible materials.



Battery disposal and recycling: Follow local regulations.



Not for use in motor vehicles.

4. Features



1. Backrest
2. Armrest Unlock Button
3. Joystick
4. Seat Cushion
5. Battery
6. Motor
7. Front Wheel
8. Reversible Footrest



- 9. Front Fork
- 10. Unlock Drawstring
- 11. Electromagnetic Unlock Valve
- 12. Anti-Tip Wheel Unlock Button
- 13. Anti-Tip Wheel
- 14. Splash Guard
- 15. Trolley wheel

5. Technical Specifications

Mode		PL001-7002
Dimensions (Unfolded): L x W x H		900 × 620 × 930 mm (35.4 × 24.4 × 36.6 in)
Dimensions (Folded): L x W x H		800 × 620 × 320 mm (31.4 × 24.4 × 12.6 in)
Suggested User Weight		120kg, (260 lbs)
Weight		23 kg (with battery)/ 20.5kg (without battery)
Maximum Climbing Angle		6 degree
Full Charge Mileage		Theoretical continuous driving distance range: 24.3 km Theoretical manoeuvring distance range(km): 11.0 km
Max Speed		6 km/h
Turning radius		720 mm (28.3 in)
Maximum Obstacle-crossing Height		35 mm
Motor		
Type		Brushless DC Motor
Rated Power		140W
Input Voltage/ Current		DC 24V
Qty		2
Brake System		Intelligent Electromagnetic Brake
Braking Distance		At max speed: <1 m
Battery		
Type		Lithium-ion Battery
Nominal Capacity		12 Ah
Output Voltage (Battery)		DC 24 V (Charging current: 2 A, fully charged voltage: 29.4 V, off-board battery charger, IPX1)
Qty		1
Controller		
Type		Brushless Dual-drive Rocker Controller
Input Power		280W
Input Voltage/ Current		DC 24V/12A withstand peak: 15A
Front Wheel		
Wheel Diameter x Tire Width		178 × 35 mm (7 × 1.4 in)
Type		Solid Tire
Material		PU
Qty		2
Rear Wheel		
Wheel Diameter x Tire Width		254 × 55 mm (10 × 2.2 in)
Type		Solid Tire
Material		PU/Rubber
Qty		2
Backrest		
Adjusting Way		N/A
Adjusting Angle		N/A

6. Electromagnetic Interference Warning



WARNING

The power wheelchair may be affected by electromagnetic interference (EMI). It is essential that users carefully read and understand the instructions to ensure safe operation.

Electromagnetic waves from sources such as broadcasting stations, TV and radio transmitters, and communication devices like two-way radios can interfere with the wheelchair's systems. Exposure to strong electromagnetic fields may cause the wheelchair to malfunction or, in rare cases, permanently damage the braking or control system.

The wheelchair has passed the 30 V/m EMI test and provides a certain level of protection against most common sources of electromagnetic energy encountered in everyday life. Users should remain aware of potential EMI sources and take necessary precautions to avoid risks.



CAUTION

1. Keep a safe distance from all sources of radio wave emissions, such as TV and radio stations, and other strong transmitters.
2. If interference occurs and causes the wheelchair to move unexpectedly or uncontrollably, turn off the power immediately.

Important: Do not modify the power wheelchair in any way, including adding or removing parts, as this may reduce its resistance to electromagnetic interference.

7. Safety



WARNING

7.1 Users

1. Keep tools and other metal objects away from both ends of the battery. Contact may cause a short circuit or electric shock, which could result in injury.
2. Health care personnel must receive professional training and guidance on the safe use of the power wheelchair.
3. Familiarize yourself with the power wheelchair before using it.
4. Practice operating the wheelchair under the supervision of trained personnel until you are confident in performing operations independently, skillfully, and safely, including moving forward, turning, crossing obstacles, and braking.
5. Do not attempt unfamiliar operations if you are unsure of their safety.
6. Inspect the operating area in advance, assess potential hazards, and take appropriate protective measures to reduce risks.



WARNING

7.2 Caregivers

1. Develop a Safe Plan: Based on the specific needs of the user, help them develop the safest plan for using the wheelchair, in consultation with doctors, nurses, and physiotherapists.
- ★ 2. Free Wheel / Unlock Mode: When pushing the power wheelchair manually, pull the electromagnetic unlock valve to engage Free Wheel or Unlock Mode. In this mode, the wheelchair's brakes on the controller will not function.
3. Precautions When Pushing the Wheelchair:
 - Maintain Proper Posture: Help the user keep their body in the correct posture according to human body mechanics to prevent back injuries. Slightly bend your knees and keep your back straight when lifting or tilting the wheelchair.
 - Communicate Clearly: Before operating, explain to the user what you intend to do, why, and what you need them to do. This helps the user prepare and reduces the risk of accidental injury.
 - Watch for Hazards: Be aware of stairs, steps, and sharp corners, where the wheelchair could tip or fall.
 - Backrest Safety: Remind the user to lean closely against the backrest when tilting the wheelchair backward.
 - Move Slowly on Steps: Move the wheelchair slowly when descending steps to prevent injury to the user and damage to the wheelchair. Ensure the surface is as smooth as possible.
 - Avoid Trapping Hazards: Be careful to prevent fingers, clothing, or other objects from getting trapped.



WARNING

7.3 Controlpanel

Please note: You may need to adjust the settings on the control panel (Fig. A1) to prevent the risk of collision, descent, or falling.

4. Check and adjust the control panel settings every six months.
5. If you need to modify the functions or settings of the control panel, please contact your supplier.



WARNING

7.4 Static Position

1. When the electric wheelchair is stopped, always turn off the power – even for short periods of time. This will:
 - Prevent accidental movement of the wheelchair if you or someone else unintentionally touches the joystick.
 - Prevent possible electromagnetic interference that could affect the normal operation of the electric wheelchair.
2. Non-users should not touch the joystick to avoid unintentional or abnormal movement of the wheelchair.



WARNING

7.5 Usage Environment



This power wheelchair must not be used or stored in heavy rain, snow, or icy conditions.

1. Exposure to water or excessive moisture may cause electrical failures.
The frame, motors, and other components are not fully waterproof and may rust or corrode from the inside.
To prevent malfunction, please follow these guidelines:
 - ★ Avoid using or placing the wheelchair in humid environments or in direct contact with water (e.g. heavy rain).
 - ★ Do not use the electric wheelchair while showering, in a sauna, or when swimming.
 - ★ Do not operate the wheelchair near water sources such as rivers, lakes, or the sea.
 - ★ Replace the control panel immediately if it becomes damaged.
 - ★ Ensure that all electrical connections are secure and not loose.
 - ★ Never wash the wheelchair with water. If the wheelchair becomes wet, remove the battery immediately and allow it to dry completely before reinstalling and using it again.
2. Operation on wet or slippery surfaces:
 - Drive carefully and at a slow speed. Ensure it is safe before proceeding.
 - If one or both drive wheels lose traction, stop immediately to avoid loss of control or tipping.
 - Do not drive on slopes or ramps covered with snow, ice, water, or oil.
3. After use:
 - Turn off the power.
 - Fully charge the batteries.
 - Keep the wheelchair clean and dry.



WARNING

7.6 Road Surfaces

1. The power wheelchair is designed for optimal performance on level and stable surfaces, such as concrete, asphalt, or indoor flooring.
2. Do not use the wheelchair on sand, loose soil, or uneven ground. Doing so may cause damage to the wheels, bearings, shafts, and motors, and may also result in loosening of fasteners or other mechanical failures.

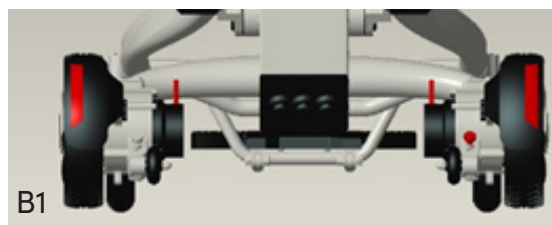


WARNING

7.7 Driving in Traffic Environments

Please be aware of local traffic regulations when operating the wheelchair on public roads.

It is dangerous to drive the wheelchair on public roads or in parking lots, so extra caution must be taken.



1. For increased visibility at night, the wheelchair is equipped with reflective markers (see Fig. B1).
2. Users are also advised to wear reflective clothing.
3. When operating the wheelchair in areas with motor vehicles, ensure that drivers have noticed you. Before proceeding, make eye contact with the driver and use clear gestures to show your intentions. Only continue when you are certain it is safe to do so.



WARNING

7.8 Driving in Motor Vehicle Environments

1. Do not use the wheelchair while traveling on any form of transportation, such as buses, metro, trains, airplanes, or ships.
2. If it is necessary to remain seated in the wheelchair during transport, it is extremely important to fasten the seat belt and secure the wheelchair or its wheels to prevent injury in the event of a sudden stop or accident.
3. Do not place the wheelchair in the front row of any vehicle, as it may interfere with the driver's operation.
4. Avoid lifting the user while they are seated in the wheelchair when boarding or exiting vehicles. If lifting is absolutely necessary, grip the front and rear edges of the seat frame, and never lift the wheelchair by the armrests or backrest.



WARNING

7.9 Driving Balance

Maintain proper balance and stability of the power wheelchair to prevent tipping when driving forward or backward.

The following factors may affect the wheelchair's weight distribution:

1. Seat height and seat angle
2. Changes in the user's position, posture, or body weight distribution
3. The gradient of ramps or slopes

The addition of backpacks or other items that may alter the total weight or its distribution

If you need to modify or adjust the power wheelchair, please consult your supplier in advance and obtain authorization from the manufacturer. Modified wheelchairs may require further adjustments to restore proper balance. Operate the modified wheelchair with extra caution until you are fully familiar with its stability and how to prevent tipping or falling.



WARNING

7.10 Wheelchair Handling

Getting On/Off

Moving your body independently can be dangerous, as it requires good balance and flexibility. Whenever moving, always use a supporting point higher than the seat cushion to prevent falls.

1. **Power Off:** Before getting on the wheelchair, ensure that the power is turned off. Touching the joystick while the power is on may cause unexpected movement.
2. **Lock the Motors:** Make sure the motors are in the "Lock" position so the wheelchair does not move on its own.
3. **Seek Professional Guidance:** Consult healthcare professionals to learn the safest way to move your body.
 - Learn how to position and support your body while moving.
 - Ask for assistance until you are confident you can safely get on and off the wheelchair.
4. **Position the Wheelchair:** Move the wheelchair as close as possible to your target position. If available, use any related auxiliary equipment to assist.
5. **Footrest and Armrest Use:**
 - Lift the footrest with your hands or feet (Fig. B2) before getting on. Do not stand on the footrest to move your body, as this may cause injury.
 - Hold the armrests for support when getting on.
6. **Getting Off Safely:**
 - Lift the footrest before getting off. Do not stand on the footrest while getting on or off to avoid falling
 - Alternatively, press the armrest unlock button on either side, lift the armrest, and get off from the side (Fig. B3).





WARNING

Body Lean and Stretching

Reaching out your hands or tilting your body affects the weight balance of the power wheelchair. Improper positioning may result in falling or tipping over.

To reduce the risk of injury or damage to the wheelchair, follow these guidelines:

1. Stay within the seat area: When shifting your body weight (e.g., lifting to one side or standing from the seat), do not lean outside the boundaries of the seat cushion. When leaning forward, keep your hips in contact with the seat at all times.
2. Avoid overreaching: Do not reach for objects beyond your comfortable range, as this may cause loss of balance and falling.
3. Do not pick up objects dangerously: Never attempt to pick up items through the space between your knees or directly in front of your body.
4. Avoid using the footrest for support: Do not apply force to the footrest while extending your body, as this may tip the wheelchair and cause serious injury.

Do not lean on the top of the backrest: Leaning here may lead to falls or damage the backrest.

★ Notes:

1. Move the wheelchair as close as possible to your target position.
2. If you overshoot the target, carefully move backward to adjust.
3. Once in position, turn off the power and hold the handrail firmly to prevent falls if the wheelchair tilts.



WARNING

Dressing on the Wheelchair

Note: When getting dressed while seated in the wheelchair, always ensure the power is turned off to prevent accidental movement caused by touching the joystick.



WARNING

Crossing Obstacles

During daily use, you may need to overcome obstacles such as doorsills, elevators, slopes, potholes, and rough roads. Improper use may result in damage to the wheelchair or personal injury.

1. **Doorsills:** Exercise extreme caution when crossing doorsills. Even a small height difference may cause the front wheels to get stuck and tip the wheelchair. To prevent this:
 - Remove or cover the doorsill with a ramp to allow smooth climbing and descending.
 - Use a portable ramp if available.
2. **Observe the Area:** Always carefully check the path you are about to travel before moving the wheelchair.
3. **Cross Safely:** Ensure that you can cross obstacles smoothly and safely.
4. **Body Positioning:** To maintain balance while crossing obstacles:
 - Slightly tilt your upper body forward when approaching an obstacle.
 - Lean gently against the backrest when crossing obstacles on a descending slope.



WARNING

Reverse Driving

Please be extremely cautious when driving in reverse. If the rear wheels encounter an obstacle, the wheelchair may become unstable or tip over.

1. **Move slowly:** Always reverse at a low speed to maintain full control of the wheelchair.
2. **Check the path:** Stop frequently and make sure the area behind you is clear of obstacles before continuing to move.



WARNING

Driving on Inclines

When driving on a slope, the wheelchair's balance and stability will change. Slopes include ramps and hillsides. If you are uncertain about safe operation on slopes, do not use the wheelchair alone—always seek assistance.

Exercise extreme caution and observe the following rules:

1. Do not drive on slopes steeper than 6°.
2. Do not drive on wet or slippery slopes, such as those covered with snow, ice, water, or oil.
3. Do not drive in areas with continuous uphill and downhill gradients.
4. Do not drive on slopes that have holes or depressions at the bottom.



WARNING

7.11 Load Limit

1. The maximum load of the wheelchair is 120 kg (264 lbs). Do not exceed this limit while using the wheelchair.
2. Under no circumstances should the user perform weight training or similar activities while seated in the wheelchair.
3. Overloading the wheelchair may cause damage to the seat, frame, fasteners, or folding mechanism. This can result in serious injury to the user or others and may permanently damage the wheelchair.
4. No warranty will be provided for any problems caused by overloading during use.



WARNING

7.17 Getting Up/Down Escalators

Using Elevators and Escalators

★ Warning:

It is strictly prohibited to use or move the wheelchair on stairs or escalators, as this may result in serious injury.

The wheelchair may be used in elevators. Always move the wheelchair only when the elevator doors are fully open, and ensure the doors remain open while passing through.

8. Installation Guide



WARNING

8.1 Seat Belt Installation

The seat belt is designed to secure the user in the seat and prevent sliding. It does not provide protection in the event of an accident.

The seat belt can be adjusted for the user's comfort.

Instructions for Use:

1. Always fasten the seat belt to ensure personal safety.
2. To open the safety buckle (Fig. D2), pinch the plastic card (Fig. D1).
3. After sitting down, insert the plastic card of the buckle into the plastic case on the other side until you hear a click.
4. Adjust the seat belt length using the adjusting buckle (Fig. D3) to achieve a comfortable fit.
5. When getting off the wheelchair, press the safety button and remove the plastic card.



D1



D2



D3



CAUTION

Seat Belt Maintenance

- Always ensure the seat belt is properly installed on the wheelchair and adjusted for comfort.
- Regularly check the seat belt for loose parts or damage. If any issues are found, contact after-sales service for maintenance or repair.

8.2 Control Panel Installation

The control panel can be mounted on either the right or left armrest based on the user's needs. (By default, the control panel is mounted on the right armrest. Contact the supplier if you wish to move it to the left side.)

1. As shown in Fig. E1, the control panel is mounted on the right side of the frame (right side when facing forward).
2. To remove the controller, unplug the connector and loosen the clamp.
3. As shown in Fig. E2 and Fig. E3, connect the control panel cable to the extension cable and secure them with the rotatable lock ring.



E1



E2

Unlock method A



E4



E5



E6

Unlock Method B ★ This accessory must be purchased separately.

Unlock Instructions:

1. Pull the quick-release pin outward at the position shown in Fig. E6.
2. Rotate the pin 180° outward in the direction indicated in Fig. E6 until it locks.
3. To return to the original position, pull out the pin again and turn the controller on.



E6

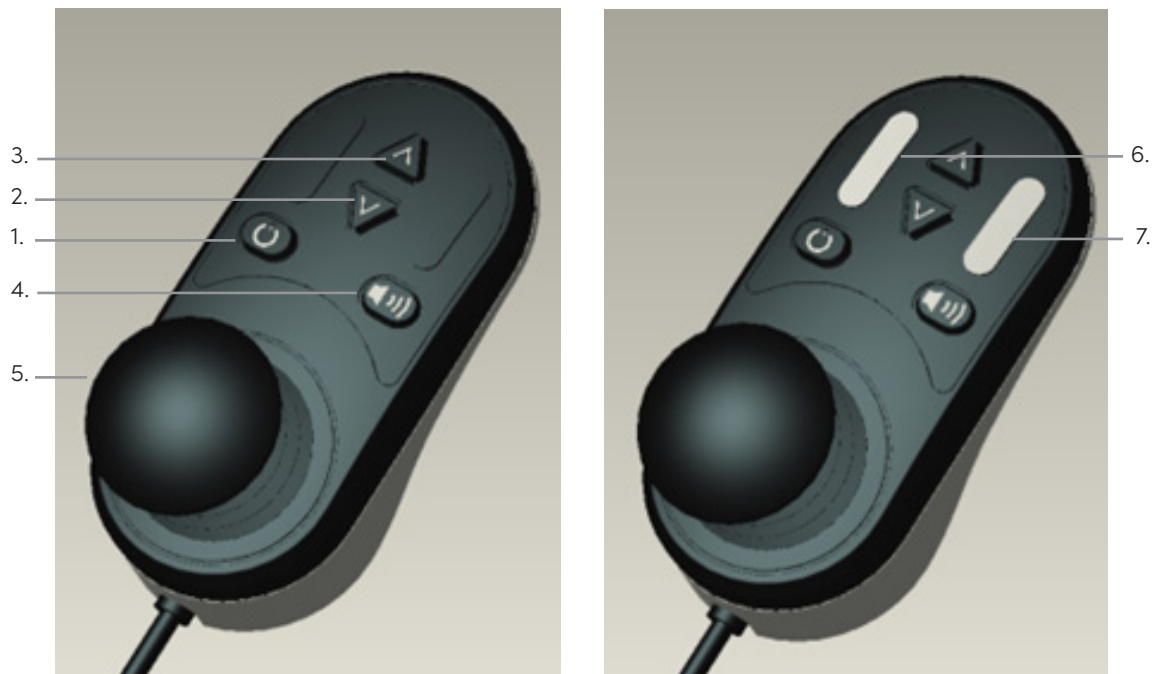


E6

9. Operation Guide

9.1 Control Panel

The operation of the electric wheelchair is controlled by the buttons and joystick located on the control panel. The functions of each button are described below.



1. Power Button

Press this button to turn the wheelchair on. Press it again to turn it off.

2. Deceleration Button

Press this button to decrease the speed.

3. Acceleration Button

Press this button to increase the speed.
Maximum speed: 6 km/h (3.75 mph).

4. Horn Button

Press this button to sound the horn and alert people nearby.

5. Control Joystick

Use the joystick to control the direction and speed of the wheelchair. Push it gently toward the desired direction. (Refer to "Control Joystick Instructions.")

6. Speed Indicator

There are five indicator lights:

- 1 light on: lowest speed
- 5 lights on: maximum speed

7. Battery Indicator

Displays the remaining battery level.

9.2 Power-On/Off Button

1. Press this button to turn the power on.
2. Press it again to turn the power off.



10. Electromagnetic Unlock Valve

1. As shown in Fig. E8, the electromagnetic unlock valve is in the “Lock” position under normal conditions. When the wheelchair loses power, the electromagnetic unlock valve engages automatically, activating the brake to prevent the wheelchair from sliding or rolling uncontrollably on a slope.
2. As shown in Fig. E9, when the wheelchair motor is out of power, the electromagnetic unlock valve can be pushed upward to the “Unlock” position, allowing the wheelchair to be moved manually. After manual movement, push the electromagnetic unlock valve downward to the “Lock” position before resuming powered operation.

In “Lock” position



E8

In “Unlock” position



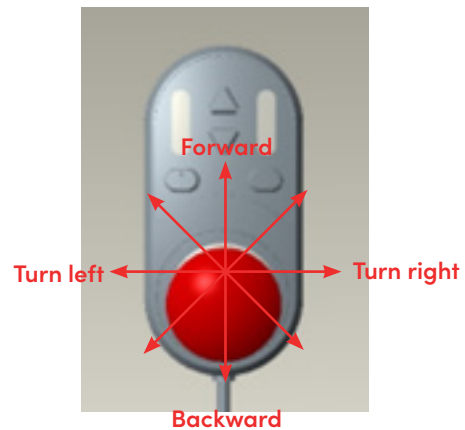
E9



WARNING

10.1 Control Joystick

1. When learning to operate the electric wheelchair for the first time, select a low speed and gently push the joystick forward. This will help you gradually learn to control the wheelchair, understand how to regulate its power, and master smooth starting and stopping. ★★★
2. Adjust the control panel settings properly before use.
3. Avoid making sharp turns at high speeds.
4. Failure to follow these warnings may result in tipping, causing serious injury or property damage.
5. The joystick on the control panel allows smooth control of both speed and direction. It provides 360-degree omnidirectional movement and is easy to operate. A built-in spring ensures the joystick automatically returns to its neutral position.
6. Push the joystick in the desired direction. The wheelchair responds proportionally: the further you push, the faster it moves. Maximum speed is 6 km/h (3.75 mph).
7. To slow down, simply release the joystick. The wheelchair will automatically decelerate and self-correct its direction within a minimal range.



10.2 Electromagnetic Unlock Valve Operation

The electromagnetic unlock valve has two modes: "Free Wheel" and "Drive" (see Fig. E6). Always ensure it is set to the "Drive" position before use. Failure to do so may create safety hazards.

In "Lock" position



E6

In "Unlock" position



E7

11. Trolley Wheel Usage

1. Stand on level ground after the wheelchair is locked.
2. Hold the end of the seat tube, tilt the wheelchair, and then push or pull it as needed.



12. How to Move the Wheelchair into the Trunk

1. After folding the wheelchair, remain standing and pull out the unlock pin until it locks in place.



2. Grasp the upper backrest, lift the wheelchair, and place it in the trunk.



13. Battery



Keep conductive objects such as metal away from both ends of the battery. If contacted, short-circuit or electric shock may occur and cause injury.



Avoid exposure to heat source such as open flames or sparks. Do not transport with flammable, explosive or combustible materials.



Corrosive substance is contained in the battery. Do not disassemble the battery.



Do not short-circuit the battery or put the battery into the fire to avoid an explosion accident.



WARNING

1. Do not attempt to charge the battery using pliers or metal wires.
2. Do not use the wheelchair while the battery is charging.
3. Do not use non-standard power supplies (e.g., generators or inverters), even if their voltage and frequency appear suitable. ★
4. Prevent the power cord from being stepped on, crushed, or sharply bent, especially near the connector. Avoid pulling or knotting the cord.
5. Keep children and pets away from the power cord, and prevent pets from biting or chewing it. When unplugging, always hold the plug, not the cord.
6. If there is a problem with the circuit breaker, unplug the charger immediately and contact your supplier or a professional technician.
7. The electronic anti-drive locking device will activate and prevent the wheelchair from operating while the battery is charging.
8. The battery warranty and performance specifications in the guide apply only to Li-ion batteries.
9. Do not smoke or use open flames near the battery.
10. The recommended ambient temperature for battery use is -5°C to 40°C .



CAUTION

1. ★ Always check that the battery is fully charged before use. The normal charging time is about 5.5 hours. If the battery is completely drained, it may take 6–7 hours to fully charge, until the charger indicator turns from red to green.
2. ★ Charge the wheelchair after use until the charger indicator turns green. If the wheelchair will not be used for a long period, fully charge the battery every 2 months. Failure to do so may render the battery unusable and severely damage the wheelchair.
3. Do not use batteries with incorrect specifications, voltage, or capacity, as this may damage the wheelchair and affect its performance.



WARNING

13.1 Mounting/Removing the Battery

To remove the battery:

Pull the battery out of the main frame tube by gripping the cover (Fig. F1).

To install the battery:

Hold the battery with the handle facing downward and insert it obliquely into the main frame tube until it clicks into place (Fig. F2).

Ensure the battery is firmly secured (Fig. F3).



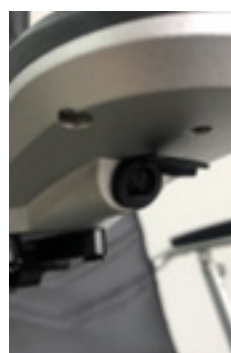
F1

F2

F3

13.2 Charging the Battery

1. The battery can be charged using standard AC power (AC 110–220 V, 50–60 Hz). The charging port is located under the front of the control panel.
2. Before charging, ensure the wheelchair is powered off.
3. Plug the charger into the charging port under the control panel (Fig. F4), or remove the battery and plug the charger into the battery's charging port (Fig. F5).
4. Plug the other end of the charger into a power outlet. When the red light is on, the battery is charging. Do not use the wheelchair while charging. ★
5. When the indicator turns green, continue charging for an additional 30 minutes to fully charge the battery. Unplug the charger from the power outlet before disconnecting it from the charging port.
6. Charge the battery within the recommended ambient temperature range of 5°C to 40°C.



F4



F5

13.3 Over-discharge Protector

- ★ The lithium battery can be permanently damaged if fully discharged. The wheelchair is equipped with an over-discharge protector. When the battery is nearly depleted, the protector will automatically cut off the circuit, and the controller will stop functioning. Users should ensure the battery is charged promptly when the last power grid is displayed. Failure to do so may render the battery unusable if it cannot be reactivated by the charger.
- ★ Maximum charge voltage: 29.4 V; Cut-off voltage: 19.6 V.

13.4 Over-current Protector

- ★ The power wheelchair is equipped with an over-current protector. If the current supplied to the motor becomes too high, the over-current protector will automatically cut off the power supply. This may occur if the climbing gradient exceeds 6°, the load exceeds 120 kg, or if the motor is blocked.

Battery Socket Cleaning

1. Inspect the battery pack and the positive and negative terminals for corrosion. If corrosion is present, clean the charging port using appropriate battery cleaning tools, such as a steel brush or medium-grit sandpaper.
 2. Carefully remove all metal dust and debris.
 3. Ensure the battery and plastic battery pack are properly assembled.
- ★ Note: Do not allow the substance inside the battery to come into contact with your skin, clothing, or other materials. The acidic substance is extremely hazardous and may cause severe burns. In case of contact, immediately rinse the affected area with cold water. If the condition is serious, or if the substance comes into contact with your eyes, seek medical attention immediately.

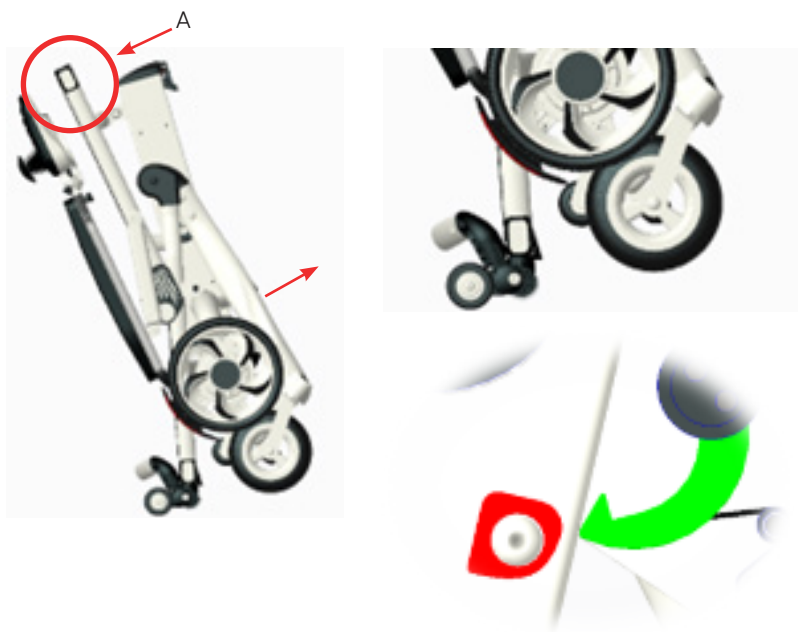
14. Folding and Unfolding

14.1 Unfolding Steps

If you need to unfold the wheelchair after initial unpacking or after it has been folded, follow these steps:

Step 1:

Hold point A (as shown in the picture) with one hand. Gently tilt the wheelchair backward to lift the front wheels off the ground. With the other hand, pull the handle in the direction of the arrow to release the lock hook. This completes the first step of unlocking.



Step 2:

When both the front and rear wheels are on the ground, press the seat cushion downward in the direction of the arrow to complete the frame unlocking.



Step 3:

When you hear a “click” locking sound, the chair is fully unlocked. Ensure the backrest and footrest return to their original positions. All unlocking steps are now complete.



14.2 Folding Steps

For storage and transportation, follow these steps to fold the wheelchair after use:

Step 1:

Pull the lock pin and fold the anti-tipping wheels. Then lift the footrest upward.



Step 2:

Pull the locking rope to release the spring pins from the locking holes on both sides, while pushing the upper backrest forward.



Step 3:

Lower the wheelchair until the rubber connector on the backrest touches the ground.



Step 4:

Using the rubber connector as a fulcrum, pull the wheelchair backward until it locks into place.



15. Getting On from the Side

Step 1: Press the unlock button.



Step 2: Press the unlock button while lifting the armrest upward.



Step 3: Pull the armrest to its maximum position.

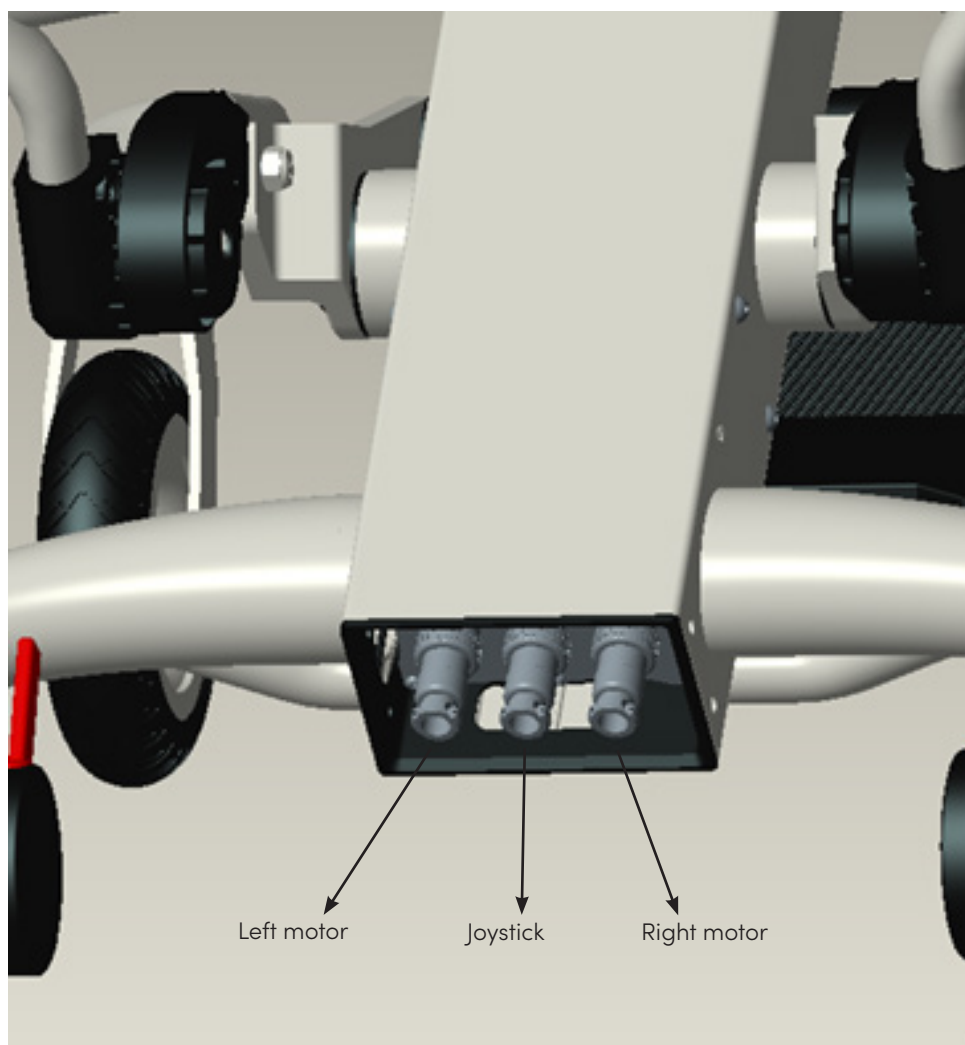


16. Controller

16.1 Controller Overview

There are three external interfaces on the controller, described as follows:

1. Interface 1: Connects to the right-side motor. If the right motor fails to operate, check that the right-side interface is properly tightened.
2. Interface 2: Connects to the left-side motor. If the left motor fails to operate, check that the left-side interface is properly tightened.
3. Interface 3: Connects to the joystick. If the joystick does not register input, check for poor contact and tighten the securing ring.



17. Troubleshooting

No.	Problem	Cause	Solution
1	Power Problem	1. Faulty connection of the control panel and the connector.	Re-plug the 5-pin plug into the socket on the side of the seat.
		2. Low power supply or automatic power cut-off.	Recharge the batteries within 2 hours and fully charge for 6–7 hours.
		3. Faulty 4-pin plug connecting to the battery.	Remove the battery, check the contacts for faults, and re-insert the battery.
2	Control Panel Fault	1. Battery indicator shows red alarm: low battery.	Charge the battery immediately.
		2. The control panel does not display.	Reconnect the control panel cable plugs or replace the control panel.
		3. Communication failure: controller emits malfunction sound; center icon shows exclamation mark; wheelchair cannot drive.	Power off the wheelchair, check the controller plug, then reboot after securing the connection.
		4. Center icon shows left/right wheel malfunction; wheelchair cannot drive; left/right motor may be broken.	Re-insert and tighten the motor connector; check motor unlock button. If problem persists, contact the distributor.
		5. Electromagnetic brake in "Unlock" position; wheelchair cannot move.	Push the electromagnetic brake lever to "Lock" position.
3	Motor Fault	1. 1. Noise and vibration occur during motor operation.	Contact customer service.
4	Battery Range Decreases	1. Driving in temperatures below 0°C.	Normal behavior due to lithium battery characteristics.
		2. Driving on slopes or rough terrain.	Normal behavior; these conditions accelerate battery consumption.
		3. Battery has exceeded its service life.	Contact customer service to replace the battery.

No.	Problem	Cause	Solution
5	Charging Fault	1. Incorrect connection between control panel and plug	Reconnect the 3-pin plug into the battery connector on the side of the seat.
		2. Damaged controller	Contact customer service to replace the controller.
		3. Damaged charger plug	Contact customer service to replace the charger plug.
		4. Loose charging plug	Recheck and firmly reconnect the plug.
6	Fail to Start When Power On	After not being used for a period or over-discharge protector is activated	Power on again after charging. If the problem persists, contact the distributor for repair.
7	Unable to fold	Locking assembly jammed	Check for obstructions in the lock head that prevent movement.
		front wheel interference	Check if the front wheel is caught in the frame during folding.

18. Warranty

Items	Warranty Period	Remarks
Main Frame	3 years	Incorrect use, damage, or modifications by the user will void the warranty; repair costs will be charged.
Motor	1 year	Damage due to overload or disassembly by the user will void the warranty.
Lithium Battery	1 year	Incorrect charging or disassembly/damage by the user will void the warranty.
Controller	1 year	Incorrect use, damage, or modifications by the user will void the warranty; repair costs will be charged.
Control Panel	1 year	Incorrect use, damage, or modifications by the user will void the warranty; repair costs will be charged.

18.1 Warranty Exclusions

The warranty does not cover the following items:

- a) Backrest cushion, seat cushion, armrest foam, backrest foam, and other decorative parts that are damaged through normal use.
- b) Any modifications made to the wheelchair without prior consent.
- c) Damage to components caused by overloading.

If the serial numbers on the wheelchair are not original or have been altered, the warranty will be void.

To the extent permitted by law, this warranty statement supersedes any other warranties (whether written, oral, express, or implied, including any implied warranties of merchantability or fitness for a particular purpose). In the event of any conflict, this warranty statement shall prevail.

19. Packing List

Items		
Main Frame	1	/
Lithium Battery	1	/
Control Panel	1	/
Charger	1	/
Owner's Manual	1	/
Certificate of Inspection	1	/
Control Panel	1	/

20. Guidance and Manufacturer's Declaration

20.1 Cables Provided for EMC Reference

Cable	length, Shielded/unshielded		Number	Cable classification
AC Power Line	1.8m	unshielded	1 Set	AC Power

Important Information Regarding Electromagnetic Compatibility (EMC)

This electric wheelchair requires special precautions regarding EMC and must be operated according to the EMC information provided in this user manual. The equipment complies with IEC 60601-1-2:2014 for both immunity and emissions. Nevertheless, the following precautions must be observed:

- Essential Performance: The wheelchair automatically brakes when the handle is released and can park automatically on ramps. It is intended for use in a home healthcare environment.
- WARNING: Do not use this wheelchair adjacent to or stacked with other equipment, as this may cause improper operation. If such use is necessary, verify that both this wheelchair and the other equipment are operating normally.

The use of accessories, transducers, or cables other than those specified or provided by the manufacturer may increase electromagnetic emissions or reduce electromagnetic immunity, potentially causing improper operation.

- WARNING: Portable RF communication devices (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) from any part of the wheelchair, including manufacturer-specified cables. Closer use may degrade equipment performance.

WARNING: If the wheelchair is used near AM, FM, or TV broadcast antennas (e.g., less than 1.5 km away), verify proper operation before use to ensure safety regarding electromagnetic disturbances throughout the expected service life.

20.2 Table 1 – Emission

Phenomenon	Compliance	Electromagnetic environment
RF emissions	CISPR 11 Group 1, ClassB	Home healthcare environment
Harmonic distortion	IEC 61000-3-2 Class A	Home healthcare environment
Voltage fluctuations and flicker	IEC 61000-3-3 Compliance	Home healthcare environment

20.3 Table 2 – Enclosure Port

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Electrostatic Discharge	IEC 61000-4-2	±8 kV contact ±2kV, ±4kV, ±8kV, ±15kV air
Radiated RF EM field	IIEC 61000-4-3	10V/m, 80MHz-2.7GHz, 1kHz, 80% AM 20V/m, 26MHz-2.5GHz, 1kHz, 80% AM
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	Refer to table 3
Rated power frequency magnetic fields	IEC 61000-4-8	30A/m 50Hz or 60Hz

20.4 Table 3 – Additional Ports

Test frequency (MHz)	Band (MHz)	Immunity test levels
		Home healthcare environment
385	380-390	Pulse modulation 18Hz, 27V/m
450	430-470	FM, ±5kHz deviation, 1kHz sine, 28V/m
710	704-787	Pulse modulation 217Hz, 9V/m
745		
780		
810	800-960	Pulse modulation 18Hz, 28V/m
870		
930		
1720	1700-1990	Pulse modulation 217Hz, 28V/m
1845		
1970		
2450	2400-2570	Pulse modulation 217Hz, 28V/m
5240	5100-5800	Pulse modulation 217Hz, 9V/m
5500		
5785		

20.5 Table 4 – AC Power Input Ports

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Electrical fast transients/burst	IEC 61000-4-4	±2 kV 100kHz repetition frequency
Surges Line-to-line	IEC 61000-4-5	±0.5 kV, ±1 kV
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz, 6V in ISM and amateur radio bands between 0.15 and 80MHz, 80% AM at 1kHz
Voltage dips	IEC 61000-4-11	0% UT; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°
		0%UT/0.5T(0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°); 0%UT/1T(0°); 70%UT /25T(0°);
Voltage interruptions	IEC 61000-4-11	0%UT/250T (0°, 180°)

20.6 Table 5 – Signal Input/Output Ports

Phenomenon	Basic EMC standard	Immunity test levels
		Professional healthcare facility environment
Electrical fast transients/burst	IEC 61000-4-4	±1 kV 100kHz repetition frequency
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands between 0.15MHz and 80MHz 80%AM at 1kHz

ISO 7176-1

Wheelchair tipping angle (degrees)				
Stability direction		Least stable		Most stable
Forward	Front wheels locked	N/A		N/A
	Front wheels unlocked	27.7°		27.7°
Rearward	Rear wheels locked	115.5°		15.5°
	Rear wheels unlocked	20.4°		20.4°
Lateral orientation ¹	Left	19.6°		19.6°
	Right	20.5°		20.5°
Anti-tip device tipping angle				
Stability direction		Least effective	Most effective	Dose device prevent tipping over?
Anti-tip device	Rearward	17.5°	17.5°	Yes 15.5°
	Forward	N/A	N/A	N/A
1 With lockable wheels locked				

ISO 7176-3

Table 2		Results of brake tests				P
Parking brake tests						
Maximum slope uphill		23.7° (only tested to angle of 45° due to angle limited by test device)				
Maximum slope downhill		16.0° (only tested to angle of 45° due to limited by test device)				
Brake operating force		2.8 N				
Running brake tests						
Test plane inclination	Direction of travel	Maximum speed	Normal operation	Reverse command	Emergency operation	Comments
		(m/s)	(m)	(m)	(m)	
Horizontal	Forwards	1.19	0.57	0.43	0.51	
Horizontal	Reverse	0.42	0.49	0.39	0.40	
3°	Forwards downhill	1.41	0.75	0.70	0.74	
3°	Reverse downhill	0.53	0.49	0.25	0.43	
6°	Forwards downhill	1.48	0.77	0.79	0.63	
6°	Reverse downhill	0.59	0.44	0.23	0.36	
10°	Forwards downhill	-	-	-	-	
10°	Reverse downhill	-	-	-	-	
Maximum slope specified by the manufacturer	Forwards downhill	-	-	-	-	Maximum slope 6°
Maximum slope specified by the manufacturer	Reverse downhill	-	-	-	-	Maximum slope 6°
Brake operating force		Brake automatically after released the speed lever.				

ISO 7176-5

Wheelchairs without handrim		
Clause	Measurement items	Measured values
8.2	Full overall length	900mm
8.3	Overall width	620mm
8.5	Stowage length	900mm
8.6	Stowage width	620mm
8.7	Stowage height	950mm
8.8	Rising	N/A
8.9	Total mass	23kg
8.10	Mass of heaviest part	N/A
8.11	Pivot width	N/A
8.12	Reversing width	N/A
8.13	Turning diameter	1440mm
8.14	Ground clearance	40mm
8.15	Required width of angled corridor	1020mm
8.16	Required doorway entry depth	1020mm
8.17	Required corridor width for side opening	970mm

ISO 7176-3

Measurement	Dimension No.	Fixed or minimum value	Maximum value, if relevant
Seat plane angle	(1)	4°	°
Effective seat depth	(2)	420mm	mm
Seat width	(3)	475mm	mm
Effective seat width	(4)	475mm	mm
Seat surface height at front edge	(5)	540mm	mm
Backrest angle	(6)	80°	°
Backrest height	(7)	450mm	mm
Backrest width	(8)	400mm	mm
Headrest in front of backrest	(9)	N/A	N/A
Headrest height above seat	(10)	N/A	N/A
Footrest-to-seat distance	(11)	420mm	mm
Footrest clearance	(12)	100mm	mm
Footrest length	(13)	207mm	mm
Footrest-leg-angle	(14)	90°	°
Leg-to-seat-surface angle	(15)	90°	°
Armrest-to-seat distance	(16)	240mm	mm
Front armrest-to-backrest distance	(17)	335mm	mm
Armrest length	(18)	350mm	mm
Armrest width	(19)	60mm	mm
Armrest angle	(20)	4°	°
Distance between armrests	(21)	460mm	mm
Front location of armrest structure	(22)	315mm	mm
Handrim diameter	(23)	mm	mm
Propelling wheel diameter	(24)	250mm	mm
Horizontal location of axle	(25)	90mm	mm
Vertical displacement of wheel axle	(26)	345mm	mm
Castor wheel diameter	(27)	170mm	mm

The wheelchair met all of the requirements of ISO 7176-9

The product met all the requirements of ISO 7176-14;

The forces necessary to operate the control devices (Operate the lever: 3.0N; Button: 1.9N)

This product meets ISO7176-16 testing requirements

The expected service life of this product is 5 years



Contact Decon if you have any questions or encounter any issues with this product.

Decon Wheel AB

Södra Ekeryd 119

314 91 Hyltebruk

0345-408 80

Follow us on:



decon.se

