

# karma

*User manual*

## **KP-12T Adapt**

(KP-12T-ADP)



A Better Wheelchair, A Better Fit



# Contents



## NOTE

- Product availability may vary by country/region. Visit [www.karmamedical.com](http://www.karmamedical.com) or contact your local sales representative for details.
- Standard features and available options may differ depending on regional market specifications. Please refer to the configuration of the product as purchased.

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## 1. How to contact KARMA

# Karma

### Head office

#### **KARMA Medical**

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Phone: +886 5 206 6688

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Website: [www.karmamobility.es](http://www.karmamobility.es)

### UK representative

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Phone: +44 845 630 3436

Email: [info@karmamobility.co.uk](mailto:info@karmamobility.co.uk)

Website: [www.karmamobility.co.uk](http://www.karmamobility.co.uk)



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## 2. Declaration of Conformity

### EU Declaration of Conformity

We, with the information specified in the below,

**Our information as the manufacturer:**

Manufacturer's Name:	KARMA MEDICAL PRODUCTS CO., LTD
Manufacturer's Address:	NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan
SRN (Single Registration Number):	TW-MF-000013206

**Our authorized representative:**

Name:	KARMA MOBILITY, S.L.
SRN (Single Registration Number):	ES-AR-000004852
Address:	C/ PERIODISTA FRANCISCO CARANTOÑA DUBERT, 23 Bajo 33209 GJÓN – ASTURIAS, SPAIN
Contact Person:	Raquel Yuste
Contact Information:	(+34) 984 390 907

in accordance with

**Regulation (EU) 2017/745 of the European Parliament and of the council  
Annex I, II, III, IV and IX**

hereby declare that the medical device specified below:

<b>Basic UDI-DI of Annex VI:</b>	471987385KP-1L8
<b>Device:</b>	Electrically powered wheelchair
<b>Trade Name or Mark:</b>	KP-1 Series (KP-12)
<b>Model Number:</b>	KP-12T-ADP
<b>Product Code according to EMDN:</b>	Y122127
<b>Product Code according to GMDN:</b>	41875
<b>Classification:</b>	Rule 13 of Class I
<b>UDI-DI:</b>	04719873856633

is in conformity with the applicable requirements of the following documents:

Ref. No.	Title	Edition date
ISO 13485	Medical devices - Quality management systems - Requirements for regulatory purposes	2016
ISO 14971	Medical devices - Application of risk management to medical devices	2019
EN 12182	Assistive products for persons with disability - General requirements and test methods	2012
EN 12184	Electrically powered wheelchairs, scooters and their chargers - Requirements and test methods	2022
EN 62366	Medical devices - Application of usability engineering to medical devices	2015
EN 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance	2006
EN ISO 10993-1	Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process	2009
EN ISO 10993-5	Biological evaluation of medical devices — Part 5: Tests for in vitro cytotoxicity	2009
EN ISO 15223-1	Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied - Part 1: General requirements	2021
MEDDEV. 2.7/1 Rev. 4	CLINICAL EVALUATION: A GUIDE FOR MANUFACTURERS	2016
MEDDEV 2.12/1 Rev. 8	GUIDELINES ON A MEDICAL DEVICES VIGILANCE SYSTEM	2013

The information on this declaration has been stated on the sole responsibility of KARMA MEDICAL PRODUCTS CO., LTD.

We hereby declare that the device named above has been designed to comply with the relevant sections of the above referenced specifications. The device complies with all General Safety and Performance Requirements.

Date of issue: 10<sup>th</sup> December 2025

Place of issue: NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan

  
 CHEN, YING-CHUN CEO

**UK Declaration of Conformity**

We, with the information specified in the below,

**Our information as the manufacturer:**

Manufacturer's Name:	KARMA MEDICAL PRODUCTS CO., LTD
Manufacturer's Address:	NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan
SRN (Single Registration Number):	TW-MF-000013206

**Our UK responsible person:**

Name:	Karma Mobility Ltd
MHRA Reference Number:	11480
Address:	Unit 6 Target Park, Shawbank Road, Redditch, B98 8YN England United Kingdom
Contact Person:	Mr Mark Duffield
Contact Information:	01527 520 468

in accordance with

**UK MDR 2002 and Council Directive 93/42/EEC concerning medical devices in Annex I, II and VII**

hereby declare that the medical device specified below:

<b>Basic UDI-DI of Annex VI:</b>	471987385KP-1L8
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EN ISO 15223-1	Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied - Part 1: General requirements	2021

The information on this declaration has been stated on the sole responsibility of KARMA MEDICAL PRODUCTS CO., LTD.

We hereby declare that the device named above has been designed to comply with the relevant sections of the above referenced specifications. The device complies with all Essential Requirements.

Date of issue: 10th December 2025

Place of issue: NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan

  
 CHEN, YING-CHUN CEO

### 3. Introduction

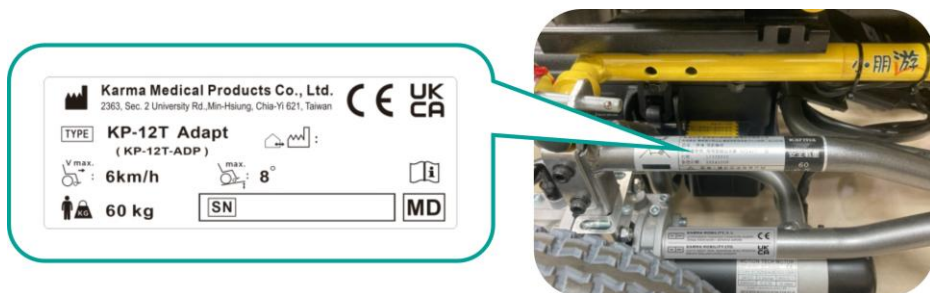
Congratulations on your new KARMA product! This product has been made with great care and dedication. The KARMA product will increase your freedom of mobility and independence. KARMA and its resellers all over the world are there to support in any way. So, if you have questions or suggestions about our products, do not hesitate to get in contact with us at [globalsales@karma.com.tw](mailto:globalsales@karma.com.tw)

Before you use the KARMA product, we strongly recommend you read this manual carefully and always keep it with your product. This way you are always able to find additional information when needed.

KARMA runs the policy of continuous product improvement. Therefore, the actual appearance of the products or options might be different from the pictures shown in this manual. KARMA reserves the right to make changes to the product without prior notice.

#### 3.1 Chassis number

The chassis number is very important. Your wheelchair will be stored in our data system under this main number. You can find the serial number on the right side frame of the wheelchair (user's right side).



Chassis serial plate

The symbols used on the chassis serial plate are explained below:



This icon describes the model and type of the product.



This icon stands for indoor use (Class A).



This icon stands for the date of production.



This icon stands for the maximum driving speed.



This icon stands for the maximum slope to drive on.



This icon stands for the maximum user weight.

**SN:**

This icon stands for the chassis serial number.









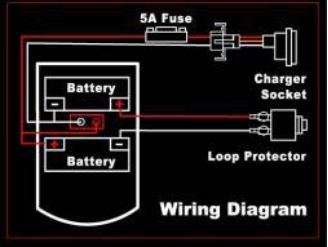
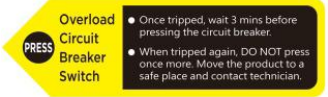

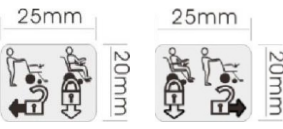





## WARNING

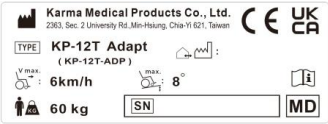



- The wheelchair is designed for a maximum user weight of 60 kg. Avoid reading the inappropriate load labeling, as it could lead to overloaded usage.
- Avoid incomplete labeling.

### 3.2 Product labels

About the styles and corresponding locations of each label, refer to the table below:

Label name	Label image	Placement
Product name label		
Pinch point warning label		
Battery box caution label		
Battery box warning label		

Label name	Label image	Placement
Wiring Diagram	 <p>5A Fuse Battery Charger Socket Loop Protector Wiring Diagram</p>	Inside of the battery box
Circuit Breaker Label	 <p>Overload Circuit Breaker Switch</p> <ul style="list-style-type: none"> <li>Once tripped, wait 3 mins before pressing the circuit breaker.</li> <li>When tripped again, DO NOT press once more. Move the product to a safe place and contact technician.</li> </ul>	 <p>Location of the circuit breaker button</p>
Freewheel lever label “9.16.2 Freewheel lever”	 <p>25mm 25mm 20mm 20mm</p>	
No braking in freewheel mode warning label	 <p><b>WARNING</b> No braking exists when a wheelchair is in freewheel mode.</p>	
Anti-tipper warning label	 <p><b>WARNING</b> To prevent the chair from tipping over backwards, do not remove anti-tippers.</p>	

Label name	Label image	Placement
<p>Max user weight label</p>		 <p>Right side frame (user side)</p>
<p>Recycling label</p>		 <p>Right side frame (user side) (Next to Max user weight label)</p>

## 4. Used symbols for warning, caution, and note

General admonitions are indicated by a symbol. There are three levels of admonition.

- **Warning**



### **WARNING**

If you see this sign, please use extreme caution where this symbol appears. Neglecting these warnings can lead to personal or material damage.

- **Caution**



### **CAUTION**

If you see this symbol, use caution to prevent dangerous situations.

- **Note**



### **NOTE**

If you see this symbol, we provide additional information that might be good to know. Please take notice of this information.



### **NOTE**

- Do not install, maintain, or operate the wheelchair without reading this manual. That is, before using the wheelchair, you should read this manual to get familiar with this product.
- Make sure the local reseller has set up the product in a proper way to exactly fit your needs and requirements.
- Always be accompanied by an attendant when you drive the wheelchair for the first time.



## NOTE

- The first drive should take place in a safe and wide area, so you can get acquainted with your wheelchair without any danger.
- Always start to drive the wheelchair at the lowest possible driving speed first.

## 5. Warranty

KARMA Medical supplies a warranty of the frame for a period of 5 years and the electrical system (controller, motor, charger, actuator, and PCB) for a period of 1 year after delivery to the customer. Your local supplier will carry out this warranty. For battery warranty, it is subject to the periods set by the manufacturers. Please contact your local supplier in detail.

For a warranty claim, you get in contact with our local authorized KARMA reseller or directly with KARMA Mobility S.L. Make sure you also provide the chassis serial number of your product. The wheelchair must be repaired by a KARMA Medical designated Customer Service agent. This warranty is VOID if the original chassis serial number is removed or altered.

The warranty does not apply to damage or faults of the product caused by wrong or improper use, or neglected maintenance. The evaluation of it is the privilege of KARMA Medical or a representative appointed by KARMA Medical.

This guarantee does not apply to components susceptible to wear, such as bearings, cables, carbon brushes, circuit breakers, covers, footplates, light bulbs, pads, side guards, upholsteries, wheels, and similar parts.

The warranty does not cover any consequential costs arising from the rectification of defects, including but not limited to freight and travel expenses, labor charges, service fees, or any transportation costs for repair or replacement.

KARMA Medical reserves the right to alter the specifications at any time. No responsibility can be accepted for any changes in the specifications.

Change of specification can be originated from e.g., availability of parts, product improvement based on market experience, changed legislations, etc.



## **WARNING**

- The use of non-original parts on this product can lead to personal or material damage. KARMA Medical cannot be held responsible for these results.
- Repairs executed by unauthorized persons can lead to personal or material damage. KARMA Medical cannot be held responsible for these results.



## **NOTE**

If you have any doubt about the service provided to your wheelchair, please contact KARMA Medical Taiwan for information.

## **6. Intended use/intended user**

The KP-12T Adapt (KP-12T-ADP) powered wheelchair is meant to provide mobility to people who are not able to walk, stand, or use a manual wheelchair, but who are very well able to control and use the interface of a powered wheelchair. The wheelchair is designed for a maximum user weight of 60 kg.

It is strongly recommended to have the use of the wheelchair evaluated by a trained doctor, therapist, or other qualified and trained staff.

This wheelchair is not suitable for people who do not have the cognitive skills to drive a powered wheelchair by themselves. Also, it is not suitable for visually impaired people.

The expected service life of the product is **5 years**, presuming that the product is used daily in accordance with the safety operation instructions, inspection and maintenance instructions, and intended use, which are described in this manual.

## 7. Intended environment

The KP-12T Adapt (KP-12T-ADP) powered wheelchair is classified as a Class A mobility product for indoor use.

use. This wheelchair is suitable for users up to 60 kg in weight. The frame is primarily made of extremely durable aluminum alloy with tough accessories and does not suffer in dramatic extremes of temperature, ensuring that neither the user nor the attendant needs to touch metal parts during normal use.

Check with your local government as to legislation pertaining to mobility vehicles to ensure your legal requirements to drive on public roads have been met, i.e. a pelvic belt, lighting, registration, or licensing.

## 8. Tire pressure

The KP-12T Adapt (KP-12T-ADP) comes with PU solid tires in the front and rear as standard options. The choice of tires is made by the user when ordering the wheelchair. In order to prevent tire damage and to preserve the performance of the wheelchair, the tire pressure must be checked at least on a monthly basis. The tire pressure should be:

Type of tire	Tire size	Recommended pressure
Drive wheel	3.00 -10 (16 inch ("))	36/40 PSI

## 9. The wheelchair

### 9.1 Parts description of KP-12T Adapt (KP-12T-ADP)

Front view of KP-12T Adapt (KP-12T-ADP)



- |                                     |                        |
|-------------------------------------|------------------------|
| 1. Headrest                         | 11. Front caster fork  |
| 2. Backrest tube w/ push handle     | 12. Front caster       |
| 3. Backrest bracket                 | 13. Four-point harness |
| 4. Backrest                         | 14. Joystick module    |
| 5. Lateral support                  | 15. Charger socket     |
| 6. Multi-adjustable armrest         | 16. Hip support        |
| 7. Armrest flip-away release button | 17. Seat cushion       |
| 8. Pelvic positioning belt          | 18. Legrest            |
| 9. Armrest height adjustment knob   | 19. Heel loop          |
| 10. Drive wheel                     | 20. Footplate          |

## Rear view of KP-12T Adapt (KP-12T-ADP)



- |                                  |                                 |
|----------------------------------|---------------------------------|
| 1. Headrest fixation ring        | 5. Battery box                  |
| 2. Headrest release lever        | 6. Circuit breaker reset button |
| 3. Lateral support release lever | 7. Legrest release button       |
| 4. Seat mounting pin             | 8. Freewheel lever              |
|                                  | 9. Anti-tipper                  |



### NOTE

Standard options are subject to change without prior notice.

## 9.2 Disassembling and assembling the wheelchair

The KP-12T Adapt (KP-12T-ADP) powered wheelchair can be disassembled into three major components (seat, chassis, and battery) for convenient storage and transportation. Follow the steps below to disassemble:

Step 1: Disconnect the joystick module wiring harness from the power module. (See Figure 9.1.)

Step 2: Pull the legrest release knob **(A)**, then lift the legrest upward to remove it from the mounting bracket **(B)**. (See Figure 9.2.)

Step 3: Pull out the seat mounting pins located on both sides at the rear of the seat. (See Figure 9.3.)



Figure 9.1

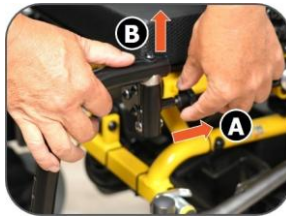


Figure 9.2



Figure 9.3

Step 4: Lift the seat upward from the rear **(C)**, then pull backward **(D)** to separate the seat from the chassis. (See Figure 9.4.)

Step 5: Finally, grasp the battery box handle and lift it upward to remove the battery. (See Figure 9.5.)



Figure 9.4



Figure 9.5



## CAUTION

- Make sure the parking brake is engaged to prevent the wheelchair from sliding during disassembly/assembly.
- Do not place your fingers in folding/moving areas or mating joints while performing disassembly and assembly to avoid pinching injuries.
- The battery box has a defined orientation. Align the arrow on the battery box toward the front of the wheelchair, align the battery contact mechanism, and lower the battery vertically into place.
- If the battery cannot be seated, check its position and re-insert. Do not force the battery into place to avoid damage and hazards.
- The battery weighs approximately 15.6 kg. Ensure sufficient handling strength during removal and installation.
- Power connector removal method (see Figure 9.6): Press down on the front latch of the socket, then pull backward to disconnect. When reconnecting, ensure the front side of the power module is facing upward, then insert the plug fully to complete the coupling. Always observe the correct orientation when operating the connector. The manufacturer is not liable for damage or issues caused by improper operation.



Figure 9.6



## WARNING

As of this date, the KP-12T Adapt (KP-12T-ADP) has NOT been tested for safety in collisions according to ISO 7176-19. Therefore, the KP-12T Adapt (KP-12T-ADP) cannot be used as seats in any vehicles. That is, KARMA recommends that users are NOT be transported in any vehicle while seated in the wheelchair. In the case of an accident or a sudden stop, the user could be thrown from the wheelchair and get injured. The suggested solution is to transfer the user from the wheelchair into a normal seat of the vehicle and to securely stow the wheelchair in a separate compartment.

### 9.3 Circuit breaker

The circuit breaker is located on top of the battery box, which protects the whole electrical system of the wheelchair. This circuit breaker will only trip if there is a serious problem with the wheelchair.



*Position of the circuit breaker*

This situation typically occurs when the wheelchair is climbing a hill steeper than what is allowed. Should the circuit breaker pop up, you need to eliminate the cause first. And then, either the user or the attendant could press down the circuit breaker. You will be able to drive again.



#### CAUTION

- When the circuit breaker trips, you must wait 3 minutes for the system to cool down before pressing the reset button to reset it. If the chair still doesn't operate normally, please contact your local authorized supplier to have the chair checked.
- If the circuit breaker trips, please contact your local authorized supplier. He should check the wheelchair first before replacing the circuit breaker. The circuit breaker only trips if a serious problem occurs.
- Only use an original circuit breaker as a replacement. Using other circuit breakers might damage the electronic system or even cause a fire.



## NOTE

For more information, refer to “[18. Safety information](#)”.

### 9.4 Multi-adjustable armrests

#### 9.4.1 Armrest swing-away and flip-up functions

This wheelchair is equipped with armrest swing-away and flip-up functions.

- To swing the armrest away:  
Press and hold the armrest swing-out release button (see Figure 9.7), then swing the armrest outward to 120° (see Figure 9.8).
- To flip the armrest up:  
Lift the armrest upward until it locks into position.

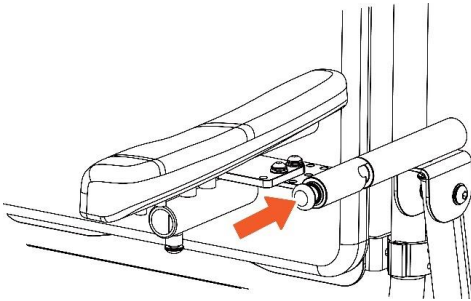


Figure 9.7

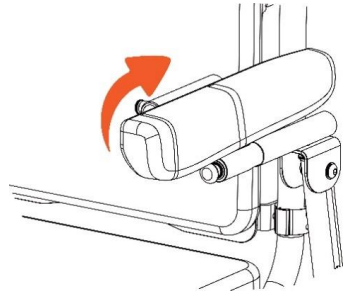


Figure 9.8

### 9.4.2 Adjusting armrest height

The armrest height can be adjusted in five positions. Each position adjusts by 1.5 cm.

Loosen the armrest height adjustment knob located underneath the armrest. Adjust the armrest up or down to the desired height, align the threaded hole on the telescopic tube with the positioning hole, then tighten the adjustment knob securely (see Figure 9.9).



Figure 9.9

### 9.4.3 Adjusting distance between armrests

The distance between armrests can be adjusted in four positions. Each position adjusts by 1.5 cm.

Use an L-shaped hex key (Allen key) to loosen the locking screws on both sides located at the rear underside of the seat cushion. Adjust the armrest inward or outward to the desired position, align the hole on the telescopic tube with the threaded hole, and then retighten the screws securely (see Figure 9.10).

To adjust the armrest pad position, loosen the screws, move the armrest pad to the desired position, align the holes, and then retighten the screws (see Figure 9.11).

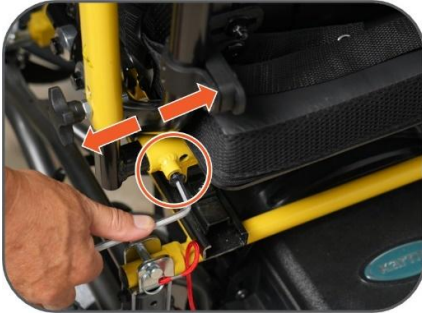


Figure 9.10



Figure 9.11

#### 9.4.4 Joystick module adjustment (forward/backward and up/down)

- **To adjust forward or backward:**

Use a hex wrench to loosen the screw located beneath the joystick module. Move the joystick module forward or backward to the desired position, then tighten the screw securely with the hex wrench (see Figure 9.11).

- **To adjust height:**

Press and hold the release button (A) on the quick-release mount located under the joystick module, then pull the joystick module forward to detach it from the joystick module mounting rod (B). Note: The release button must be held down during removal (see Figure 9.12).

Next, loosen and remove the screw and nut on the joystick module mounting rod. Adjust the rod to the appropriate height, then reinstall and tighten the screw and nut securely (see Figure 9.13).

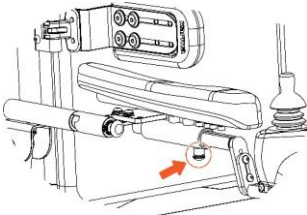


Figure 9.11



Figure 9.12



Figure 9.13

## 9.5 Legrests

### 9.5.1 Swing-away legrests

The legrests can provide lower limb support with length adjustment. The footrest comes in multiple sizes and features an adjustable angle.

When the user transfers, the legrests can be detached or the footplates can be lifted.

**To remove the footrest:** Pull and hold the legrest release knob (A), then lift the legrest upward to remove it from the mounting bracket (B) (see Figure 9.14).

**To install the legrest:** Place the legrest back into the mounting bracket, press it downward, and rotate it slightly left and right until it is securely locked into the bracket.

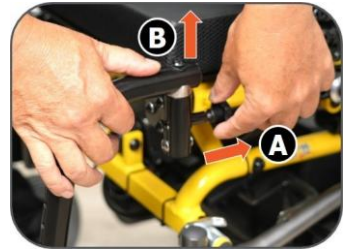


Figure 9.14



#### WARNING

Do not place your fingers in folding/moving areas or mating joints while performing disassembly and assembly to avoid pinching injuries.



#### CAUTION

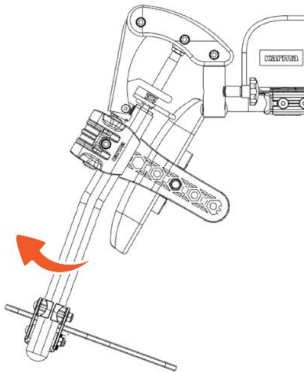
When moving a wheelchair, please avoid using legrests and other detachable parts as a force application point.

### 9.5.2 Articulating legrests (optional)

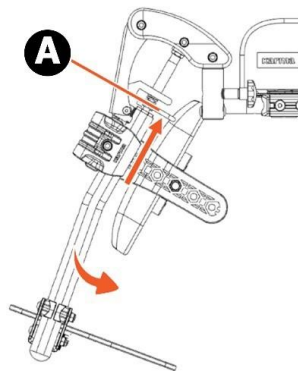
Articulating legrest can raise the user's lower leg to a specific angle according to individual needs, enhancing comfort and providing improved support. The length of the articulating legrest is adjustable. Its ergonomic design ensures that the legrest does not change length or cause pinching during movement.

Articulating legrest can be optionally equipped with a calf support. The calf support can be swung away and adjusted in height, depth, and angle, providing additional support for the user. The articulating legrest also features a quick-release function, making transfers easier.

- To install the articulating legrest, please insert it directly into the bracket.
- To detach the articulating legrest, please lift the legrest release knob to pull the legrest upward from the bracket.
- To lift the articulating legrest, please lift it to a suitable height, and then it can be fixed.
- To lower the articulating legrest, please press the orange lever **(A)** upward, hold the articulating legrest with another hand, and lower it to a suitable height. Then, release the orange lever **(A)**.



*Lift articulating legrest*



*Lower articulating legrest*



## CAUTION

- When stretching the legrest, always check if there are no obstructions close to the wheelchair, especially in front of the wheelchair.
- When stretching the legrest, the wheelchair will get longer. This has an influence on the driving characteristics of the wheelchair. Make sure there is enough space to drive.

## 9.6 Footplate adjustment

### 9.6.1 Footplate height adjustment

Footplate height is adjustable in 2 cm increments. Please use an Allen key to detach the bolt **(A)** and nut **(B)**. Move the footplate upward or downward to a suitable position. Then, remount the bolt **(A)** and nut **(B)** (see Figure 9.15).

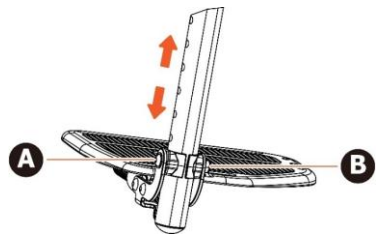


Figure 9.15

### 9.6.2 Footplate depth adjustment

To adjust the footplate depth, detach the bolt **(C)** and nut **(D)**. Use the reserved holes to move the footplate to a suitable depth. When required, reverse the orientation of the footplate mounting bracket **(E)** to allow for a wider adjustment range, then secure it by tightening bolt **(C)** and nut **(D)** (See Figure 9.15).

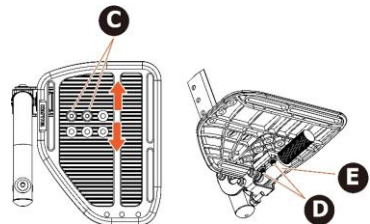


Figure 9.15

### 9.6.3 Footplate left-and-right position adjustment

To adjust the footplate left-and-right position, loosen the bolt **(F)** and nut **(G)**. Move the footplate left and right to a suitable position, then secure it by remounting the bolt **(F)** and nut **(G)** (See Figure 9.16).

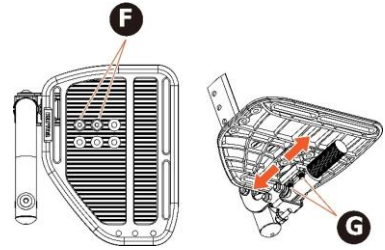


Figure 9.16

### 9.6.4 Footplate internal/external rotation angle adjustment

To adjust the footplate internal or external rotation angle, loosen the nut **(H)**, then mount the bolt **(I)** inward or outward until the footplate achieves the suitable internal or external rotation angle. Last, remount the nut **(H)** (See Figure 9.17).

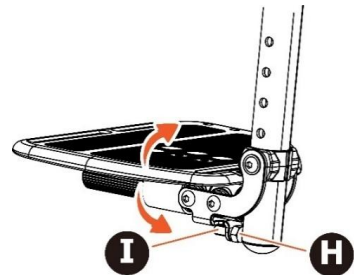


Figure 9.17

### 9.6.5 Footplate forward/backward angle adjustment

To adjust the footplate forward or backward angle, loosen the bolt **(J)** and nut **(K)**. Rotate the footplate forward or backward to the suitable angle, then remount the bolt **(J)** and nut **(K)** (See Figure 9.18).

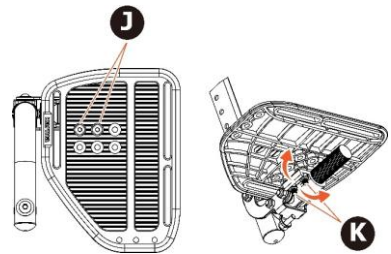


Figure 9.18

## 9.7 Installing anti-tip mechanism (anti-tipper)

Press the anti-tip mechanism (anti-tipper) quick-release button and insert it into the rear tube of the chassis frame. The quick-release button must snap out through the hole. Please pull forward or backward to check if the anti-tip device (anti-tipper) is secured. If it is secured, the installation is completed.

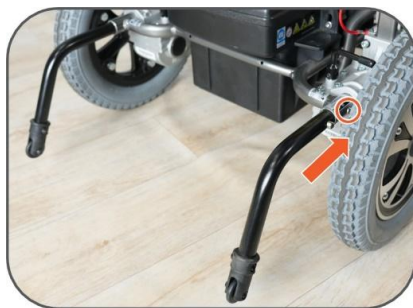


Figure 9.19



## CAUTION

For your safety, ensure that the anti-tippers are securely installed. Do not remove the anti-tippers, as this might result in the risk of tipping backward.

## 9.8 Seat depth adjustment

To adjust the seat depth, please follow the steps below:



## NOTE

Before adjusting the seat depth, please remove the seat upholstery in advance.

- Step 1. Press and hold the armrest swing-out release button (see Figure 9.7), then swing the armrest outward (see Figure 9.8).
- Step 2. Swing the left and right sides of the hip support outward (Please refer to [9.10 Swing away hip support](#) for operation instruction).
- Step 3. Remove the seat upholstery from the seat plate.
- Step 4. Loosen the four bolts on the seat plate (Figure 9.20) and slide the seat plate along the rail to the suitable seat depth (Figure 9.21). Then re-tighten the four bolts.
- Step 5. Reattach the seat upholstery.
- Step 6. Swing back left and right sides of the hip supports.
- Step 7. Return the armrest to the original position.

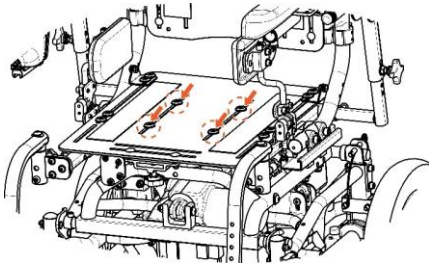


Figure 9.20

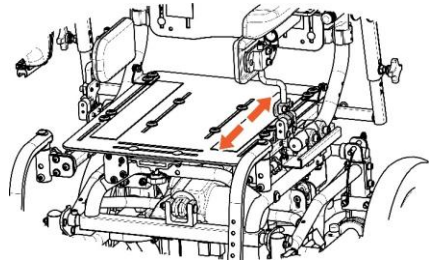


Figure 9.21

## 9.9 Side-flip lateral trunk support

- Press the fixation axle button on the lateral trunk support adjustment bracket **(A)** until the latch is released. Then, swing the lateral trunk support **(B)** outward (See Figure 9.22).
- To return the trunk lateral support, press the fixation axle button on the lateral trunk support adjustment bracket **(A)** until the latch is released. Then, swing the lateral trunk support **(B)** inward.



Figure 9.22

### 9.9.1 Lateral trunk support adjustment

- To adjust the width, please loosen the lateral trunk support adjustable lever **(A)**, then adjust the support left and right to the suitable width. Last, tighten the lateral trunk support adjustable lever **(A)** (See Figure 9.23)
- To adjust the depth, please loosen the bolts **(B)**, then adjust the support forward and backward to the suitable depth. Last, remount the bolts **(B)** (See Figure 9.24).
- To adjust the height, please loosen the nuts **(C)**, then adjust the support upward and downward to the suitable height. Last, remount the nuts **(C)** (See Figure 9.25).

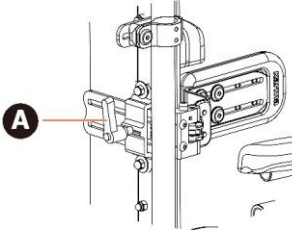


Figure 9.23

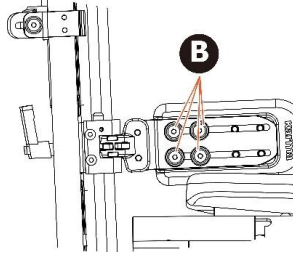


Figure 9.24

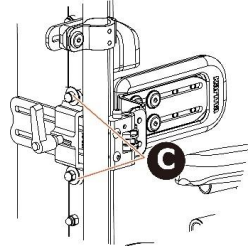


Figure 9.25

## 9.10 Swing away hip support

- Press the fixation axle button on the hip support adjustment bracket **(A)** until the latch is released. Then, swing the hip support **(B)** outward (See Figure 9.26).
- To return the hip support, press the fixation axle button on the hip support adjustment bracket **(A)** until the latch is released. Then, swing the hip support **(B)** inward.



Figure 9.26

### 9.10.1 Hip support width and forward/backward adjustment

The width is stepless adjustable. When adjusting the width and forward and backward, use an Allen key to loosen the bolts **(A)** on the hip support, then adjust the support to a suitable width and angle. Last, remount the bolts **(A)** (See Figure 9.27)

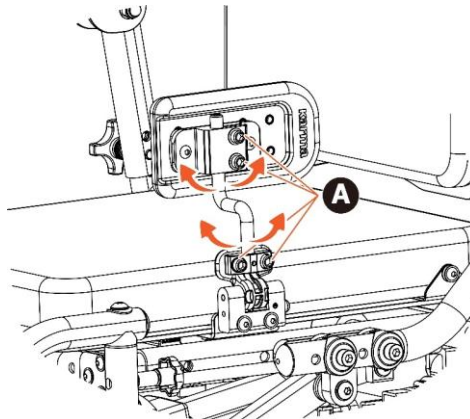


Figure 9.27

## 9.11 Medial knee support (Pommel) (Optional)

Medial knee support (Pommel) can be quickly flipped downward (See Figure 9.28) and removed directly (See Figure 9.29).

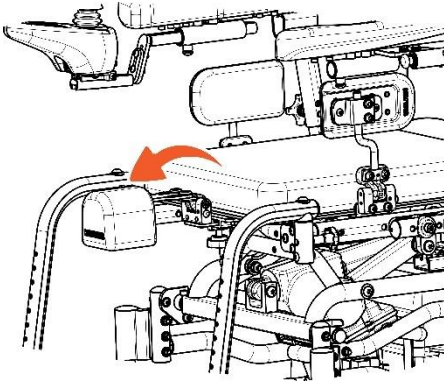


Figure 9.28

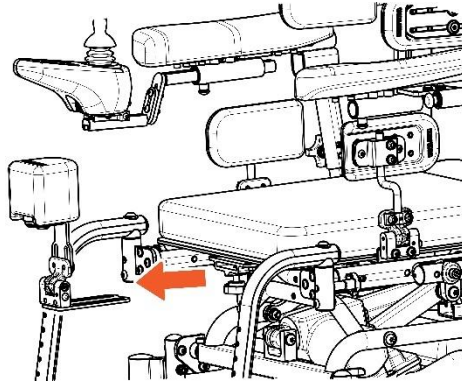


Figure 9.29

## 9.12 Backrest height adjustment

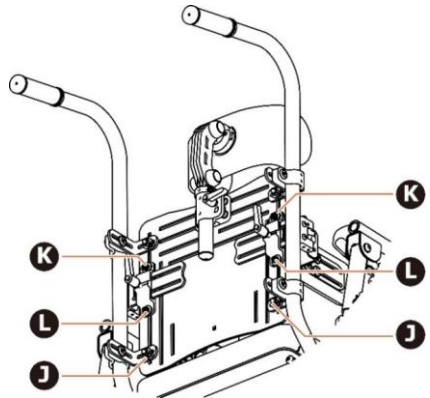
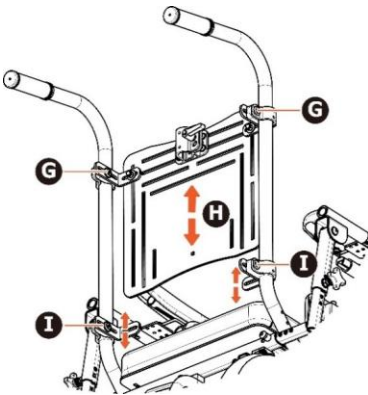
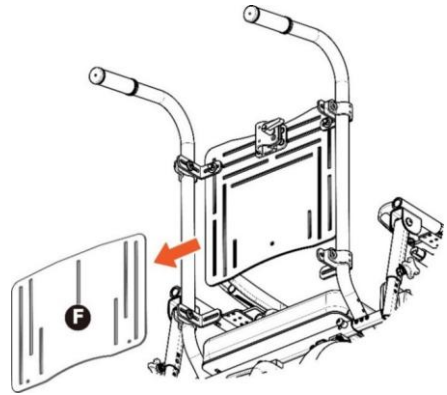
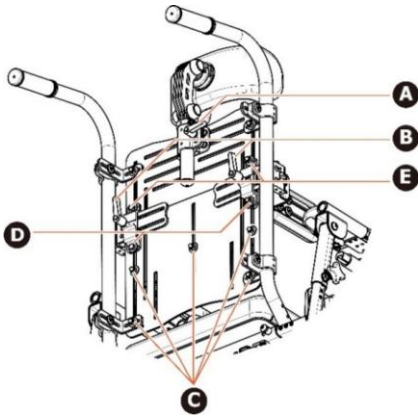
### 9.12.1 Backrest height <350 mm adjustment

Step 1. Remove the backrest upholstery.

Step 2. Loosen the headrest adjustable lever **(A)** and the lateral trunk support adjustable lever **(B)** to remove both the headrest and the lateral trunk support.

Step 3. Detach the five bottom sets of bolts and nuts **(C)** securing the extension backrest panel and the bolts and nuts **(D)** beneath the trunk lateral support mounts on both sides.

Step 4. Detach the bolts, nuts, and washer **(E)**, then remove the extension backrest panel **(F)**.



- Step 5. Loosen the two upper sets of the backrest clamp bolts (**G**) secured to the backrest tube, then adjust the main backrest panel to the targeted backrest height (**H**). Last, re-tighten the bolts.
- Step 6. Loosen the two lower sets of the backrest clamp bolts (**I**) secured to the backrest tube, then adjust the clamp to the corresponding position. Last, re-tighten the bolts.
- Step 7. Remount the two lower sets of bolts and nuts (**J**), securing the backrest panel and clamp.
- Step 8. Remount both sides of the lateral trunk support bracket and secure it to the required height, then tighten the upper and lower bolts and nuts (**K**) of the lateral trunk support bracket. **Please note that, when the backrest height is less than 350 mm, the washer is not required to be remounted.**

Step 9. Reinstall the headrest and lateral trunk support to the corresponding bracket, and then tighten the adjustable levers (**A & B**).

Step 10. Reinstall the backrest upholstery.

### 9.12.2 Backrest height >350 mm adjustment

Step 1. Remove the backrest upholstery.

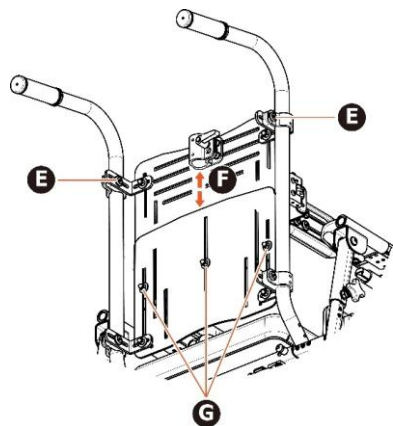
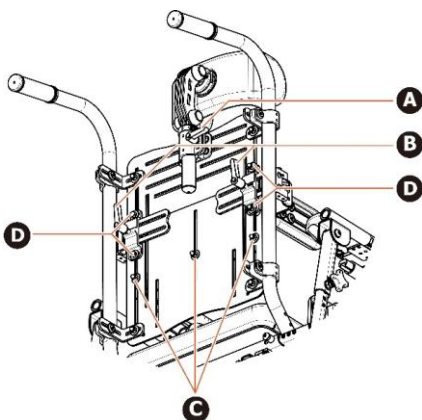
Step 2. Loosen the headrest adjustable lever (**A**) and the lateral trunk support adjustable lever (**B**) to remove both the headrest and the lateral trunk support.

Step 3. Loosen the three bottom sets of bolts and nuts (**C**) securing the extension backrest panel and the main backrest panel.

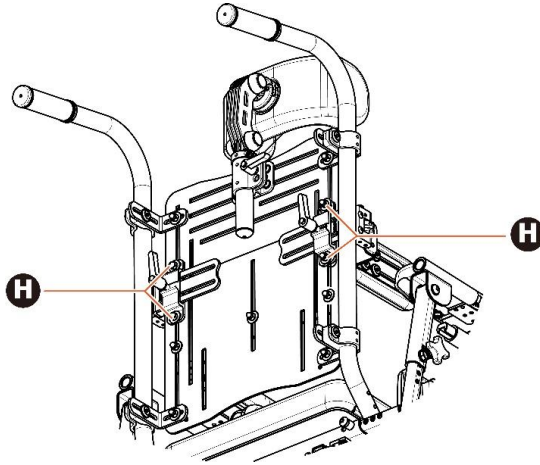
Step 4. Detach the bolts, nuts, and washer (**D**).

Step 5. Loosen the two upper sets of the backrest clamp bolts (**E**) secured to the backrest tube, then adjust the main backrest panel to the targeted backrest height (**F**). Last, re-tighten the bolts.

Step 6. Remount the three lower sets of bolts and nuts (**G**), securing the backrest panel and clamp.



Step 7. Remount both sides of the lateral trunk support bracket and secure it to the required height, then tighten the upper and lower bolts and nuts (**H**) of the lateral trunk support bracket. **Please note that, when the backrest height is more than 350 mm, the washer is required to be remounted.**



Step 8. Reinstall the headrest and lateral trunk support to the corresponding bracket and then tighten the adjustable levers (A&B).

Step 9. Reinstall the backrest upholstery.

## 9.13 Headrest adjustment

### 9.13.1 Headrest left-and-right position adjustment

Loosen the four bolts (A) on the headrest bracket, then adjust the headrest left and right to the suitable position. Last, remount the four bolts (A) (See Figure 9.30).

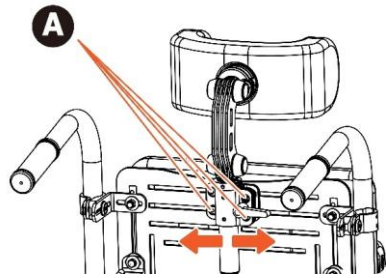


Figure 9.30

### 9.13.2 Headrest height adjustment

- Loosen the adjustable lever **(B)**, then adjust the headrest upward or downward to a suitable height. Last, tighten the headrest adjustable lever **(B)** (See Figure 9.31).
- Loosen the fixation ring bolts on the headrest mounting hardware. Position the clamp at the top edge of the headrest fixation bracket, ensuring the quick-release pin engages the fixation slot. Retighten the fixation ring bolts to maintain consistent height and angle when reinstalling the headrest.

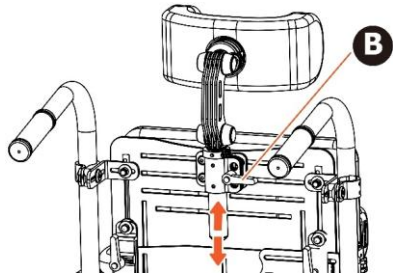


Figure 9.31

### 9.13.3 Headrest cushion height, depth, and forward/backward angle fine adjustment

Detach the round tube plugs **(C)**, then loosen the bolts **(D)**. Next, adjust the headrest to a suitable position. After the adjustment, remount the bolts **(D)** and reinstall the round tube plus **(C)**.

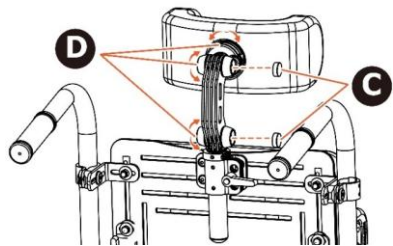


Figure 9.32

### 9.13.4 Headrest cushion contour angle adjustment

- Step 1. Unzip the headrest cushion cover (See Figure 9.33) until the bolts inside the headrest are exposed.
- Step 2. Loosen the bolts on both sides of the headrest cushion (See Figure 9.34) and adjust the required contour angle for the headrest cushion.
- Step 3. After the adjustment, remount the bolts on both sides of the headrest cushion.
- Step 4. Zip up the headrest cushion cover to fully enclose the headrest cushion.



Figure 9.33



Figure 9.34

## 9.14 Transfer into and out of the wheelchair



### CAUTION

- The freewheel lever is located at the rear of the wheelchair motor. Please note that the freewheel lever must be engaged before transferring into and out of the wheelchair to prevent it from moving.
- Fold the footplate before transferring into and out of the wheelchair to allow easy access and avoid tipping forward.
- Align the front caster and drive wheel straight and facing forward before transferring into and out of the wheelchair. A caregiver should firmly hold the wheelchair to enhance stability.
- Only when the controller is turned off and the freewheel lever is engaged can the user transfer into and out of the wheelchair.
- For the brake and freewheel lever instructions, please refer to “[9.16 Brake, freewheel lever, and tires](#)”.



### WARNING

DO NOT stand on or place weight on the footplate when transferring into or out of the wheelchair.

### 9.14.1 Transfer into a wheelchair



#### NOTE

- During operation, a caregiver is suggested to hold and carry the user or provide assistance nearby.
- If the caregiver holds and carries the user, removing or reinstalling the legrests is not required.

Step 1. Ensure that the freewheel lever is engaged and remove the legrests.

Step 2. Unfasten the chest strap and pelvic positioning belt. Move them away from the backrest and seat to clear the seating area.

Step 3. Flip the armrest on the transfer side outward, then flip it up.

Step 4. Flip the lateral trunk support and hip support on the transfer side outward.

Step 5. Assist the user with the transfer.

Step 6. After the transfer, the caregiver assists with positioning and fastens the pelvic positioning belt.

Step 7. Return the hip support to its original position and ensure proper support.

Step 8. Return the lateral trunk support to its original position and ensure proper support.

Step 9. Secure the chest strap.

Step 10. Return the armrest to its original position and reinstall the legrests.

### 9.14.2 Transfer out of a wheelchair



#### NOTE

- During operation, a caregiver is suggested to hold and carry the user or provide assistance nearby.
- If the caregiver holds and carries the user, removing or reinstalling the legrests is not required.

- Step 1. Ensure that the transfer destination is the nearest.
- Step 2. Ensure that the freewheel lever is engaged and remove the legrests.
- Step 3. Flip the armrest on the transfer side outward, then flip it up.
- Step 4. Flip the lateral trunk support and hip support on the transfer side outward.
- Step 5. Untie the chest strap on the wheelchair and then remove the pelvic positioning belt.
- Step 6. Assist the user with the transfer.
- Step 7. After the transfer, ensure the user's safety at the transfer destination.
- Step 8. Reinstall the hip support, lateral trunk support, and legrests.

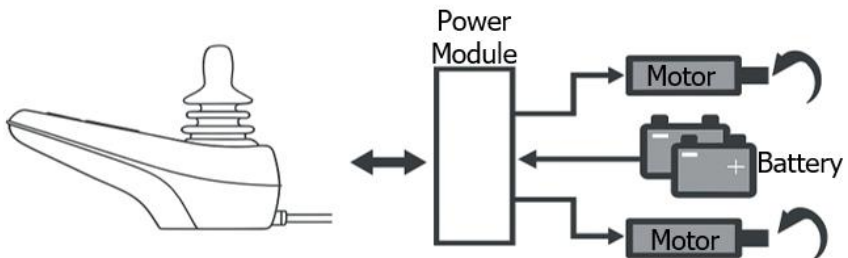
### 9.15 Wheelchair operation and control



#### NOTE

User is recommended to be accompanied by a trained caregiver when using this wheelchair, especially before becoming familiar with the operation of the controller.

All the controller parameters are factory-preset to ensure optimal performance under various operating conditions. If the controller parameter adjustment is required due to any medical consideration, such adjustments must be performed and verified by qualified personnel from our company to ensure user safety and compliance with appropriate safety standards. DO NOT modify or adjust the circuit in any manner, as doing so may result in damage or safety hazards.



*Controller connection diagram*

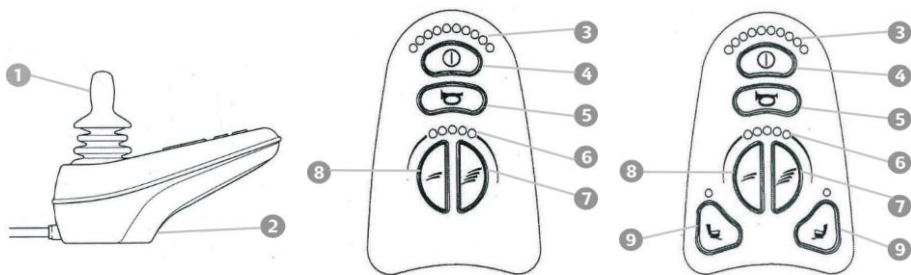


## CAUTION

Before using the wheelchair, please refer to “[12. Inspection and maintenance](#)” for the maintenance schedule and self-check.

### 9.15.1 Joystick module operation

- 9.15.1.1 Press the button **4** and remove your hand from the joystick **1**. The battery gauge will illuminate. If the joystick is moved before the power switch is turned on, the safety mechanism will prevent the wheelchair from moving, and the battery gauge will flash. In this case, simply release the joystick and then move the joystick once again to restore normal operation.
- 9.15.1.2 The speed adjustment buttons consist of two controls. The left button is used to decrease the speed, and the right button is used to increase the speed. There are five speed levels available for adjustment. Please adjust the speed to a suitable level before operating the wheelchair.
- 9.15.1.3 Within the preset speed limit, the joystick can be used to control the movement direction.
- 9.15.1.4 When starting or stopping the wheelchair, please turn the speed control to the low-speed setting.
- 9.15.1.5 Beginners should operate the wheelchair at a low speed. Once you become more confident with driving, the speed may be adjusted to a higher setting.
- 9.15.1.6 When operating the wheelchair indoors, in crowded areas, near ditches or waterways, or on uneven surfaces, please switch to low speed to avoid potential obstacles.
- 9.15.1.7 In case of an emergency that requires an immediate stop, simply release the joystick. The fully automatic electromagnetic brake will stop the wheelchair instantly. A clicking sound from the motor indicates that the brake is functioning properly.



- |                    |                                 |
|--------------------|---------------------------------|
| 1. Joystick        | 6. Speed indicator              |
| 2. Charging socket | 7. Increase speed button        |
| 3. Battery gauge   | 8. Decrease speed button        |
| 4. On/Off button   | 9. Tilt-in-space seating button |
| 5. Horn button     |                                 |



## WARNING

- To ensure stability, DO NOT tilt the seat while driving uphill.
- When tilting, always ensure that no body parts or clothing are placed under the seat or behind the backrest to prevent injury caused by the mechanism.

### 9.15.2 Battery gauge

The Battery Gauge is used to indicate power on and provides an estimate of the remaining battery capacity.

Any green LEDs lit indicate well-charged batteries. If only amber and red LEDs are lit, the batteries are moderately charged. Recharge before undertaking a long trip. If only red LEDs are lit, the batteries are running out of charge. Recharge as soon as possible.

### 9.15.3 On/Off button

The On/Off button applies power to the control system electronics, which in turn supply power to the wheelchair's motors. Do not use the On/Off button to stop the wheelchair unless there is an emergency (If you do, you may shorten the life of the wheelchair drive components). When turning on, be sure not to touch the joystick. Your battery & diagnostics indicator should light up.

Press the On/Off button. Be sure not to touch the joystick while turning on the controller. Your battery & diagnostics indicator should light up.



## CAUTION

Always make sure the wheelchair is switched off before entering or leaving the wheelchair. If the wheelchair is switched on during transferring, there is a danger that the joystick will be touched, and the wheelchair will move.

### 9.15.4 Horn button

The horn will sound while this button is pressed.

### 9.15.5 Speed indicator-adjusting driving speed

The user can adjust the wheelchair's top speed to suit their preferences and environment. The currently selected top speed is shown on the Speedometer and can be adjusted using the "Increase Speed" and "Decrease Speed" buttons. In the "5 speed" mode, pressing the Increase Speed and Decrease Speed buttons steps between one of 5 top speeds 20% to 100%. In the "fine adjusting" mode, pressing and holding the Increase Speed (Decrease Speed) button ramps the top Speed up (down) in fine steps.

You can choose between 1 to 5 orange dots in the speed indicator, with 5 being the maximum speed. Please refer to "Maximum speed forward" in "[19. Technical specifications](#)".

Speed scale	Speed equivalencies and recommended circumstances
1-2	<ul style="list-style-type: none"><li>● Speed equivalent to walking slowly on foot</li><li>● On a decline/Driving indoors or in a narrow space</li></ul>
3-4	<ul style="list-style-type: none"><li>● Speed equivalent to walking at a normal speed</li><li>● Driving outdoors on flat ground</li></ul>
5	<ul style="list-style-type: none"><li>● Speed equivalent to a brisk walk</li><li>● Driving in an open space/On an incline</li></ul>



## CAUTION

- Please fasten the pelvic belt whenever the user is sitting in the wheelchair.
- Please slow down before you get used to control your powered wheelchair.
- Please slow down your speed when indoor.

### 9.15.6 Powered tilt-in-space seating

Tilt-in-space seating helps redistribute pressure while seated. The tilt-in-space angle range is from 0° to 30°.

When driving downhill, a small tilt-in-space angle may also be applied to help return the user's line of sight to a level position and slightly shift the center of gravity backward, thereby enhancing safety.

The operations for this wheelchair's tilt-in-space seating are as follows:

9.15.2.1 Press the power On/Off button.

9.15.2.2 Press the tilt-in-space seating button **9**.

9.15.2.3 Push the joystick backward to tilt the seat backward in tilt-in-space mode, up to a maximum angle of 30 degrees.

9.15.2.4 Push the joystick forward to return the seat to the upright position.

9.15.2.5 Press the tilt-in-space seating button again to return to normal driving operation.



## WARNING

- To ensure stability, do not tilt the seat while driving uphill.
- Tilting on uphill slopes might lead to instability and bodily injury or cause personal or material damage.



## CAUTION

- Always drive carefully on slopes. The angle of the slope has a great influence on the total stability of the wheelchair.
- When tilting, always check if there are no obstructions close to the wheelchair, especially in the front or rear of the wheelchair.

- Avoid activating the tilting function by accident. An unexpected tilting movement could make the user feel shocked and fall from the seat.
- When tilting, the wheelchair will get longer. This has an influence on the driving characteristics of the wheelchair. Make sure there is enough space to drive.
- Be sure to fasten the pelvic positioning belt when operating the seat tilt function to prevent the user from falling out of the seat.

## **9.16 Brake, freewheel lever, and tire**

### **9.16.1 Brake**

9.16.1.1 This wheelchair is equipped with a fully automatic electromagnetic brake system integrated into the motor.

9.16.1.2 During operation, releasing the joystick will automatically engage the brake.

9.16.1.3 Activate the joystick again, and the brake is immediately released.

9.16.1.4 To check if the braking system is operating correctly, turn on the power and move the joystick in any direction; the brake will disengage.

9.16.1.5 When the joystick is released and returns to the center, the braking system will automatically engage.

### **9.16.2 Freewheel lever**

The freewheel lever is located at the rear of the wheelchair, above the motor housing. Freewheel mode allows the wheelchair to be moved without power, such as when manual pushing is required.

This wheelchair features a safe electromagnetic brake disengagement system. The electromagnetic brake is integrated into the motor and is linked to the freewheel lever. The operations are as follows:

#### **9.16.2.1 Enter freewheel mode (manual operation):**

Turn off the power, then move the freewheel lever on both sides fully outward (See Figure 9.35) to complete the mode change.

#### **9.16.2.2 Returning motor drive mode:**

Move the freewheel lever on both sides fully inward to the locked position (See Figure 9.36). Ensure that the wheelchair has returned to powered driving mode to complete the mode change.

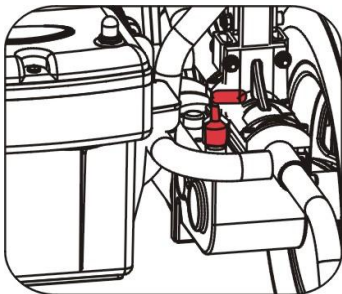


Figure 9.35

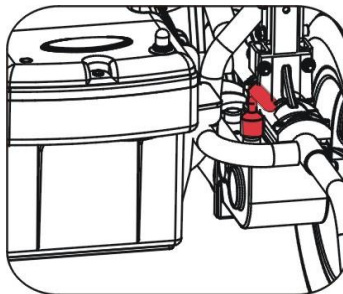


Figure 9.36



#### NOTE

Before driving the wheelchair, please ensure that the freewheel lever is moved inward to the locked position and enters the powered driving mode.



#### WARNING

The freewheel function must be used only on level ground. DO NOT operate on the slope, as using freewheel mode on a slope may result in injury to the user.



#### CAUTION

- Please check the tire condition. When the freewheel levers are fully moved outward (automatic brake disengaged), a caregiver must be present to assist at all times.
- After entering the freewheel mode, the wheelchair cannot be driven, and a warning indicator light will flash. To resume driving, please move the freewheel lever inward to the locked position to return the wheelchair to powered driving mode.

### 9.16.3 Tires

The KP-12T Adapt (KP-12T-ADP) comes with PU solid tires in the front and rear as standard options. If optional pneumatic tires are purchased and installed, the recommended tire pressure is 36/40 PSI.

Please ensure that no one places their hands near the wheels or touches the wheel with fingers to prevent injuries.



#### **NOTE**

- The pneumatic tire for the drive wheel can be optionally ordered based on the requirement. If a pneumatic tire is ordered, please inflate the tire according to the pressure indicated on the side of the tire.
- Please check the pneumatic tire (optional) pressure condition, as excessive tire pressure may cause a tire blowout during driving, creating a potential hazard.
- Abnormal pneumatic tire (optional) pressure may result in reduced stability and maneuverability of the wheelchair.



#### **CAUTION**

- Please ensure that no one places their hands near the wheels or touches the wheel with fingers to prevent injuries.
- Please check the drive wheel condition. When the freewheel levers are fully moved outward (automatic brake disengaged), a caregiver must be present to assist at all times.
- The freewheel function must be used only on level ground. **DO NOT** move the lever to freewheel mode on the slope; preventing freewheel mode on a slope may cause the wheelchair to move uncontrollably and result in damage.

## **10. Using the wheelchair**

### **10.1 General warnings and advice**

Please read this section of the user manual very carefully as it contains issues related to safety and possible hazards.



#### **WARNING**

- When the user is driving the wheelchair for the first time, the supplier has to make sure that the maximum driving speed and curving speed are

set in a slow mode. After learning to drive the wheelchair safely, the set speeds can be increased.

- Special care should be taken in driving on uneven surfaces, such as slopes, uneven pavements, and during descending from footpaths.
- It is not allowed to carry passengers other than the user on the wheelchair.
- On wet or slippery surfaces, like ice and snow, the driving speed must be reduced accordingly.
- When driving on wet and soft ground, it is difficult to control the wheelchair. The driving speed must be reduced accordingly.
- Avoid driving in the rain or snow because of the visibility could be poor. If you do need to drive in the rain, wear a raincoat with bright colors, and turn on lights. The driving speed must be reduced.
- Do not drive through water puddles that you cannot see how deep they are. This might lead to dangerous situations. Water can damage the wheelchair.
- Only charge the wheelchair in well-ventilated areas.
- Note that no other people or animals are in the direct contact zone of the wheelchair when using it. This is for both driving and operating seat functions. Because the wheelchair is a very powerful machine with a relatively high weight, this might lead to severe injuries.
- When driving the wheelchair in the dark, be sure that you have the lights switched on.
- Always drive slowly in the near surroundings of other people or animals.



## **WARNING**

- Although the wheelchair is intensively tested, it cannot be excluded completely that the wheelchair influences the performance of electromagnetic fields. The wheelchair can disturb the operation of devices in its environment that emit electromagnetic fields (e.g. Alarm systems of shops, automatic doors etc.).

- The driving characteristics of the wheelchair can be influenced by strong electromagnetic fields (e.g. Those emitted by portable telephones, electricity generators or high-power sources). Try to avoid the near presence of any radiation source, such as radios, cell phones, etc. If your wheelchair reacts to a source of radiation with unexpected behavior, try to drive slowly to a safe place, turn off your wheelchair, and try to extinguish the radiation source.
- Avoid driving in high heat because the user might get heatstroke or sunburns. Also, the tires can become soft.
- Avoid driving in low temperatures to prevent hypothermia. When the tires are exposed to low temperature, the tires can crack.
- Avoid driving in heavy traffic because it could be difficult to control the wheelchair, and the user could get hit.
- When driving the wheelchair, pay attention to the environment, and follow the traffic regulations. Avoid collisions as the impact could damage the wheelchair or injure the user.
- Be aware of any potential fire hazard. Keep away from flame. Pay attention when using matches/cigarette lighters.
- Do not overload the chair. Exceeding the maximum user weight of 60 kg could cause structure failure, which could injure the user.
- Keep fingers, cloth, or tools away from moving parts because it might cause pinch point injuries. For example, do not touch the wheel when the wheels are in motion because it might cause injury.
- The wheelchair shall not be pulled or pushed by another vehicle or object when there is a user on the wheelchair, or the wheels are not set to the freewheel mode.

## 10.2 Hot and cold surfaces



### WARNING

- Some parts of the wheelchair can reach high temperatures when exposed to direct sun. Please be careful with touching especially the plastic parts under these circumstances in order to prevent skin burning.
- Avoid any contact with the wheelchair's motors. The motors can reach high temperatures during and after use, and physical contact with the motors could cause burns.

- The wheelchair can reach low temperatures when exposed to cold weather (below zero degrees Celsius). Please take caution in touching especially the metal parts with wet body parts under these circumstances as they easily can freeze and get stuck to these surfaces.

### 10.3 Danger of pinching

#### User

Special care has been taken to make sure that the chance that the user pinches him or herself while seated in the wheelchair is minimal. However, there are a few situations that might lead to injury. Special caution has to be taken under the following circumstances:

- When the tray table is closed, pinching of fingers or other body parts is possible between the locking parts.
- When the revolving control unit is used in the tray table, pinching of fingers or other body parts is possible when the control unit is being turned upside down.
- When adjusting the seat while the user is sitting in the chair, please note that no body parts are in the direct zone of the moving parts.



#### WARNING

- When moving the seat down, the tilt frame comes very close to the top chassis cover. This creates a pinching danger, when at this time, hands are on the top cover at the rear end of the chassis. For this reason, a warning decal is placed on the top cover on the rear of the chassis. We advise you to always keep your hands or the hands of other people away from the rear end of the top chassis cover.
- All areas where there might be a risk of pinching are indicated by these warning decals:



## **10.4 Surroundings**

Special care has been taken to make sure that the chance that the surroundings pinch him or herself is minimal. However, there are a few situations that might lead to injury. Special caution has to be taken under the following circumstances:

- When driving the wheelchair, make sure that no people or animals are in the near surroundings, because running over e.g. feet will lead to serious injury as a result of the high weight of the electrical wheelchair.
- When using the powered tilt function, make sure that no people or animals are in the near surroundings, because it is possible to get pinched by the moving mechanism, although the moving parts are designed to be as safe as possible.

## **10.5 Precautions to prevent dangerous situations**

In order to prevent dangerous situations please take note of the following precautions:

- Only charge the battery in well-ventilated areas.
- Only drive at slow speed in the direct surrounding of other people or animals.
- Always turn on the head and rear lights when using the chair under circumstances with limited sight like darkness or fog.
- Please do not allow any people to stand or sit in the wheelchair, except for the user.
- Make sure that the remaining battery power is sufficient for the distance that is to be bridged.
- Using the battery of this wheelchair to charge mobile devices or any other devices will reduce the drive range. When the battery capacity is low, do not charge any device except in an emergency. When the battery capacity is full, please use it with discretion. Please use the original adapter when charging other devices.
- Do not replace a damaged fuse before it is known why the fuse is blown and the cause is taken away.

- Have the wheelchair checked by your supplier after any collision or when the wheelchair is otherwise (visual) damaged.
- Check the tire pressure and refill the tires, if necessary, every four weeks. Check the tires at the same time for wear and damage. Replace them if necessary.
- In order to ensure that your wheelchair is in good condition, please contact KARMA authorized dealers regularly and make further wheelchair inspection and maintenance records. We recommend that you inspect and maintain your wheelchair **every 6 months**. Please refer to "[12. Inspection and maintenance](#)."
- Do not change the programmed driving characteristics of your control unit, as it is specific for the situation of the user. If any adjustment is required because of a change of circumstances, please contact your supplier.



## WARNING

Always make sure that, when positioned on slopes, the brakes are engaged (no Freewheel). If the wheelchair is in freewheel mode, there is a risk that the wheelchair might start to move in an uncontrolled way. This might lead to personal or material damage.

## 10.6 Use on slopes: driving on downhill slopes

Driving on downhill slopes must always be done at a low speed and with great care. Avoid sudden braking, abrupt avoidance maneuvers and never maintain a speed higher than that at which you can maneuver the wheelchair in a safe and secure manner. Always be aware of the fact that the control of the wheelchair driving downhill is different than on level surfaces.



*Max. acceptable downhill slope*



### **WARNING**

- To ensure stability when driving on slopes, always keep the backrest in an upright position. Failing to do so might lead to instability and bodily injury or cause personal or material damage.
- Never drive downhill on slopes bigger than 6°. This might result in uncontrollable behavior of the wheelchair. This can lead to material or personal damage. (Dynamic stability according to ISO 7176-2= 6°)



## **WARNING**

- When driving down a slope, the stopping distance can be significantly greater than on level ground.
- The position of the seat in height and angle or the position of the backrest has great influence on the stability of the wheelchair if driving on slopes. Make sure the seat is in the optimal driving position to avoid tipping over.
- When driving on slopes, be sure to stop in case of any danger. If the user is unable to stop, the user could get frightened and fall off.



## **NOTE**

- When driving on downhill slopes with an uneven or slippery surface (for example grass, gravel, sand, ice or snow), you should drive with extra care and attention.
- When driving on downhill, you can use the tilt (if built in) to create a more stable seating position for yourself.

## 10.7 Use on slopes: driving on uphill slopes

Driving on uphill slopes must always be performed with great care and attention. Avoid sudden avoidance maneuvers and never drive at a speed higher than needed to maneuver the wheelchair in a safe and secure way. Avoid holes and bumps as much as possible. Drive slowly and controlled.



*Max. acceptable uphill slope*



### **WARNING**

- Do not tilt the seat while driving uphill.
- To ensure stability when driving on slopes, always keep the backrest in an upright position. Failing to do so might lead to instability and bodily injury or cause personal or material damage.
- Never drive uphill on slopes bigger than 6°. This might result in uncontrollable behavior of the wheelchair. This can lead to material or personal damage. (Dynamic stability according to ISO 7176-2= 6°)
- The position of the seat in height and angle or the position of the backrest has great influence on the stability of the wheelchair if driving on slopes. Make sure the seat is in the optimal driving position to avoid tipping over.



## NOTE

When driving on uphill slopes with an uneven or slippery surface (for example grass, gravel, sand, ice or snow), you should drive with extra care and attention.

### 10.8 Driving on sideways slopes

Driving on a sideways slope must always be performed with great care. Avoid sudden avoidance maneuvers and never drive at a speed higher than needed to maneuver the wheelchair in a safe and secure way. Avoid holes and bumps as much as possible. Drive slowly and controlled.



*Max. acceptable sideways slope*



## WARNING

- Do not tilt the seat while driving on sideways slopes.
- To ensure stability when driving on slopes, always keep the backrest in an upright position. Failing to do so might lead to instability and bodily injury or cause personal or material damage.
- Never drive sideways slopes bigger than 6°. This might result in uncontrollable behavior of the wheelchair. This can lead to material or personal damage. (Dynamic stability according to ISO 7176-2= 6°)
- The position of the seat in height or the position of the backrest has a great influence on the stability of the wheelchair if driving on slopes. Make sure the seat is in the optimal driving position to avoid tipping over.



## NOTE

When driving on sideways slopes with an uneven or slippery surface (for example, grass, gravel, sand, ice, or snow), you should drive with extra care and attention.

## 10.9 Obstacle climbing



### WARNING

Before driving over any obstacle, be sure to elevate the legrest high enough. This could prevent the legrest from hitting the ground. Such hits could damage the legrest and might lead to instability and bodily injury or cause personal or material damage.

The KP-12T Adapt (KP-12T-ADP)'s obstacle climbing ability is 25 mm with the run-up distance of 500 mm. Do not drive the wheelchair over obstacles of a height bigger than 25 mm.

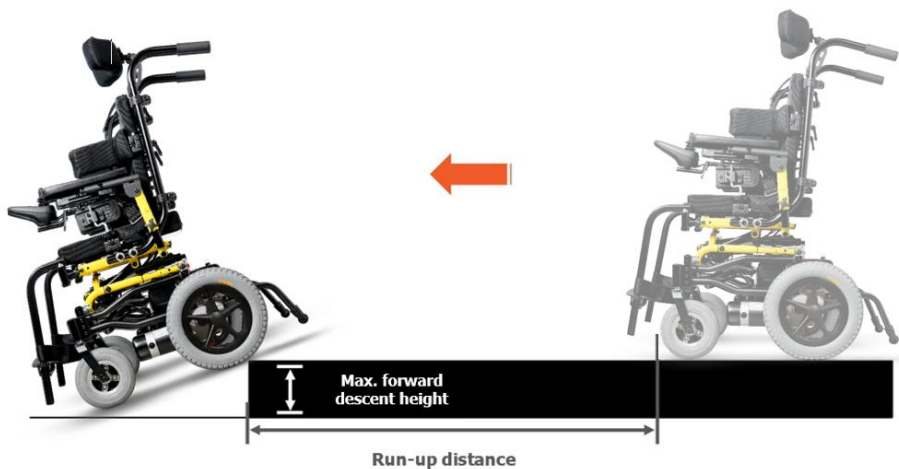
Driving over tall edges increases the risk of tipping over as well as the risk of damage to the wheelchair. When climbing obstacles, always be aware of the stability of your wheelchair.

Driving down from a higher surface (like pavement), always be aware of the sudden forward movement of your wheelchair when driving down of it. If your wheelchair has a powered seat tilt, you can use the seat tilt for more stability whilst driving off the pavement.

Refer to the illustrations and tables below for capabilities and limitations.



*Navigating up an obstacle (forward)*



*Navigating down an obstacle (forward)*

Model	Speed forward (km/h)	Motor (W)	Max. forward ascent height (without run-up distance)	Max. forward ascent height (with a run-up distance of 500 mm)	Max. forward descent height (without run-up distance)	Max. forward descent height (with a run-up distance of 500 mm)
KP-12T-ADP	6	200			25 mm	



**NOTE**

When driving over obstacles with uneven or slippery surface (for example, grass, gravel, sand, ice, or snow), you should drive with extra care and attention.



**WARNING**

- Never drive over obstacles higher than 25 mm. Always drive with maximum attention and great care.
- For your safety, please ensure that the anti-tippers (anti-tip devices) are properly installed. DO NOT remove them arbitrarily, as removal may significantly increase the risk of the wheelchair tipping backward.



## CAUTION

When a caregiver is assisting the wheelchair down steps or curbs, the wheelchair must be maneuvered backward to prevent the risk of the wheelchair tipping forward.

### **10.10 Use in presence of electromagnetic fields, e.g. from cell phones**

Use your cell phone only when the wheelchair is switched off. Although the wheelchair is tested and approved for electromagnetic interference, there is a very small chance that strong electromagnetic fields from cell phones or some other electrical products lead to unexpected and unpredictable electrical reactions from the wheelchair.

Try to avoid the near presence of any radiation source, such as radios, cell phones, etc. If your wheelchair reacts to a source of radiation with unexpected behavior, try to drive slowly to a safe place, turn off your wheelchair, and try to extinguish the radiation source.

When it is unavoidable to use the wheelchair under these circumstances, be prepared for any unexpected and unpredictable electrical reactions from the wheelchair.



## WARNING

- If you enter an area where there might be a risk of strong electromagnetic interference, always reduce your driving speed and drive carefully.
- Avoid the areas where strong military transmitters are used. They might interfere with your wheelchair's electronics.
- Avoid the areas close to high-voltage power lines. They might interfere with your wheelchair's electronics.
- Avoid areas close to high-frequency energy equipment, like high-frequency welding machines. They might interfere with your wheelchair's electronics.

- The driving performance of the wheelchair can be influenced by electromagnetic fields (e.g. those emitted by electricity generators or high-power sources).

### **10.10.1 Electromagnetic interference (EMI)**

This section provides the user with basic information about the problems with EMI, known sources of EMI, and protective measures either to reduce the possibility of exposure or to minimize the degree of exposure. This section also shows some conditions in which unexpected or erratic wheelchair movements may occur.



#### **CAUTION**

- It is very important that you read this information regarding the possible effects of electromagnetic interference on your powered KARMA wheelchair.

10.10.1.1 Powered wheelchairs may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources, such as radio stations (Radio Frequency Interference), TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones.

10.10.1.2 The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself, or move in unintended directions.

10.10.1.3 Each powered wheelchair can resist EMI up to a level of intensity. This amount of resistance is called its immunity level. The higher the immunity level is, the greater the protection will be.

10.10.1.4 There are a number of sources of relatively intense electromagnetic fields in our everyday environment. However, we believe that by following the warnings listed below, your risk to EMI can be greatly minimized.

- 10.10.1.5 Hand-held portable transceivers (transmitter-receivers) with the antenna mounted directly on the transmitting unit, such as citizens band (CB) radios, walkie-talkies, security and fire or police transceivers, cellular telephones, and other personal communication devices
- 10.10.1.6 Medium-range mobile transceivers used in police cars, fire trucks, ambulances, and taxis usually have the antenna mounted on the outside of the vehicle.
- 10.10.1.7 Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.



### CAUTION

- Other types of hand-held devices (cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances such as electric shavers and hair dryers, et cetera) so far as we know, are not likely to cause EMI problems.
- Some cellular telephones or similar devices transmit signals while they are ON, even though they are not in use.

## 10.10.2 Electromagnetic susceptibility (EMS)

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy too close to the powered wheelchair's control system while using these devices. This can affect your powered wheelchair's movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered wheelchair.



### WARNING

- Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs and motorized wheelchairs.

Following the warnings listed below should reduce the chance of unintended brake release or powered wheelchair movement.

- If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe.
- Be aware that adding accessories/components or modifying the powered wheelchair may make it more susceptible to EMI. There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair.
- Report all incidents of unintended movement or brake release to your powered wheelchair dealer or KARMA, and note whether there was a source of EMI nearby.

## 11. Charger and Battery



### NOTE

- The charger is used to charge the wheelchair batteries. The main plug connects to a power outlet, while the charging connector is to be plugged into the charger socket located underneath the joystick module.
- Before charging, ensure you read and understand the instruction manual supplied with the charger and choose the correct input voltage for the battery charger.

### 11.1 Charging the batteries

11.1.1 Charge your batteries if any of the following conditions occur.

11.1.1.1 If you have used your wheelchair for more than an hour continuously.

11.1.1.2 You've used more than one quarter of the total charge.

11.1.1.3 When you haven't used the wheelchair for more than two weeks.

11.1.1.4 If the current charge is not enough to reach your final destination.

11.1.2 Be sure to follow the procedures listed below precisely.

11.1.2.1 Ensure the charger socket is not obstructed.

11.1.2.2 Turn the wheelchair OFF.

11.1.2.3 Connect the charger's cord to a power outlet.

11.1.2.4 Locate the charger socket at the front of the joystick housing. Then connect the charger's round plug to the charger socket.

11.1.2.5 The charging time is at least 8 hours, but it could be as long as 12 hours, depending on the status of the batteries and temperature. The charging time is 16 hours maximum.

11.1.2.6 Disconnect the cord when charging is completed and then pull out the round plug from the charger socket.



## WARNING

- Avoid any abnormal use of the charger. For example, do not drop it and avoid any external impact on the charger. It could damage the charger.
- Using the battery without fully charging it may reduce its service life.
- DO NOT use an extension cord or a shared multi-outlet power strip when charging.
- Failure to follow the above battery maintenance instructions or replacing the battery incorrectly may result in product malfunction or hazards. In such cases, the company shall bear no responsibility or liability.



## CAUTION

- Please follow the guidelines below to avoid accidents while charging.
- If not used for a long period, charge the batteries once a week to ensure they remain fully charged.
- Be sure to only use a KARMA approved battery charger and charge the battery completely every time. The battery can be damaged if a non-genuine charger is used.
- Never disassemble or modify the charger. This will void the warranty.
- Please charge in a well-ventilated area where the battery is not directly exposed to sunlight. Do not charge the battery under rainfall, in morning dew or in an area where the humidity is high.
- Do not cover the wheelchair with any waterproof cloth or other objects while charging. Don't charge in temperatures less than -10°C (14°F) or higher than 50°C (122°F) as the charger may not work well and the battery may become damaged.
- The fan inside the charger will start to work when you turn on the charger. The function is designed for heat dissipation; a slight increase in the charger's surface temperature is normal and does not indicate a malfunction.
- The charger is not guaranteed to be water resistant.
- Valve Regulated Lead-Acid batteries do not have a memory function like cell phone batteries have. Please get in the habit of recharging your VRLA batteries frequently.



## CAUTION

- New batteries **MUST** be fully charged prior to initial use of the power wheelchair.
- Always charge new batteries before initial use or battery life will be reduced.
- As a general rule, recharge batteries as frequently as possible to assure the longest possible life and to minimize required charging time. Plan to recharge them when use of the power wheelchair is not anticipated.
- You can check whether charging is complete by the charging indicator light (for detailed information about the meaning of each indicator, please refer to the instruction manual supplied with the charger). Do not stop charging before it is fully completed.
- The battery box can be detached and charged separately. Open the charger socket on the right side of the battery box and connect the charger to begin charging. An additional battery can be ordered and used alternately for extended operation.
- When the battery box is installed on the wheelchair, **DO NOT** charge the battery through the charger socket on the battery box.
- Before charging, ensure you read and understand the instruction manual supplied with the charger to realize the charger instruction, signal display, and notice.
- Ensure to choose the correct input voltage for the battery charger.



## NOTE

- For more detailed information about the charger and its functions, such as LED light color/behavior, refer to the user manual supplied with the charger itself.
- If the charger is abnormal during charging battery, such as charging function (unstable voltage, abnormal wiring, fuse failure, or voltage cannot be output), LED light, socket, plug, cord, fan functions and so on, please contact your local supplier.

- If the wheelchair is used during the day, charge the battery that same evening.
- If the wheelchair is used infrequently, charge the battery at least once a week.
- If the wheelchair will not be used for one month or longer, disconnect the battery to help extend battery life.
- For long-term non-use, remove the battery box from the wheelchair. In addition, check the battery 3–4 times per month, and recharge it when necessary to maintain battery condition.
- If the battery has been charging for more than 16 hours and does not reach a fully charged status, this may indicate a malfunctioning charger or battery deterioration.

## 11.2 Charger

11.2.1 You can determine whether the battery is charging or fully charged by the indicator light on the charger. For detailed information about the indicator light, refer to the user manual that comes with the charger itself.

11.2.2 Follow the instructions in the charger’s user manual for operating the charger.

11.2.3 The battery charger is compatible with various types of lead-acid batteries and with powered wheelchairs powered by lead-acid batteries.

Lead-acid battery specification: 12V 22Ah x 2 batteries connected in series are compatible with this charger.



### NOTE

The actual appearance/type of charger might vary depending on the country/region where you purchase the wheelchair. For more detailed information about the charger and its functions, such as LED light color/behavior, refer to the user manual supplied with the charger itself.



## NOTE

- For more detailed information about the charger and its functions, such as LED light color/behavior, refer to the user manual supplied with the charger itself.
- The charger can be supplied by your local dealer.
- In some occasions putting in the charger socket yourself can be very difficult. Optionally, the wheelchair can be supplied with charger socket which can be placed on the spot you can reach yourself. For more information, please contact your local authorized supplier.



## WARNING

Be sure that the charger plug is pushed fully in position. You will not be able to drive the wheelchair when the charger is connected. If the wheelchair does drive with the charger plugged in, contact your local authorized supplier.



## NOTE

In some occasions it might be the case that your local supplier will deliver the wheelchair with a different brand charger. In that case your local supplier will inform you about the functionality of that charger and will also make sure the charger comes with a user manual.

## 11.3 Batteries

### 11.3.1 Battery storage

KP-12T Adapt (KP-12T-ADP) contains two batteries inside the battery box located underneath the wheelchair. The battery box is professionally designed and can be detached and combined.

Before disassembling the wheelchair, remove the seat first, then grasp the battery box handle and lift it upward to remove the battery. To install the battery, follow the above steps in reverse order. When installing the battery, please check the battery box position. Please refer to the notice in [9.2 Disassembling and assembling the wheelchair](#).

### 11.3.2 Cleaning the batteries

If a battery is contaminated by dirty water, battery acid, dust, or other soil, the battery will discharge quickly. Therefore, please follow the steps to clean the battery:

11.4.2.1 Turn the power off.

11.4.2.2 Remove the seat.

11.4.2.3 Use a clean cloth to wipe the frame of the battery.

11.4.2.4 Remove the battery.

11.4.2.5 Use a clean cloth to wipe the battery. If white powder is present on the connector, remove it using a copper brush.



#### CAUTION

- The battery weighs approximately 15.6 kg. Ensure sufficient strength and proper handling techniques during installation and removal to prevent injury.
- This wheelchair is equipped with a maintenance-free battery; replacement or refilling of electrolyte is not required.
- This wheelchair uses a sealed, maintenance-free battery. DO NOT open the battery box, as this may cause damage, malfunction, or personal injury.
- When storing this product or charging the battery, DO NOT expose the battery to temperatures less than -10°C (14°F) or higher than 50°C (122°F). Exposure to extreme temperatures may cause overheating, battery damage, or reduced lifespan.
- Please keep the wheelchair and battery away from fire and heat sources, such as cigarettes, stoves, or open flames.

## 12. Inspection and maintenance

### 12.1 Daily check

Check the following items before driving. If you find anything abnormal, visit your KAMRA wheelchair dealer for further inspection before using it.

Item	Inspection Content
Joystick Module	<ul style="list-style-type: none"> <li>● Can the power be turned on/off normally?</li> <li>● Is there any part loose?</li> <li>● Can the joystick be operated smoothly in all directions?</li> <li>● Can the speed buttons be adjusted freely, and do they function well?</li> <li>● Do the power indicators illuminate and show sufficient power for use?</li> <li>● Does the horn work well?</li> </ul>
Motor	<ul style="list-style-type: none"> <li>● Is there any abnormal motor noise?</li> <li>● Does the electromagnetic brake work properly?</li> </ul>
Freewheel Mode	<ul style="list-style-type: none"> <li>● Do the freewheel levers work properly?</li> <li>● Is there any abnormal motor noise?</li> </ul>
Wheelchair	<ul style="list-style-type: none"> <li>● Is there any abnormal noise?</li> <li>● Is there any part loose?</li> </ul>
Tires	<ul style="list-style-type: none"> <li>● Is there any part loose?</li> <li>● Are there any cracks or other damage to the tires?</li> <li>● Is there any abnormal noise?</li> </ul>
Joystick Module and Brakes	<ul style="list-style-type: none"> <li>● Do the brakes work properly (manual and electromagnetic brakes)?</li> <li>● Is there any abnormal indicator flashing on the joystick module?</li> </ul>



#### CAUTION

If you find anything abnormal, visit your KAMRA wheelchair dealer for further maintenance service.

## 12.2 Regular Maintenance Record

In order to ensure that your wheelchair is in good condition, please contact KARMA authorized dealers regularly and make further wheelchair inspection and maintenance records. We recommend that you inspect and maintain your wheelchair **every six months**. A maintenance/service fee may apply after the warranty period.

Please follow the inspection checklist below to inspect your wheelchair according to the recommended inspection frequency. Some inspections must be performed by yourself when sitting in or getting up from the wheelchair to ensure safe use.

To help you pay more attention, the self-inspection items are categorized as follows:

- A:** Every week                      **B:** Every month  
**C:** Every six months              **D:** Every year

Item	Checklist
A. Every week	Please check the following checklist for any abnormalities: <ul style="list-style-type: none"> <li>● Do the seat upholstery and battery function properly?</li> <li>● Do the casters/drive wheels function properly, or is there any abnormal noise?</li> <li>● Is the safety belt secure?</li> <li>● Is the wheelchair frame structurally stable and intact?</li> <li>● Are all the moving parts adequately lubricated (apply machine oil or grease as required)?</li> </ul>
B. Every month	Please check the following checklist for looseness or wear: <ul style="list-style-type: none"> <li>● The spring lock, bolt, and armpad tube with joystick bracket.</li> <li>● Electromagnetic and manual brakes.</li> <li>● Freewheel lever function.</li> <li>● Caster and drive wheel parts.</li> <li>● Caster and drive wheel tread depth.</li> <li>● Electric system connection</li> <li>● Charger and controller connectors.</li> </ul>
C. Every six months	Please visit your KARMA dealer for regular inspection.

D. Every year	It is recommended to return the wheelchair to an authorized service center annually for inspection and maintenance.
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## CAUTION

- DO NOT damage or remove the motors, controller, or the sealing covers of the battery box, as this may compromise your safety and void user rights or warranty.
- DO NOT neglect cleaning and maintenance, even when the wheelchair is stored and not in use.

### 12.3 Battery, circuit breaker, and tire

#### Battery

Please ensure that the battery is frequently charged. We recommend avoiding complete battery discharge, as this may reduce the battery lifespan. Please refer to the battery section in [Chapter 11](#) for more detailed information.

#### Circuit breaker

The battery box is equipped with a circuit breaker to prevent an overload of current during operation, causing mechanical damage. The circuit breaker will automatically trip and cut off the circuit route when necessary.

#### Tire

Solid tires do not require inflation or maintenance; however, please inspect tire wear regularly (once a month). If the tread depth is less than 1 mm or cracks, please contact customer service to arrange tire replacement. For pneumatic tires, please ensure that tire pressure is sufficient before use. Under general conditions, the lifespan of solid tires and pneumatic tires is comparable.

### 12.4 General maintenance

12.4.1 User's routine wheelchair maintenance primarily involves cleaning the wheelchair and monitoring its condition during use.

12.4.2 Please maintain and clean the wheelchair if you drive on grass, sand, or gravel roads.

12.4.3 Please use a mild cleaning detergent to clean the seat upholstery to avoid damage to the seat upholstery material. Please clean the wheelchair by wiping it with either a spray wax polish or a dry cloth. DO NOT use water or cleaning detergent to clean the mechanism and battery.



## CAUTION

- Before performing any maintenance, be sure to turn the power OFF and unplug the charger if connected.
- DO NOT over-tighten hardware. This could cause damage to the frame and hardware.
- DO NOT directly spray water on your wheelchair to wash it, as this could lead to a malfunction in the electric system.
- DO NOT use gasoline, solvents, or other abrasive solutions; the casing may become deformed or damaged.
- DO NOT connect or modify any wiring without authorization, as this may result in danger or injury.
- After ANY adjustments, repair, or maintenance and BEFORE use, make sure that all the parts are tightened securely; injury or damage may occur.

## 12.5 Transporting and storing

### Transporting

KP-12T Adapt (KP-12T-ADP) is designed to allow easy, tool-free disassembly, enabling you to transport the wheelchair into a vehicle or to other locations. Depending on the size and shape of the vehicle trunk or storage space, various transport options are available. For transport and storage purposes, the wheelchair may be loaded and carried either assembled or disassembled into individual components. The disassembled wheelchair can be transported by almost any type of vehicle. For detailed instructions for disassembly and reassembly, please refer to [9.2](#)

[Disassembling and assembling the wheelchair](#). Please be aware of the electric connector when assembling the wheelchair.

### Storing

Please store the wheelchair indoors in a cool and dry environment to maintain it in good condition. Please also check the battery condition every week to maintain proper charge levels.



## CAUTION

- DO NOT touch the battery connector to prevent injury or cause a fire hazard.
- DO NOT connect any metal parts to the battery connector.
- When assembling, please install the battery first. If the battery cannot be properly positioned, check if it is correctly aligned in the position and try again. DO NOT force the battery into place, as this may cause damage or danger.
- When carrying the wheelchair with a vehicle, please ensure that each disassembled part is properly positioned and secured to prevent damage to the wheelchair and the vehicle during transportation.
- Please store the wheelchair in a place free from direct sunlight, rain, or moisture.
- For long-term storage, please fully charge the battery and disconnect the battery terminals. For detailed information, please contact your KARMA wheelchair dealer.

### 13. Optional accessories

The following accessories are available as optional items to meet individual requirements.

- Solid tire
- Medial knee support
- Tray table
- Shoulder strap alignment guide
- 4-point pelvic positioning belt
- Articulating legrest



#### CAUTION

- The arrangement of the options/accessories should take the motion of wheel and cables into consideration. It is suggested to set up those options/accessories by an authorized KARMA supplier.
- Only accessories approved by KARMA may be used. Modifications or additions are limited to medical-related equipment and must be installed by professional technicians. When making modifications, please consider the added weight and whether it affects the wheelchair's stability and safety limitations in your environment.
- Any modifications not authorized by KARMA are the sole responsibility of the user.
- While the electric device has passed EMC testing, please avoid driving in areas with high-frequency signals or potential electromagnetic interference.

## 14. Cleaning and recycling

### 14.1 Cleaning

- 14.1.1 In order to lengthen the life of your wheelchair, it is suggested that you clean the wheelchair periodically (if not daily), especially after it is used in the rain or the snow. We suggest that you DO NOT use your wheelchair in the rain or snow. If you are travelling and get caught in the rain, we suggest you try to find shelter and turn OFF your wheelchair while waiting it out. If you cannot find shelter, proceed to your destination. However, we DO NOT recommend you do this often, as it may shorten the life of your wheelchair or cause damage.
- 14.1.2 Driver's seat upholstery: Use soapy water. Wring out the sponge/cloth before scrubbing. DO NOT use the wheelchair until it is dry.
- 14.1.3 Frame: Wipe with a damp cloth, but be sure not to splash/spray the wheelchair with water, as doing so may damage the motor, electrical wiring, and battery. If compressed air is available, you can use the compressed air to clean your wheelchair (do not exceed  $7\text{kg/cm}^2$  and keep the nozzle at least 10 cm away from your wheelchair).
- 14.1.4 Casing (box): Wipe with a damp cloth. After it is dry, coat the casing (box) with a light layer of wax, if desired.

### 14.2 Post-consumer recycling

- 14.2.1 A post-consumer recycling plan should follow the Environmental Protection Administration's regulations. The items listed below are for reference only as local laws and regulations may vary.

Material	Part Name	Method
Aluminum-alloy	Frame	Recyclable
Various material	Battery	Recyclable
Copper and iron	Motor	Recyclable
Various metal	Reduction gear	Recyclable
Various material	Electric parts	Recyclable

- 14.2.2 There are many organizations in many countries that you can find on the internet that will accept used goods for charity or disassemble electronic equipment and batteries to recycle them. Please search the Internet to help less fortunate individuals and protect our planet for future generations. If you DO NOT have access to the World Wide Web, please use your local phone directory, ask for operator assistance, or go to your local government center for more information. Various parts of this wheelchair should be recycled at the collection and recycling location nearest to you. Earth Day is every day.
- 14.2.3 Check with your local recycling center on where and how to recycle used batteries, as this information varies from region to region.



### 14.3 Disposal of the battery



#### WARNING

There are many risks involved with improper disposal of batteries, whether damaged or not. Batteries may contain heavy metals and be considered hazardous waste.

Many regions around the world now strictly enforce laws to help protect our environment. By not disposing of batteries properly, you may be liable for fines from your local through national government.

By not recycling batteries, they end up in landfills where lead and other chemicals may leach into streams and rivers destroying ecosystems and poisoning local water resources.

Improper disposal of batteries may also cause injury to unsuspecting others that come in contact with them. If you come in contact with fluids or corroded powder from a battery, rinse with water and contact a physician if necessary. If contact with eyes occurs, rinse for 15 minutes and then visit a physician.

DO NOT incinerate or burn the battery. It will cause it to explode!

Refer to the "[16. Disposal of the product](#)" chapter for details.



#### CAUTION

- If you are not capable of replacing the batteries by yourself or you don't feel comfortable doing it, please contact your local authorized supplier for help.
- Damage on the wheelchair as a result of a not proper repair or replacement is not covered by our product warranty.
- Batteries are classified as chemical waste and need to be disposed according to the local regulations for chemical waste.

## 15. Refurbishment and re-use of the product

This wheelchair is suitable for refurbishment and re-use. This means that, if the wheelchair is not used anymore by the first user, it can be refurbished to fit another user. Should you not be able to use the wheelchair any longer, we strongly recommend you contact your local authorized supplier to have it picked up for refurbishment and re-use.



### WARNING

- The refurbishment of the wheelchair is only allowed to be executed by an authorized supplier.
- If the wheelchair is refurbished by a non-authorized supplier or institute, KARMA Medical cannot be held responsible for this product, and all warranty claims will be voided.



### NOTE

The wheelchair will be refurbished according to a refurbishment guideline of KARMA. This includes the replacement of all upholstery parts, a total disinfection of the product and a complete technical check of the wheelchair and its accessories.

## 16. Disposal of the product

When disposing of the used wheelchair, you need to follow the local legal regulations for disposals.

We strongly recommend you contact your local authorized supplier to take care of the disposal of your wheelchair.



### CAUTION

Batteries are classified as chemical waste and need to be disposed according to the local regulations for chemical waste.

# 17. Troubleshooting

## 17.1 Trouble or problems with your wheelchair

Every time you turn on the KP-12T Adapt (KP-12T-ADP) powered wheelchair, the joystick module will automatically perform a self-diagnostic check. The built-in diagnostic system monitors the controller, motors, and electromagnetic brakes. Any detected issues will be displayed on the joystick module. In the event of a malfunction during operation, please identify the error code on the indicator before turning off the power to inspect the wheelchair.










In the event of a malfunction, you can inspect the following before taking your wheelchair to a KARMA wheelchair dealer:



Problem	Checking points and corrective action
The wheelchair does not start	Is the power turned OFF? →Turn on the power.
	Does the battery still have power? Is the battery indicator light not on? →Charge the batteries.
	Is the charger still plugged into the wheelchair? →Unplug the charger connector and put it away.
	Does the circuit breaker trip? When the circuit breaker trips, you must wait 3 minutes for the system to cool down before pressing the reset button to reset it. For essential information about the circuit breaker, please refer to " <a href="#">18.Safety information.</a> " →Press the circuit breaker button.

If you cannot solve the problem by yourself, contact your KARMA wheelchair dealer for help.

## 17.2 VR2 controller, battery, and diagnostics indicator

The following table indicates what the gauge will display for any given state.

Indication	Status	Meaning	What to do
	1 signal	The battery needs charging or there is a bad connection to the battery.	Check the connections to the battery. If the connections are good, try charging the battery.
	2 signals	The left hand motor has a bad connection.	Check the connections to the left hand motor.
	3 signals	The left hand motor has a short circuit to a battery connection.	Connect your service agent.
	4 signals	The right hand motor has a bad connection.	Check the connections to the left hand motor.
	5 signals	The left hand motor has a short circuit to a battery connection.	Connect your service agent.
	6 signals	The wheelchair is being prevented from driving by an external signal.	Please remove the charger.
	7 signals	A joystick fault is indicated.	Make sure that the joystick is in the center position.
	8 signals	A joystick fault is indicated.	Make sure that all connections are secure.
	9 signals	The parking brakes have a bad connection.	Check the parking brake and motor connections and make sure all connections are secure.

Indication	Status	Meaning	What to do
	10 signals	An excessive voltage has been applied to the control system.	Check the battery connections.
	10 signals + speed indicators	A joystick connector fault is indicated.	Check the connector's connections.



**WARNING**

Diagnostics should only be performed by authorized people with sound knowledge of the wheelchair's electronic control system. Incorrect or poorly performed repair work may make it dangerous to use the wheelchair. KARMA accepts no liability for any personal injury or damage to the wheelchair and its surroundings that occur because of incorrect or poorly performed repair work. If the wheelchair is refurbished by a non-authorized supplier or institute, KARMA Medical cannot be held responsible for this product, and all warranty claims will be voided.

## 18. Safety information

During normal use, if the circuit breaker trips, please be sure to handle it properly as follows:



### CAUTION

Important safety instructions about the circuit breaker:

- Once the circuit breaker trips, you must wait 3 minutes for the system to cool down before pressing the reset button to reset it.
- If the circuit breaker trips twice repeatedly while in operation, **DO NOT** press the reset button again. Seek assistance to move your product to a safe and flat place and contact your customer service technician for further assistance.

Safety knowledge:

- When the circuit breaker trips, it indicates that your product may have encountered an abnormal situation under special operating conditions, such as climbing a slope.
- If the electronic/electrical components overheat due to prolonged climbing, the circuit breaker will trip immediately to activate the product's safety mechanism.
- Once tripped, if you forcibly press the reset button more than twice, it may cause the electronic/electrical components to fail, leading to safety issues with the product.



### WARNING

If the circuit breaker trips twice repeatedly, it indicates that the product system is not suitable for the current operating conditions. Stop using the product immediately and contact your customer service technician for further assistance. KARMA will not be responsible for any product damage or personal injury resulting from such misuse.

## 19. Technical specifications



### NOTE

Available features, specifications, and configurations may vary depending on the country/region where you purchase the product.

Product Model	KP-12T Adapt (KP-12T-ADP)
Nominal seat width (mm) <sup>1</sup>	350 / 14
Nominal seat depth (mm) <sup>2</sup>	255–405 / 10–16
Caster / Drive wheel size (in)	8 / 12
Backrest height without cushion (mm)	N/A
Backrest height with cushion (mm)	300–500
Armrest to seat distance without cushion (mm)	225–290
Armrest to seat distance with cushion (mm)	170–235
Front location of armrest structure (mm)	0–450
Seat surface height at front edge without cushion (mm)	480
Seat surface height at front edge with cushion (mm)	535
Footrest to seat distance without cushion (mm)	80–385
Footrest to seat distance with cushion (mm)	135–440
Effective seat width (mm)	N/A
Effective seat depth (mm)	255–405

Product Model	KP-12T Adapt (KP-12T-ADP)
Seat plane angle (X°)	1.5–33.5
Backrest angle (X°)	5
Seat to backrest angle (X°)	92.5
Leg to seat angle (X°)	90–99
Overall length (mm)	915–1026
Overall width (mm)	620
Overall height (mm)	1040–1190
Folded length (mm)	670–825
Folded width (mm)	620
Folded height (mm)	375–680
Total mass (kg)	65.14
Total mass without batteries (kg)	51.34
Mass of the heaviest part (kg)	24.56
Maximum user weight (kg) <sup>3</sup>	60
Drive range (km) <sup>4</sup>	16
Maximum speed forward (km/h)	6
Minimum braking distance from max speed (mm)	1000
Obstacle climbing (mm)	25
Ground clearance (mm)	100
Minimum turning radius (mm)	765
Reverse turning width (mm)	960
Static stability downhill (X°)	10
Static stability uphill (X°)	11
Static stability sideways (X°)	10

Product Model	KP-12T Adapt (KP-12T-ADP)
Dynamic stability (X°)	6
Ability to climb rated slope (X°) <sup>5</sup>	10
Controller	VR2
Motor power (W)	200
Battery capacity (Ah)	22 x 2
Charger output current (A)	4
Battery compartment (L x W x H) (mm)	180 x 80 x 165

**1. Nominal seat width** is measured the width of seat cushion. This value is mainly used in the product ordering process.

**2. Nominal seat depth** is measured from the front end of the seat cushion to the back cushion. This value is mainly used in the product ordering process.

**3. Maximum user weight** refers to the combined weight of the user and all personal items.

**4. Drive range** is estimated based on the following conditions: 20°C–35°C, 60 kg occupant, and brand new, fully charged batteries, and driving on a flat road. The drive range will be reduced if the wheelchair is used frequently on slopes, rough ground, or kerbs (curbs) climbing, etc.

**5. Ability to climb rated slope** is estimated based on the following conditions: 20°C–35°C, 60 kg occupant, and brand new, fully charged batteries.

- The actual product specifications differ from the data in the table by  $\pm 10$  mm  $\pm 0.5$  kg.

- The actual product specifications may vary according to different configurations.

- KARMA reserves the right to modify information herein without further notice.

- If you want to know more about the measurement methods of wheelchair specifications, please scan the QR code to read the instructions on the KARMA website.



## 20. Accessories

Accessories for KARMA powered wheelchairs are subject to continuous development. Every day we design new accessories to improve the flexibility of our products.

Contact your local authorized KARMA supplier for more information on the accessories which are available for your wheelchair.

Should you have a good suggestion for a new accessory, do not hesitate to contact us. Your idea might be the next new accessory!

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## **We have a big dream**

Whether it's a customized wheelchair, standing chair, general purpose chair, or another mobility aid device, each of our products is carefully designed with our customers' voices, needs, and desires in mind.

When it comes to user experiences, we strive to be more "caring," "empathetic", and "approachable".

Through our dedication and our mindfulness, we look forward to bringing more confidence, joy, and love for life to those with physical disabilities around the world.

*we look forward to bringing more confidence, joy, and love for life to those with physical disabilities around the world.*

KARMA Medical is continuously improving their products and accessories. Changes might take place without further notice.

# karma

A Better Wheelchair, A Better Fit



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