

karma

User manual
Flexx Adapt



CE UK
CA

A Better Wheelchair, A Better Fit

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1. How to contact Karma

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KARMA MOBILITY, S. L.

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KARMA MOBILITY LTD.

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Produced and published by Karma, Taiwan.

Technical changes and print errors are prohibited.

2. Declaration of conformity



A Better Wheelchair, A Better Fit

Document No.: DOC-Flexx Adapt-00

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 GIJÓN – 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:

Basic UDI-DI of Annex VI:	471987385FLEXx-Adapt24
Device:	Manual wheelchair
Trade Name or Mark:	Flexx Adapt series
Model Number:	Flexx Adapt (FLX-ADP)
Product Code according to EMDN:	Y122103
Product Code according to GMDN:	41630
Classification:	Rule 1 of Class I
UDI-DI:	04719873857081

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 12183	Manual wheelchairs - Requirements and test methods	2014
EN 62366	Medical devices - Application of usability engineering to medical devices	2015
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	2016
MEDDEV. 2.7/1 Rev. 4	CLINICAL EVALUATION: A GUIDE FOR MANUFACTURERS	2016
MEDDEV 2.12/1 Rev. 4	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: 22nd November 2022

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:

Basic UDI-DI of MDR(Annex VI):	471987385FLEXX-Adapt24
Device:	Manual wheelchair
Trade Name or Mark:	Flexx Adapt series
Model Number:	Flexx Adapt (FLX-ADP)
Product Code according to EMDN:	Y122103
Product Code according to GMDN:	41630
Classification:	Rule 1 of Class I
UDI-DI:	04719873857081

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

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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	2016

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: 22nd November 2022

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


CHEN, YING-CHUN, CEO

3. Introduction

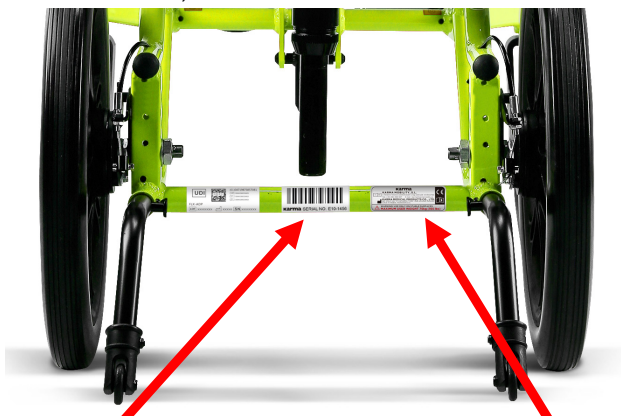
Congratulations on your new Karma wheelchair! This product has been made with great care and dedication to increase your freedom of mobility and independence. If you have questions or suggestions about our products, do not hesitate to get in contact with us at globalsales@KARMA.com.tw.

You must read and understand this entire manual prior to use. Always keeping it with your product. This way, you will be able to find additional information when needed.

Karma runs the policy of continuous product improvement. Therefore, pictures of products or options shown in this manual might differ from what you see in the product. Karma reserves the right to make changes to the product without prior notice.




3.1 Serial number

We will keep the serial number in our data system. The serial number label is on the frame tube. Please carefully read all the labeling on the wheelchair before using the wheelchair, and do not remove them.



4. Symbols

The following symbols indicate general warnings. There are three levels of them:

 Warning	Use extreme caution where this symbol appears. Ignoring these warnings may result in personal or property damage.
 Caution	Use caution to prevent dangerous situations.
 Note	The symbol refers to additional information that might be useful. Take notice of this information.

- Before using the wheelchair, you should read this manual to get familiar with this product. Improper use of the wheelchair could result in harm or injury.
- Follow our guidelines and use the product with reasonable care to increase your safety. Be aware that careless use may result in danger.
- Ensure the local reseller has set up the product properly to fit your exact needs and requirements.
- Always be accompanied by an attendant when operating the wheelchair for the first time.

5. Warranty

Karma offers a 5-year guarantee on the frame and cross-braces and a 1-year guarantee on the gas strut after delivery to the customer. Your local supplier will carry out this warranty.

The wheelchair must be repaired by a Karma designated Customer Service agent. This warranty is VOID if the original chair serial number is removed or altered. Please get in touch with our Karma authorized dealers for warranty claims.

The warranty does not apply to damage or faults of the product caused by wrong or improper use or neglected maintenance.

This guarantee does not apply to components susceptible to wear, such as brakes, bearings, footplates, pads, side guards, upholsteries, wheels, etc.

The warranty does not cover consequential costs arising from the rectification of defects, such as freight and travel expenses, labor costs, fees, etc.

Karma 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 originate from availability of parts, product improvement based on market experience, changed legislation, etc.



Warning

Using non-original parts on this product may result in personal injury or material damage. Karma cannot be held responsible for these results.

Repairs executed by unauthorized persons may result in personal injury or material damage. Karma cannot be held responsible for these results.

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

6. Intended use

The wheelchair is intended to provide mobility to people with mobility limitations and require proper sitting positioning. The maximum user weight is 75 kg.

We strongly suggest the wheelchair occupant be evaluated by a doctor, therapist, or other qualified and trained staff before using the wheelchair.

The wheelchair user should physically and mentally be able to use the wheelchair safely.

The expected service life of the product is five years, presuming that the product is used daily following the safety operation instructions, inspection and maintenance instructions, and intended use described in this manual.

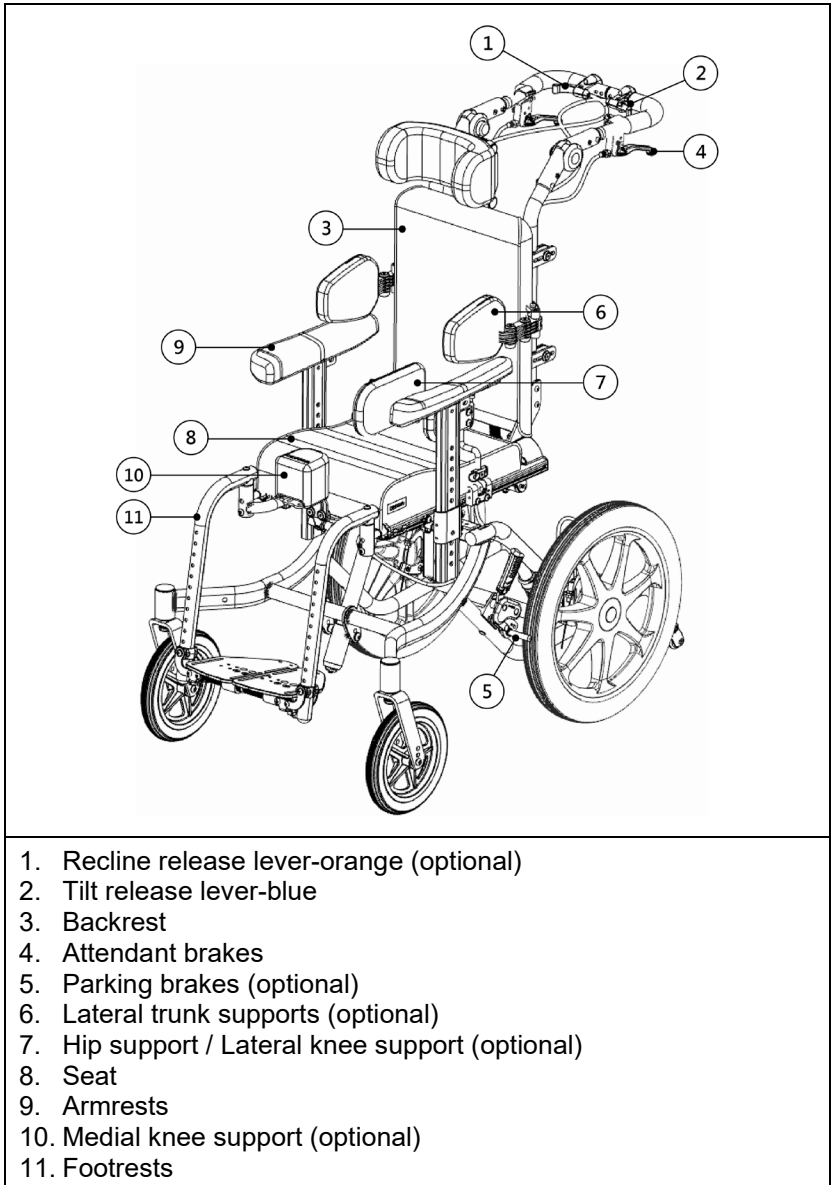
7. Intended environment

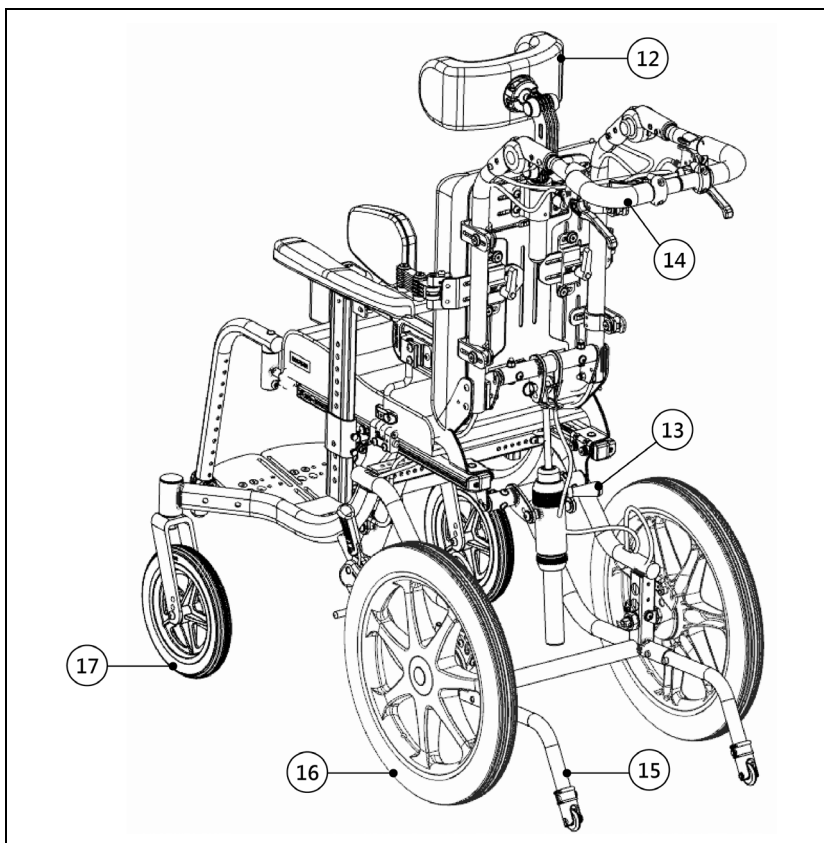
The wheelchair is suitable for indoor and outdoor use. Only use the wheelchair on level ground and on accessible terrain outdoors. Avoid using the wheelchair on beaches to prevent saltwater and sand damage. Clean the wheelchair right after being contacted with sand and saltwater. Refer to [Part 12.4](#).

The wheelchair can be used in different weather conditions. Note that metal or plastic surfaces of the wheelchair can become very hot when exposed to direct sun for a long time.

8. Wheelchair components – functions and operations

8.1 Overview





- 12. Headrest
- 13. Dynamic backrest switch (optional)
- 14. Stroller handle
- 15. Anti-tippers
- 16. Rear wheels
- 17. Front casters

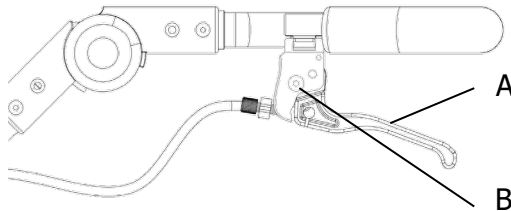
8.2 Attendant brake

The attendant brakes allow the caregiver to brake the wheelchair when needed. They can also be used to lock the rear wheels to the wheelchair from moving.

To brake the wheelchair while moving, squeeze both brake handles (A) upwards to slow down and stop the wheelchair.

To lock the wheel, squeeze the brake handles (A) and press the lock pins (B) inwards. Then release the brake handles.

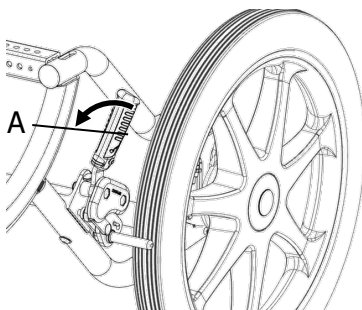
To release the brakes, squeeze the brake handles (A), and the lock pins (B) will release automatically.



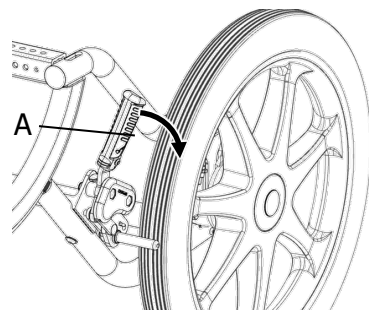
8.3 Parking brake (optional)

The parking brakes can lock the wheel when stationary to prevent it from moving.




To engage the brake, move the brake lever (A) forwards as far as possible. To release the brake, push the brake lever (A) backwards.



Engage the brake

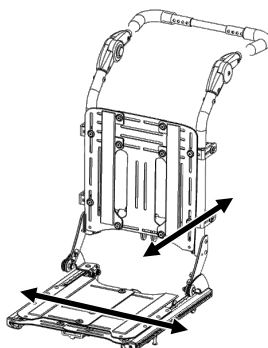


Release the brake

 Warning	<ul style="list-style-type: none"> ● Never apply the parking brakes when the wheelchair is moving. If you do so, the wheelchair may become uncontrollable or stop suddenly, leading to a collision or the user falling forward. ● Do not apply the parking brakes to slow down the wheelchair. And do not lean on the parking brakes for support. These actions may lead to the uncontrollable conditions of the wheelchair. ● When moving the brake lever forward, be careful not to trap your fingers between the lever and frame.
 Caution	<p>There might be a small gap between the rear wheel and the parking brake with the risk that you could trap your fingers. When using the brake, always keep your hand on the brake lever.</p>
 Note	<p>If needed, contact a Karma authorized dealer to adjust the distance between the brake shoe and the tire to keep the braking efficacy.</p>

8.4 Seat

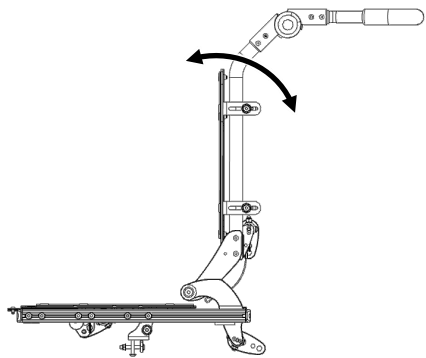
The rails on each side provide the mounting points for accessories such as hip supports or pelvic belt.



8.4.1 Frame

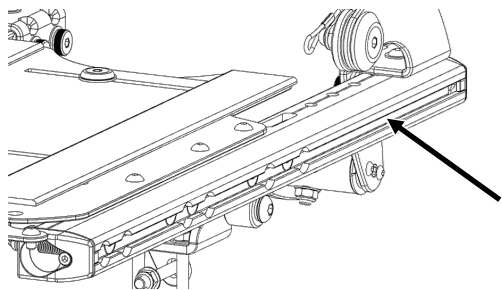
The seating system allows the adjustment of the seat depth, seat width, and backrest angle. The seat plate is flat and is compatible with other seating

cushions. Also, various modular seating supports can attach to the frame to meet each user's needs.



8.4.2 Rail

There are rails on each side of the seat frame to mount different accessories to the wheelchair.



8.4.3 Angle

According to the user's needs, the seat angle can be preset to 0 degrees or 5 degrees. If necessary, please consult a Karma authorized dealer for adjustment.

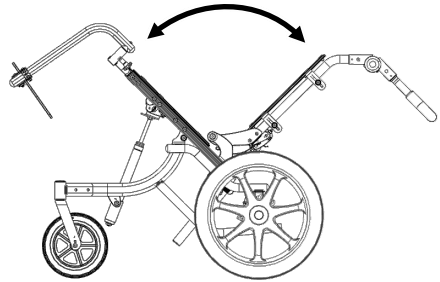


Note

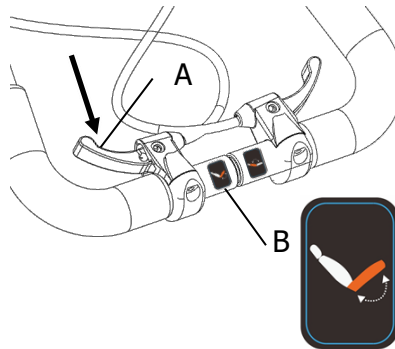
When the preset seat angle is 0 degrees, vertical footrests/legrests are recommended to avoid interference.

8.4.4 Tilt

The seat tilt function contributes to pressure relief and provides a more stable seat position and safe driving when driving down a slope. The tilting angle is up to 45°.



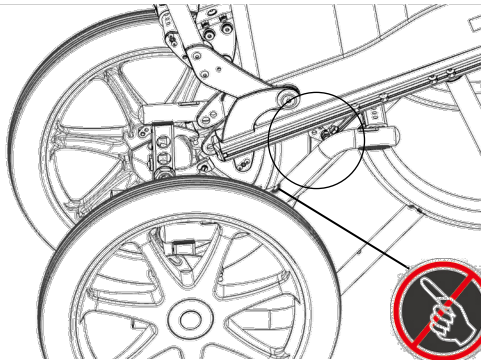
To adjust the seat angle, pull the blue lever (A) marked with the symbol (B) on the left-hand side to tilt the seat to the desired position. Then release the lever.



- When tilting, always steer clear of obstacles where possible, especially at the front and rear of the wheelchair.
- Keep your fingers away from the gap between the movable parts and the frame.



Caution



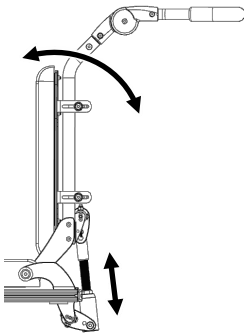
- When tilting, the total length of the wheelchair will become longer. Make sure there is sufficient space to propel the wheelchair.
- The user should keep the head in an upright position when the backrest is reclined, and/or the seat is tilted. The wheelchair must always be equipped with a headrest.

8.5 Backrest

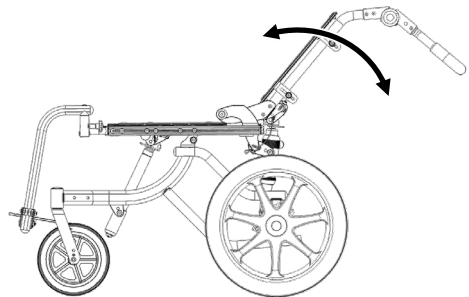
There are two types of backrests available: angle-adjustable backrest and reclining backrest. Each of them can add on a dynamic backrest.

The **angle-adjustable backrest** has a threaded tube behind the backrest for angle adjustment from 0° to 20°.

The **reclining backrest (optional)** has a gas strut behind the backrest. The reclining angle ranges from 0° to 40°.

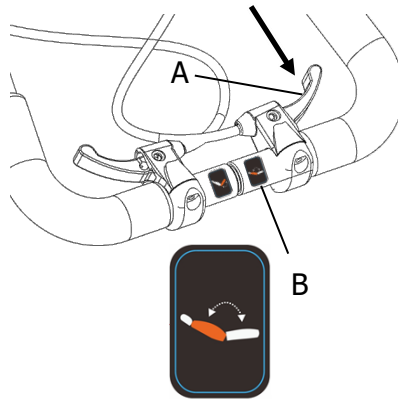


Angle-adjustable backrest



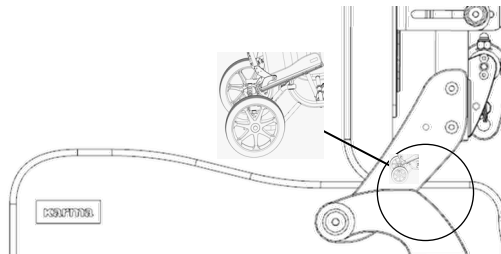
Reclining backrest

To recline the backrest, pull the orange lever (A) marked with the symbol (B) on the right-hand side to recline the backrest to the desired angle. Then release the lever.



Caution

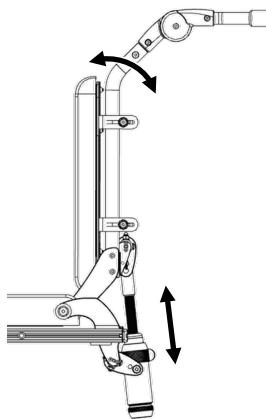
- When reclining, always steer clear of obstacles where possible, especially at the front and rear of the wheelchair.
- Keep your fingers away from the gap between the movable parts and the frame.



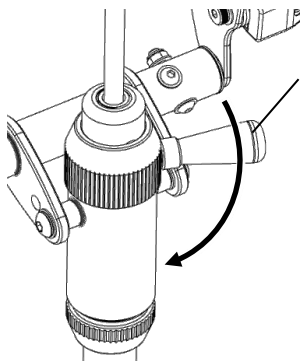
- When reclining, the total length of the wheelchair will become longer. Make sure there is sufficient space to propel the wheelchair..
- When tilting or reclining, use a headrest to keep the head upright.

The **dynamic backrest (optional)** provides movement of the back to absorb the extensor forces. This mechanism can protect the client from injury and the seating system from breakage.

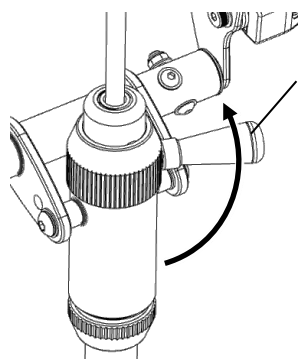
To engage the shock-absorbing dynamic backrest, rotate the switch (C) clockwise. To stop the shock-absorbing dynamic backrest, rotate the switch counterclockwise.



Dynamic backrest



Release the lockout

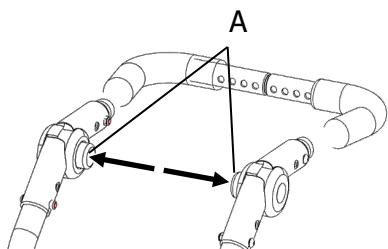


Lock the lockout

8.6 Stroller handle

The stroller handle is easy for angle adjustment to meet the attendant's preferences and needs.

To adjust the angle, depress both push buttons (A) simultaneously to allow the stroller handle to rotate freely. Releasing the push buttons (A) to lock the adjustable stroller handle in the desired position.



Warning

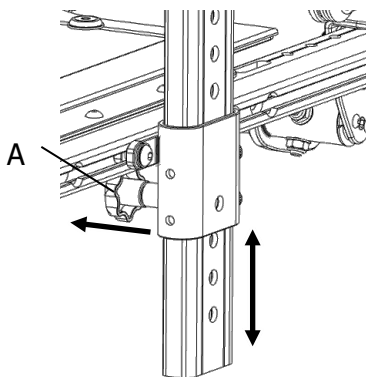
Always keep fingers away from the hinge when adjusting the angle of the stroller handle.

8.7 Armrest

The T-bar armrest can support the user's upper limbs and is removable for side transfer.

The T-bar armrest is also easy to adjust in height and position. Different armpads are available for good support and comfort.

To detach the armrest, pull and hold the release knob (A) located inside the armrest. Then remove the armrest by pulling it up. To put the armrest back, pull the release knob (A) and press the armrest downwards until you can feel/see that the armrests are securely locked in place.



Warning

Do not use the armrests as a hand hold to lift the wheelchair.



Caution

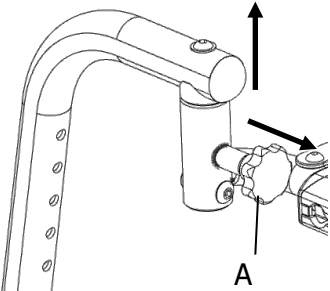
Please keep your fingers away from movable parts during removing, installing, or adjusting the armrest. Be careful of the risk of pinching.




8.8 Footrest

The footrest can support the user's lower limbs and can be adjusted in length and footplate angle separately on each side. The footplate comes in different sizes.

The footrest is removable for easy transfer in tight spaces.

To detach the footrest, activate the release knob (A) and pull the footrest upwards. To put the footrest back, put the footrest on the bracket of the front frame until you can feel/see that the footrest is securely locked in place.



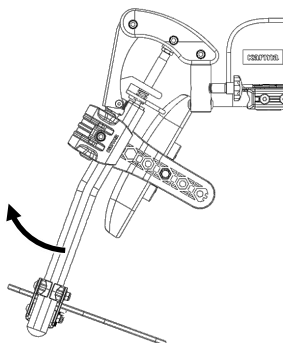
 Warning	Please keep your fingers away from movable parts or swing mechanisms during removing, installing, or adjusting the footrest. Be careful of the risk of pinching.
 Caution	<ul style="list-style-type: none">● Do not use the footrest or legrest as a hand hold to lift the wheelchair.● Please keep your fingers away from movable parts or swing mechanisms during removing, installing, or adjusting the footrest. Be careful of the risk of pinching.
 Note	Do not place anything heavy or let children sit on the footrest or legrest.

8.9 Articulating elevating legrest (optional)

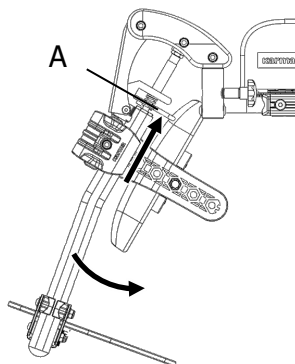
The elevating legrest is for those who need to elevate their legs or keep them at a certain angle for more comfort and support. The legrest can be adjusted in length, and the ergonomic design ensures that the occupant will have enough space for feet, knee and thigh movement.

The calf support is available on an elevating legrest. The swing-away calf support is adjustable in height, depth, and angle, giving users additional support. The legrest is also removable for easy transfer in tight spaces.

To raise the legrest, lift the legrest to the desired position. To lower the legrest, pull the orange lever (A) with one hand while supporting the legrest with another hand. When you reach the desired position, release the lever (A).



Raise the legrest



Lower the legrest



Warning

Do not use the articulating elevating legrest as a hand hold to lift the wheelchair.



Caution

- When adjusting the legrest angle, always steer clear of obstacles where possible, especially at the front and rear of the wheelchair.
- When adjusting the legrest angle, the total length of the wheelchair will become longer, which affects the driving characteristics of the wheelchair. Make sure there is enough space to drive.

8.10 Headrest

There are various types of headrests available. The headrest is removable and adjustable in height, depth, horizontal position, and angle to meet users' requirements.



Curved headrest



Adjustable headrest



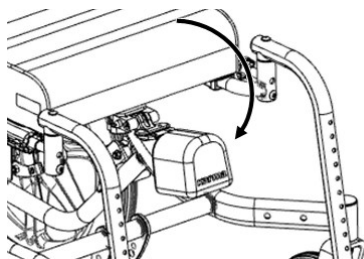
Caution

Always use the headrest when tilting, reclining, and transporting the wheelchair with the occupant to provide optimal head and neck stability.

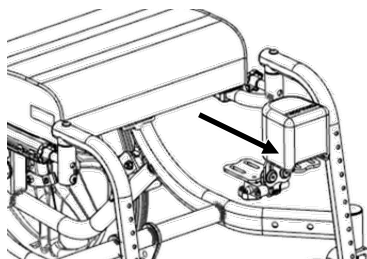
8.11 Medial knee support (optional)

The medial knee support can be attached to the front of the wheelchair seat. It helps to keep the user's legs in the correct position to maintain a neutral pelvis. The height, depth, and horizontal position of the medial knee support are adjustable.

The soft pad can be flipped down or removed for easy transfer.



Flip down the soft pad

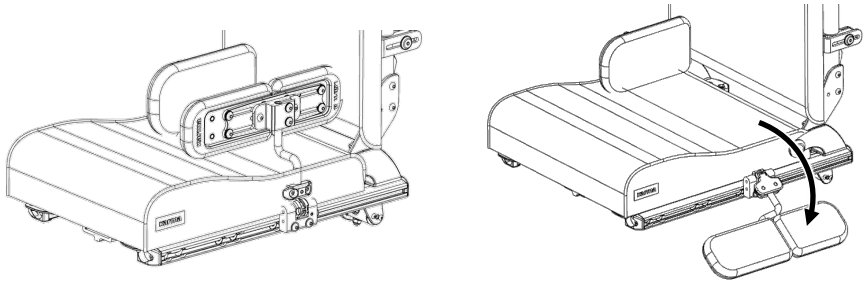


Remove the medial knee support

8.12 Hip support / Lateral knee support (optional)

Hip support / lateral knee support facilitates thigh alignment, stabilizes sitting posture, and prevents hip abduction. The hip and knee support are the same accessories mounted in different locations of the seat rail. The support is adjustable in height, depth, width, and angle. Several sizes of support pads are available for precise fitting.

Flip down the pad for easy transfer.

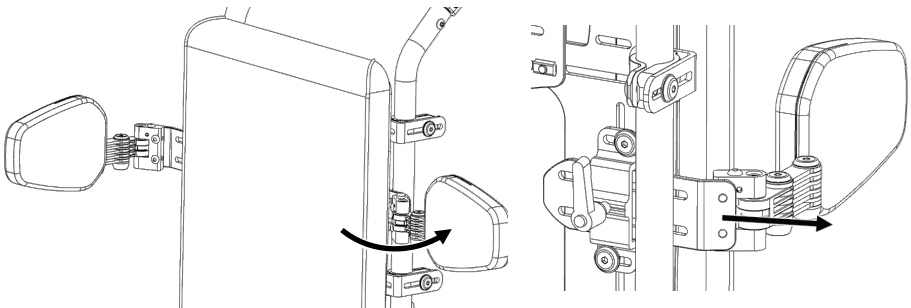


Flip down the pad

8.13 Lateral trunk support (optional)

The lateral trunk support offers optimum support while improving balance, posture, and comfort. The support is adjustable in height, depth, and width. Several sizes of support pads are available for precise fitting.

The swing-away design facilitates easy transfer.



Swing away the soft pad

Remove the lateral trunk support



Caution

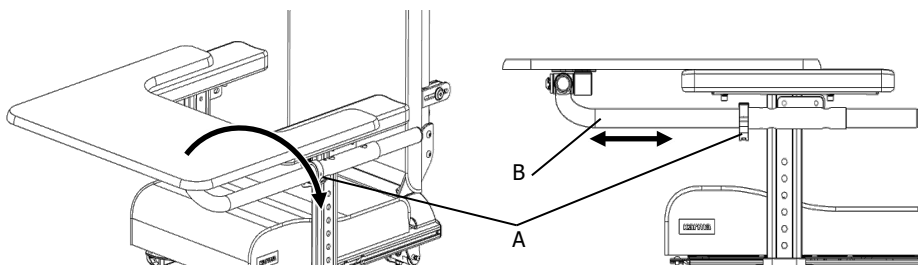
Be careful not to trap your arm between lateral trunk support and armrest when changing the backrest angle.

8.14 Tray table (optional)

The tray table provides a desktop for daily activities and a support surface for the user's elbows to increase the upper body stability. The tray table can be swung-away and adjusted in depth.

To swing the tray table away, open the quick release clamp (A), hang the tray table sideways, and then close the quick release clamp (A).

To adjust the depth of the tray table, open the quick release clamp (A), adjust the table position with the table tube (B), and then close the quick release clamp (A).



Swing away the tray table

Adjust the table depth



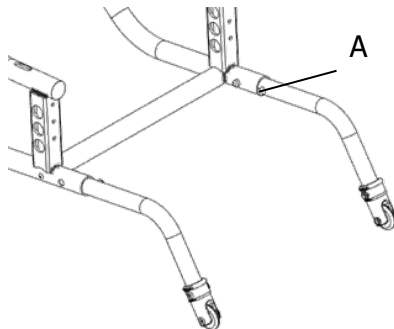
Caution

- Please take care not to hit the user while swinging the table away.
- The maximum load on the table is 8 kg.
- Do not propel the wheelchair with a swing-away tray table to avoid interference and damage to the front casters.
- Do not place the tray table too far ahead of you, because it will shift your center of gravity and increase the risk of tipping over.

8.15 Anti-tippers

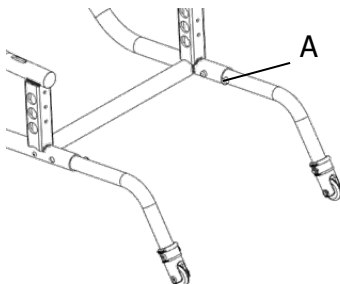
Anti-tippers prevent the wheelchair from tipping backwards.

To mount the anti-tippers, press the release buttons (A) then inserting them into the back of the side frame. Ensure the release buttons (A) pop out properly in the fixing hole.

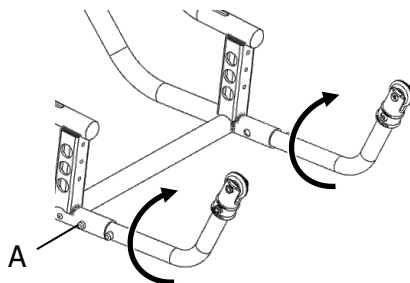


Rotate the anti-tippers by pressing the release buttons (A) and turning them up for the inactive position. Ensure the buttons (A) pop out again into place.

The minimum distance between the rear wheel and the anti-tipper should be 5 cm, and the maximum distance between the ground and the anti-tipper should be 5 cm.



Active position



Inactive position



Warning

- Please always check that the anti-tippers are working before using the wheelchair. Anti-tippers that are incorrectly set or damaged can lead to tipping over. Please turn to a Karma authorized dealer when anti-tippers need to be installed or readjusted.

- The activated anti-tippers may bump into the ground when negotiating steps or curbs. Therefore, deactivate the anti-tippers if needed.

8.16 Seat and backrest cushions

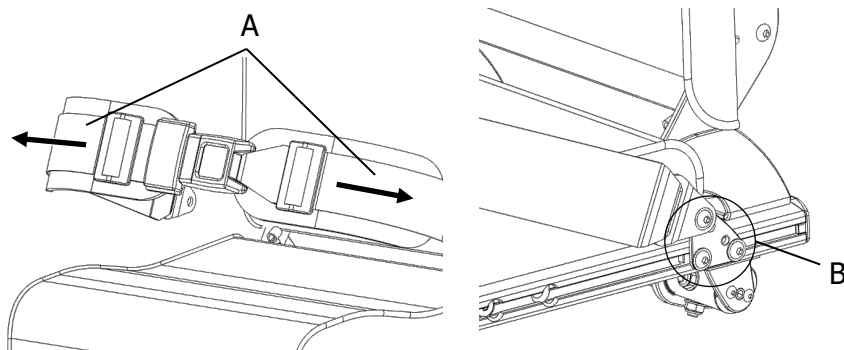
Seat and backrest cushions are available in different lengths and widths to offer optimal comfort and support. The size depends on the specifications of the wheelchair. The cushion's cover is removable for cleaning.

8.17 Positioning belts

8.17.1 Pelvic belt

The pelvic belt prevents the user from sliding downward in the wheelchair or falling out of the wheelchair. When the pelvic belt is properly adjusted and tightened, it should fit snug with all slack removed so that the user is secured. Use the pull strap (A) for daily adjustments, such as accommodating clothing changes.

If this adjustment is insufficient, it might be required to re-fit the pelvic belt at the fixations point (B) (refer to [Section 9.5.1](#)).



Note

Accessories shown in the figure may not be part of the standard wheelchair.



Caution

Ensure that the pelvic belt does not get caught in wheelchair components, such as the seat cushion and armrest.

8.17.2 Chest harness

The chest harness helps maintain the seating position and improve trunk stability, allowing for better head and neck position.

Use the pull strap to adjust the tightness. The upper and lower strap can be fixed at the desired position to meet the user's needs (Refer to [Section 9.5.2](#)). Refer to the doctor or therapist to determine the proper position.



Warning

- A loose belt can allow the user to slip downward and increase the risk of injury.
- The wheelchair occupant transported in a vehicle must wear a safety belt. The positioning belt of the wheelchair does not replace a car safety belt.



Caution

Always use the pelvic belt and harness when moving the wheelchair with the occupant to prevent instability.

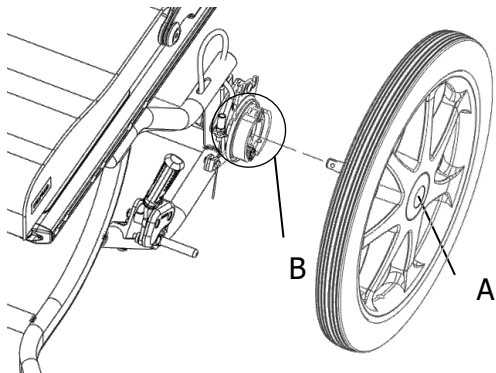
8.18 Rear wheels

8.18.1 Removing

1. Release the brakes.
2. With one hand, hold the wheelchair upright.
3. With the other, hold the wheel through the external spoke rim around the wheel hub.
4. Press the quick release button (A) in the middle using your thumb. Keep it pressed and pull the wheel out.

8.18.2 Installing

1. With one hand, hold the wheelchair upright.
2. Hold the wheel through the external spoke rim around the wheel hub with the other hand.
3. Press the quick-release button (A) with your thumb and put the axle into the adapter (B).
4. Release the button (A) and ensure that the wheel is secured.



Warning

Always ensure that the removable axles are fully engaged whenever you fit a wheel.

9. Wheelchair components - adjustments

Before use, it is vital to make a proper adjustment for a better fit. This chapter will explain all the necessary adjustments before the first use.



Caution

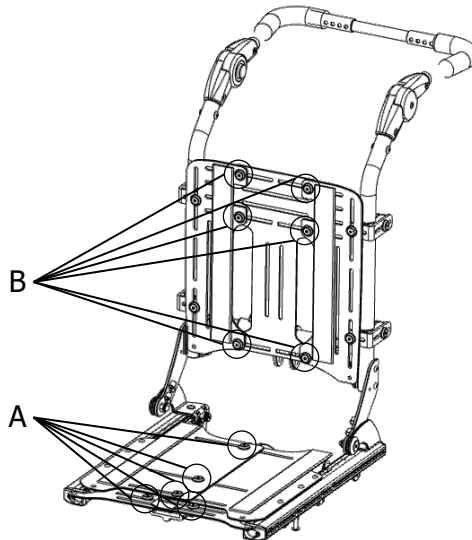
An improper adjustment of the wheelchair might lead to uncontrolled driving, resulting in personal injury or property damage.

9.1 Seat & seat accessories

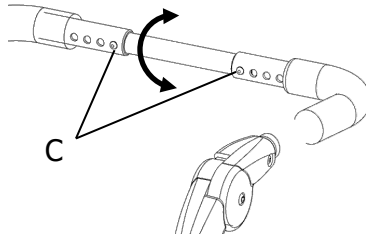
9.1.1 Seat

Seat Width

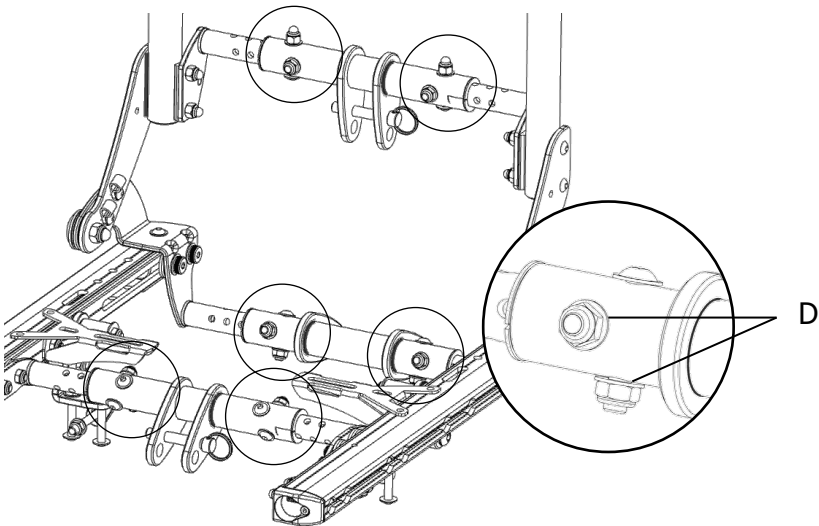
1. Loosen the five screws (A) on the seat plate and six screws (B) on the backrest plate.



2. Press the release buttons (C) on the stroller handle and rotate the bar to draw the buttons inside.

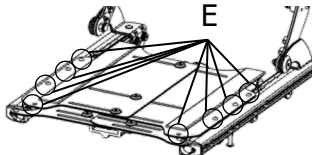


3. Remove the two bolts and nuts (D) on one side of the three strut tubes.

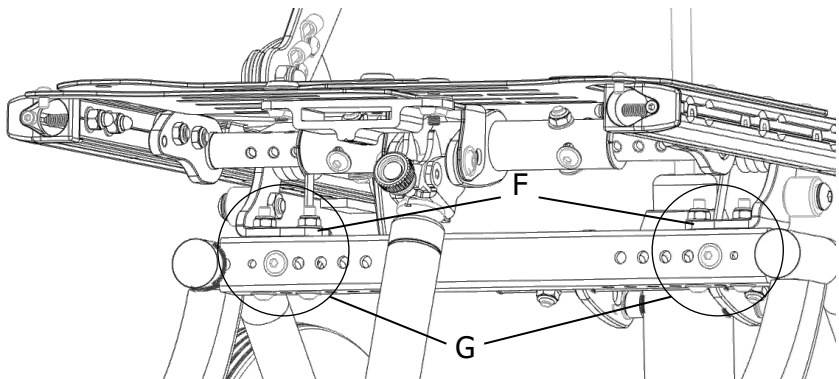


Note



If you find it challenging to do steps 3 and 4, remove the screws (E) to detach the seat plate. For stubborn screws, release the seat plate by the quick release latch. Refer to [10.2.1](#).



4. Remove the bolts and nuts (G) on one side of the seat plate bracket (F).

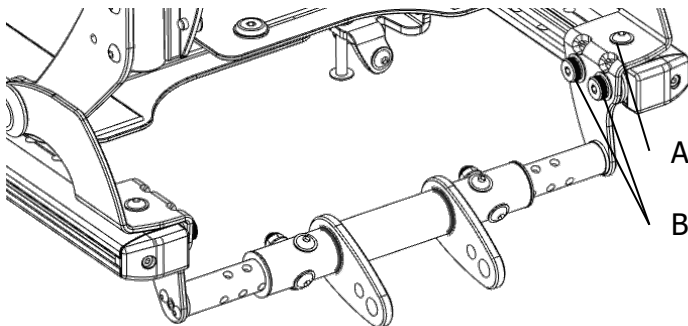


5. Adjust the seat plate, backrest, stroller handle, strut tubes, and seat plate bracket to the desired width on that side.
6. Reverse steps 3-4 to mount back all the parts.
7. Repeat steps 3-6 on the other side.
8. Reverse steps 1-2 to mount back all the parts.

 Caution	<p>The adjustment on each side of the chair should be equal.</p>
 Note	<p>The seat width can be adjusted in 1" increment (1/2" on each side).</p>

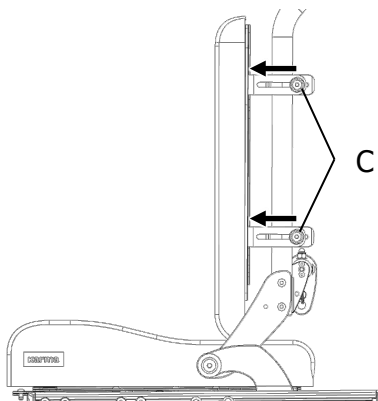
Seat Depth

- Adjust to 280-380 mm (11" -15") seat depth (with 3cm backrest cushion)
1. Remove the screw (A) and loosen the screws (B) on each side of the seat rail.
 2. Slide the backrest along the seat rail to the desired position using preset holes.
 3. Mount back all the parts in step 1.



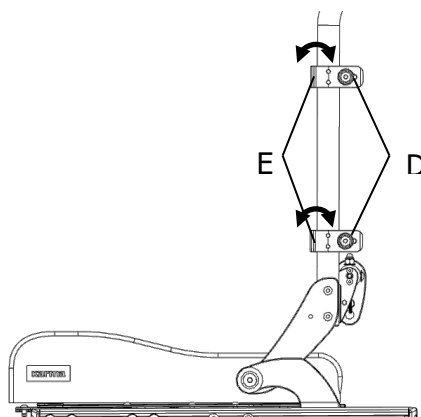
● Adjust to 255 mm (10") seat depth (with 3cm backrest cushion)



1. Loosen the screws (C).
2. Push the backrest forward.
3. Mount back all the parts in step 1.



● Adjust to 230 mm (9") seat depth (with 3cm backrest cushion)

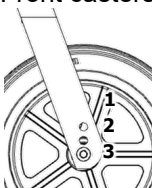
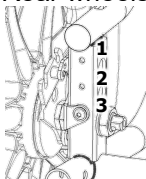
1. Remove the screws (C) and detach the backrest.
2. Remove the screws (D).
3. Change the backrest bracket (E) position (from front to back), and mount it with the screws (D).
4. Attach the backrest on the bracket (E) and mount back all the parts in step 1.




 Caution	The adjustment on each side of the chair should be equal.
 Note	The seat depth can be adjusted in 1" increments.

Seat Height

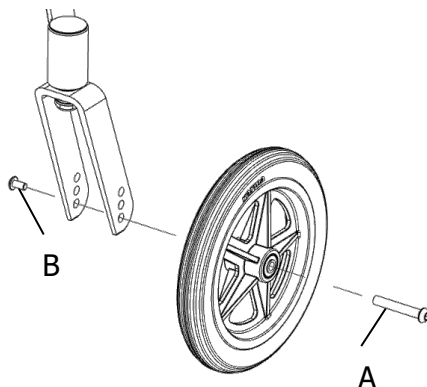
Seat height is determined by the axle position of rear wheels and front casters. Refer to the matrix below for the proper setting.

Seat height (with 5 cm seat cushion)	Axle position		
	Front casters		Rear wheels
			
	6" PU tire	8" PU tire	16" PU tire
480 mm (19")	1		1
505 mm (20")	3		2
530 mm (21")		3	3

 Caution	Selecting the wrong caster sizes or axle position may result in personal injury or damage to the wheelchair.
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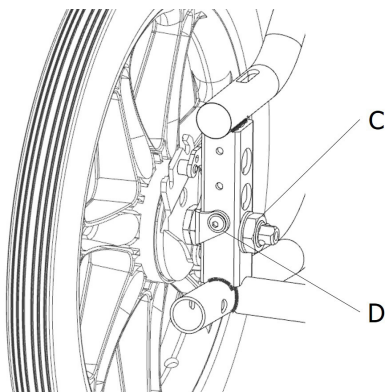
- Front casters axle position

1. Remove the bolt (A) and nut (B).
2. Set the front caster axle at desired position using preset holes in the fork.
3. Mount back all the parts in step 1.



- Rear wheels axle position

1. Remove the bolt (C) and screw (D).
2. Set the rear wheel axle at desired position using preset holes in the frame.
3. Mount back all the parts in step 1.



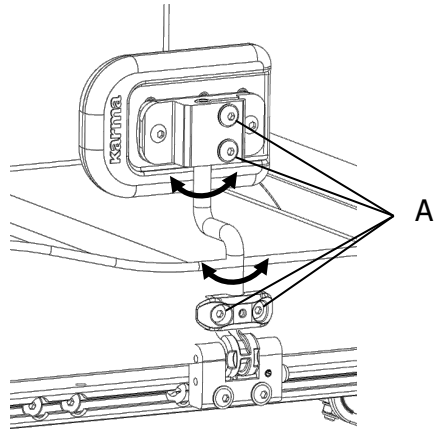
Caution

The adjustment on each side of the chair should be equal.

9.1.2 Hip support / lateral knee support (optional)

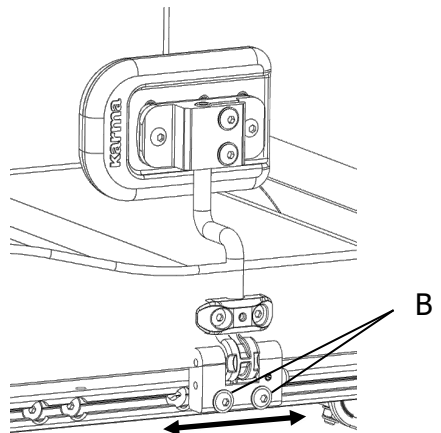
Width & Angle

1. Loosen the screws (A).
2. Adjust the support pad to desired width and angle.
3. Mount back all the parts in step 1.



Depth

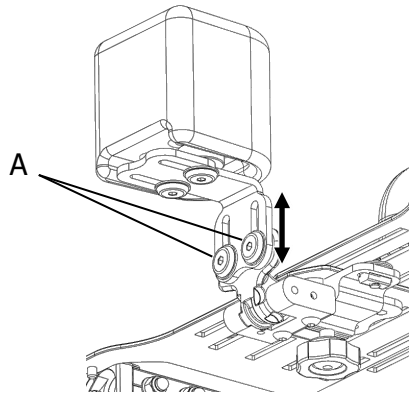
1. Loosen the screws (B).
2. Slide the bracket along the seat rail to the desired position.
3. Mount back all the parts in step 1.



9.1.3 Medial knee support (optional)

Height

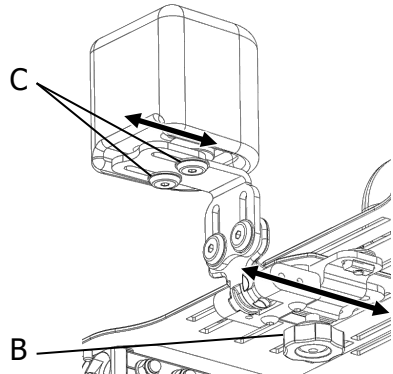
1. Loosen the screws (A).
2. Slide the medial knee support to the desired height.
3. Mount back all the parts in step 1.



Depth

- Method one

1. Loosen the knob (B).
2. Slide the medial knee support to the desired position.
3. Tighten the knob.

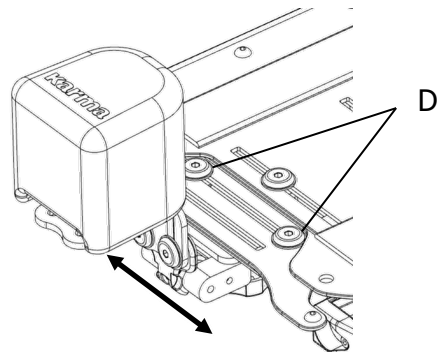


- Method two

1. Loosen the screws (C).
2. Slide the support pad to the desired position.
3. Mount back all the parts in step 1.

Horizontal position

1. Loosen the screws (D).
2. Slide the medial knee support to the desired position.
3. Mount back all the parts in step 1.

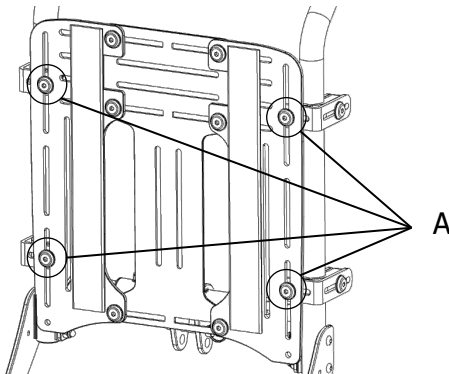


9.2 Backrest & backrest accessories

9.2.1 Backrest

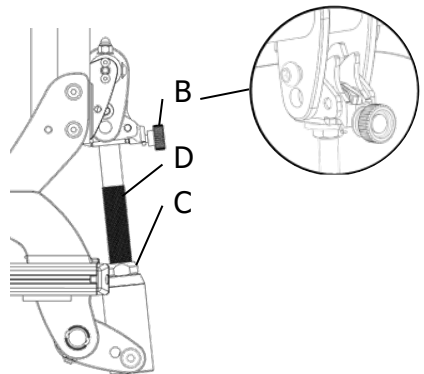
Backrest Height

1. Loosen the screws (A).
2. Adjust the backrest plate to the desired height.
3. Mount back all the parts in step 1.



Backrest Angle (angle-adjustable backrest)

1. Loosen the knob of the quick release latch (B) until the spring is released.
2. Depress the quick release latch (B) and release the backrest.
3. Loosen the nut (C) and rotate the threaded tube (D) upward or downward to the desired backrest angle.
4. Mount back the quick release latch (B) and tighten the nut (C).

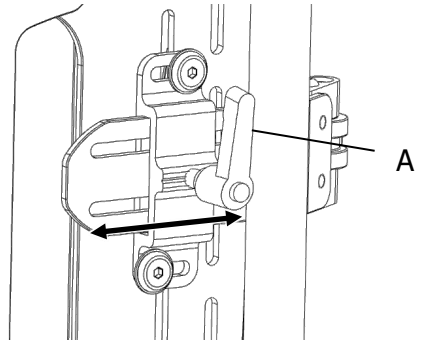


9.2.2 Lateral trunk support (optional)

9.2.2.1 Vertical adjustment trunk support

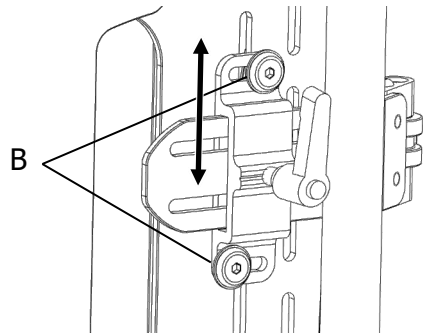
Width

1. Loosen the knob (A).
2. Adjust the trunk support to the desired width.
3. Tighten the knob.



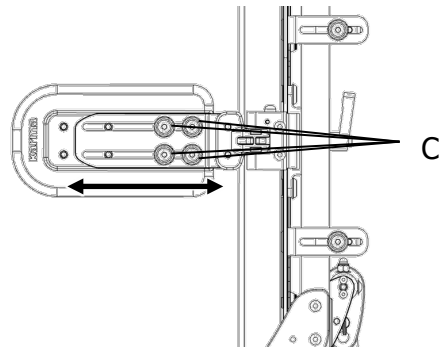
Height

1. Loosen the screws (B).
2. Slide the trunk support to the desired height.
3. Mount back all the parts in step 1.



Depth

1. Loosen the screws (C).
2. Adjust the trunk support pad to the desired depth.
3. Mount back all the parts in step 1.



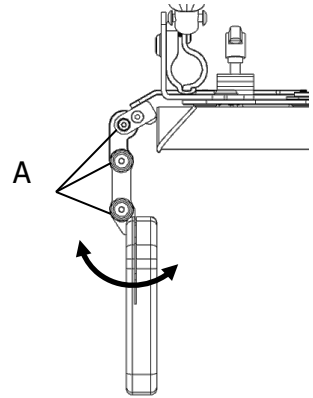
9.2.2.2 Multi-direction adjustment trunk support

Width

Refer to [Section 9.2.2.1, Width](#).

Width & Depth

1. Loosen the screws (A).
2. Adjust the trunk support pad to the desired width and depth.
3. Mount back all the parts in step 1.



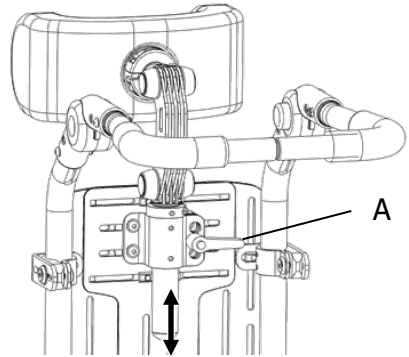
Height

Refer to [Section 9.2.2.1, Height](#).

9.2.3 Headrest

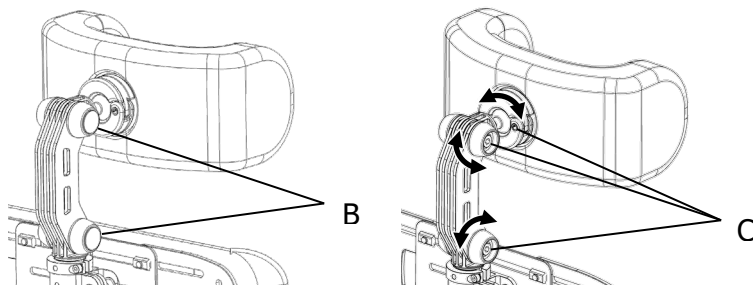
Height

1. Loosen the knob (A).
2. Adjust the headrest to the desired height.
3. Tighten the knob.



Depth, Height & Angle

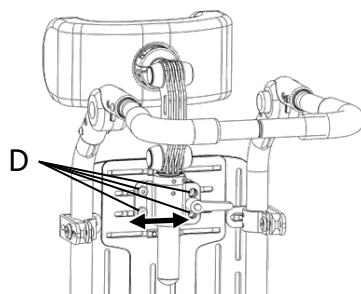
1. Remove the rubber covers (B).
2. Loosen the screws (C).
3. Adjust the headrest to the desired position.



4. Reverse steps 1-2 to mount back all the parts.

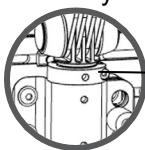
Horizontal position

1. Loosen the screws (D).
2. Adjust the headrest to the desired position.
3. Mount back all the parts in step 1.



Note

Use the fixing ring (E) to prevent the headrest from rotating and maintain the desired height when mounting the headrest assembly.

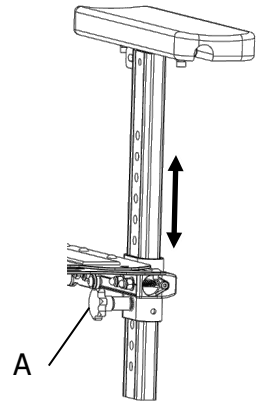


E

9.3 Armrest

Height

1. Pull the armrest release knob (A).
2. Adjust the armrest to the desired height until it locks into place in preset holes.



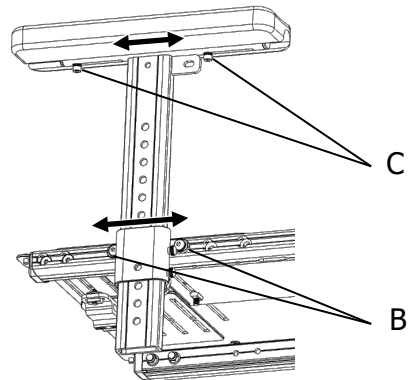
Depth

- Method one

1. Loosen the screws (B).
2. Slide the armrest along the seat rail to the desired position.
3. Mount back all the parts in step 1.

- Method two

1. Loosen the screws (C).
2. Adjust the armrest pad to the desired position.
3. Mount back all the parts in step 1.



Note

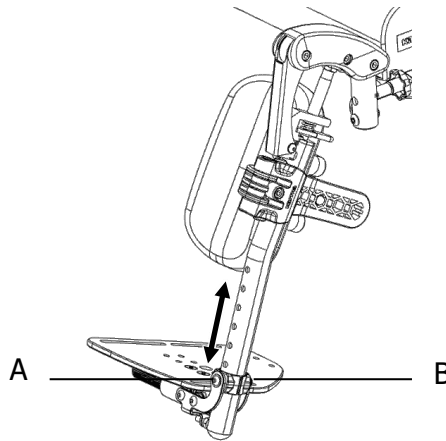
- The armrest height can be adjusted in 20mm increments.
- When adjusting the armrest height, ensure that it does not interfere with the frame or other parts.

9.4 Footrest/Legrest (optional)

9.4.1 Footrest/Legrest (optional)

Length

1. Remove the bolt (A) and nut (B).
2. Move the footplate upward or downward to the desired position.
3. Mount back all the parts in step 1.



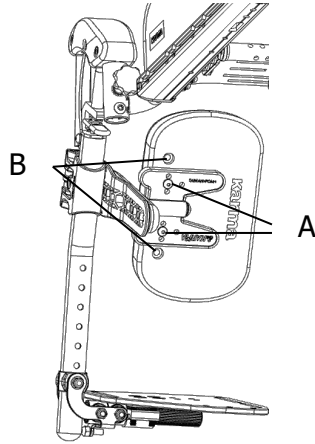
Note

The footrest/legrest length can be adjusted in 20mm increments.

9.4.2 Calf pad (optional)

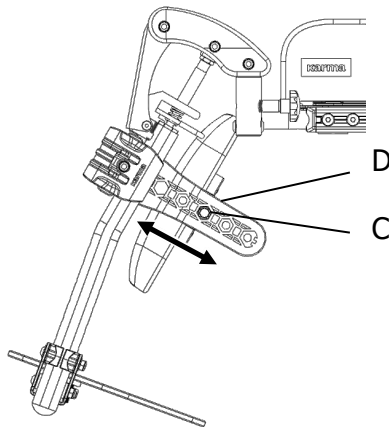
Height

1. Remove the screws (A).
2. Set calf pad at the desired height using preset holes (B).
3. Mount back all the parts in step 1.



Depth

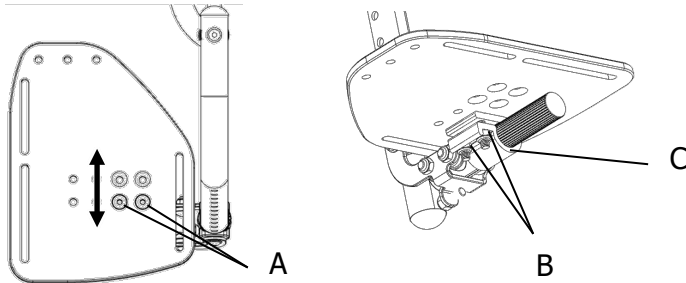
1. Remove the bolt (C) and nut (D).
2. Set calf pad at desired depth using preset holes.
3. Mount back all the parts in step 1.



9.4.3 Footplate

Depth

1. Remove the bolts (A) and nuts (B).
2. Set footplate at desired position using preset holes. Mount the bracket (C) in the opposite direction to increase the adjustment range if necessary.
3. Mount back all the parts in step 1.

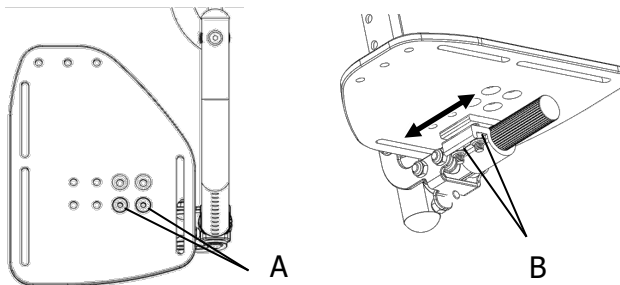


Note

The bracket can't be mounted in the opposite direction if using ankle straps.

Horizontal position

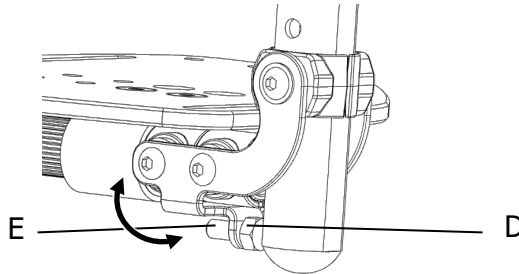
1. Loosen the bolts (A) and nuts (B).
2. Slide the footplate to the desired position.
3. Mount back all the parts in step 1.



Angle

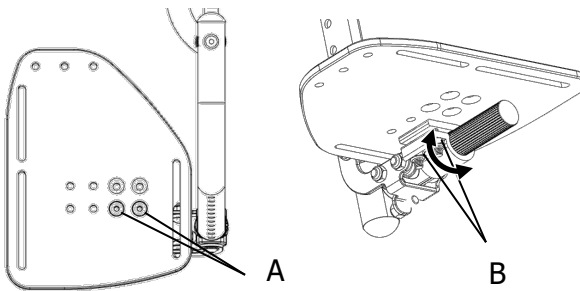
- Inward/Outward

1. Loosen the nut (D).
2. Screw the bolt (E) inward or outward to the desired footplate angle on the frontal plane.
3. Tighten the nut (D).



- Forward/Backward

1. Loosen the bolts (A) and nuts (B).
2. Adjust the footplate forward or backward to the desired angle.
3. Mount back all the parts in step 1.

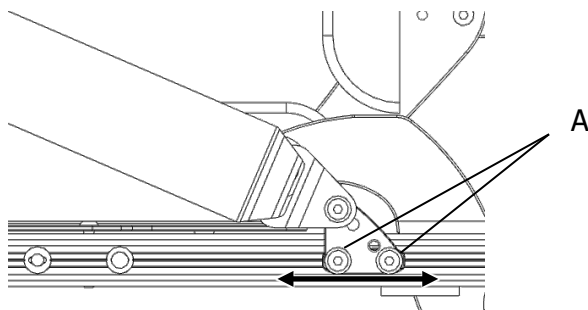


9.5 Positioning belts

9.5.1 Pelvic belt

Position

1. Loosen the screws (A).
2. Slide the pelvic belt plate along the seat rail to the desired position.
3. Mount back all the parts in step 1.



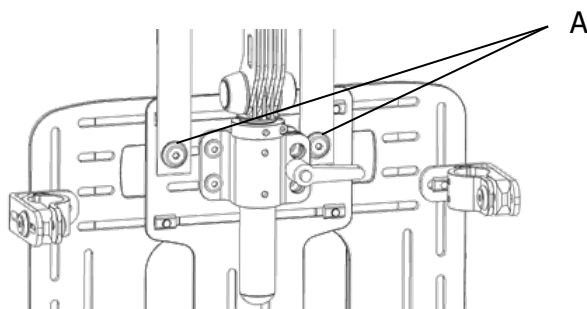
Note

Accessories shown in the figure may not be part of the standard wheelchair.

9.5.2 Chest harness

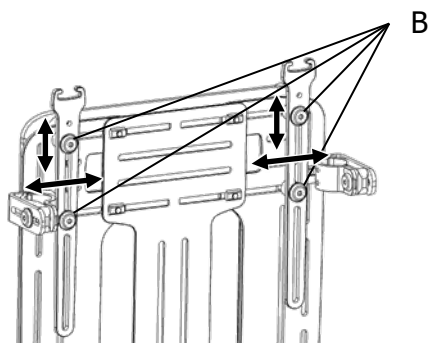
Upper straps position

1. Loosen the screws (A).
2. Place the upper straps to the desired position on the backrest plate.
3. Mount back all the parts in step 1.



- Shoulder strap guides (optional)

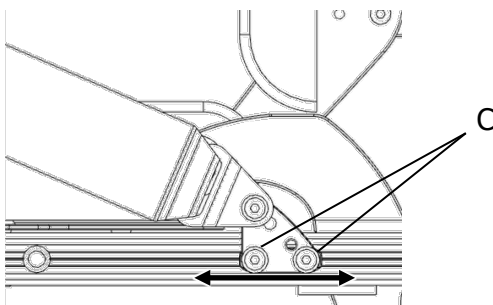
1. Loosen the screws (B).
2. Adjust the upper straps and shoulder strap guides to the desired position.
3. Mount back all the parts in step 1.



Lower straps position

- fixed on the seat rail

1. Loosen the screws (C).
2. Slide the chest harness plate along the seat rail to the desired position.
3. Mount back all the parts in step 1.

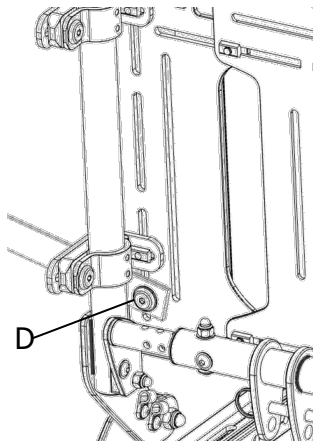


Note

Accessories shown in the figure may not be part of the standard wheelchair.

- *fixed on the backrest*

1. Loosen the screw (D).
2. Move the lower strap to the desired position.
3. Tighten the screw (D).



10. Using the wheelchair

10.1 General warnings and precautions

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

- Use the anti-tippers in the active position in normal situations. When going up or down a curb, you may need to rotate them into an inactive position to prevent from getting stuck. Remember to put them back afterwards.
- Loads exceeding maximum user weight can cause damage and malfunctions to your wheelchair yielding a safety hazard. Refer to Section “Technical specifications” for the Maximum User Weight”. The warranty does not cover the damage resulted from overload of the wheelchair.
- Do not carry passengers on the wheelchair.
- Have the wheelchair checked by your supplier at least on a yearly basis and after any collision or when the wheelchair is otherwise (visual) damaged.
- Check the tires monthly for wear and damage. Replace them if necessary.



Warning

- When using too small front wheels, the wheelchair could get stuck at curbs or in floor grooves. Make sure that the front wheels are suitable for the surface you're driving on.

10.1.1 Use in combination with other products



Warning

- The used materials adhere to EN 12183 regarding flame resistance and biocompatibility.
- The seat or any other mounted parts do not touch the wheelchair carrier when using the tilt function. This is because the dimensions will vary from the standard seat.

- Karma does not assume any responsibility for changes which are made by third parties, also, the product is no longer covered by the warranty.

10.1.2 Use in hot and cold environment



Warning

- Some parts of the wheelchair can reach high temperatures when exposed to direct sun. Please be careful when using the wheelchair under these circumstances to prevent skin burning.
- 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.

10.1.3 Use on different surfaces

- Special care should be taken in driving on uneven surfaces such as slopes.
- Exercise caution when operating the wheelchair on slippery surfaces, such as ice and snow.
- Do not drive through water puddles.

10.1.4 Danger of pinching

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

- When tilting and reclining the wheelchair, keep your fingers away from the gap between the movable part and frame.



Warning

All areas where might cause a risk of pinching are indicated by the warning decal:



10.1.5 Surroundings

Special caution has to be taken under the following circumstances:

- Always drive slowly when there are other people or animals nearby. Make sure that there are no other people or animals in the direct contact zone of the wheelchair.
- When using the tilt adjustment, make sure that no other people or animals are near the chair, because they are possible to get pinched or hit by the moving mechanism.

10.2 Storage

Fold the wheelchair and engage both brakes for storage.

Inspect the wheelchair after long-term storage (more than three months). Refer to the “Maintenance and Repairs” chapter.



Warning

Don't put anything on the wheelchair while it is in storage. Putting goods on a folded or unfolded wheelchair may result in damage and is not covered under the product warranty.

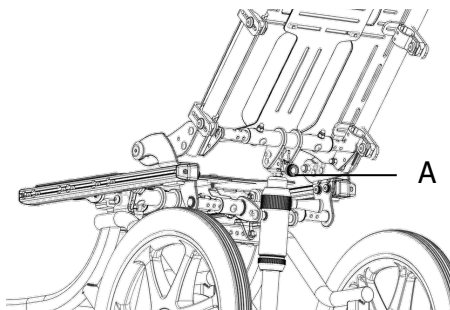


Note

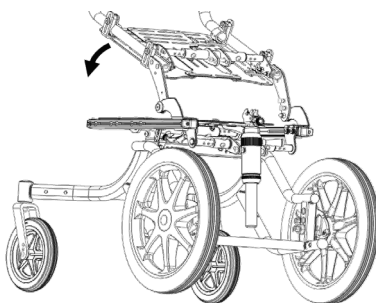
Please store the wheelchair in a location without direct sunlight, rain, and water. Do not store the product near heat sources. For more details, please consult your Karma authorized dealer.

10.2.1 Folding the wheelchair

1. Remove all the removable components, including armrests, footrests or legrests (optional), rear wheels, seat and back cushion, and seat and back accessories. For more details, refer to [Chapter 8](#).
2. Recline to the fullest.



3. Loosen the knob of the quick release latch (A) until the spring is released.
4. Depress the quick release latch (A). Release and fold the backrest plate forward.

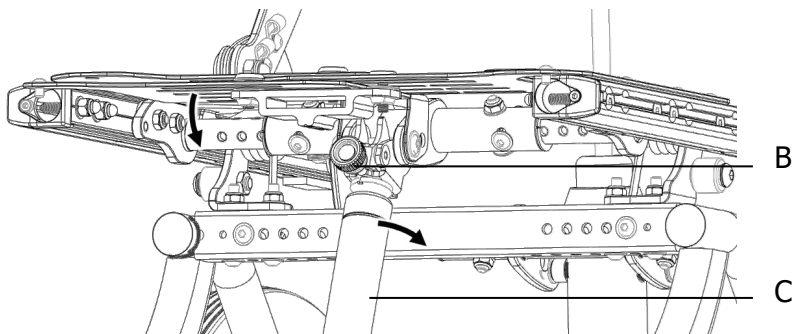


Caution

- If not reclining before pulling out the lock pin, the gas strut will not be compressed, which may result in damage.
- For the angle-adjustable backrest, flip back the thread tube after releasing the backrest plate.

5. Fold the stroller handle downwards. For more details, refer to [Part 8.6](#).
6. Loosen the knob of the quick release latch (B) until the spring is released.

7. Depress the quick release latch (B), release the seat plate, push down the gas strut (C), and fold the seat plate downward.



Caution

If not push down the gas strut before folding the seat plate downward, the gas strut may be damaged during folding.

10.2.2 Unfolding the wheelchair

1. Unfold the seat plate and mount back the quick release latch (B) (Refer to [Section 10.2.1, step 4](#)).
2. Unfold the backrest plate and mount back the quick release latch (A) (Refer to [Section 10.2.1, step 2](#)).
3. Fold the stroller handle upwards. For more details, refer to [Part 8.6](#).
4. Replace all the removable components mentioned in [Section 10.2.1, step 1](#).

10.3 Transfer

10.3.1 Transfer into the wheelchair

1. Lock the rear wheels by engaging the parking brakes or attendant brakes.
2. Detach the footrests or swing them outwards.
3. Flip back the armrests out of the way.
4. Hold the armrest of the wheelchair and move slowly towards the seat.
5. Sit on the wheelchair seat slowly to prevent the wheelchair from tipping.
6. Replace the footrests or swing them inwards.
7. Disengage the rear wheel brakes.

10.3.2 Transfer out of the wheelchair

1. Move the wheelchair as close as possible to the transfer surface.
2. Lock the rear wheels by engaging the parking brakes or attendant brakes.
3. Detach the footrests or swing them outwards.
4. Flip back the armrests out of the way.
5. Hold the armrest of the wheelchair and move slowly to the seat. Do not put all your weight or apply large lateral force on the armrests.



Caution

- Ensure the front casters face straight to the front for maximum stability when transferring in or out of the wheelchair.

- Do not transfer on slopes, uneven ground, or other unsafe environments.
- Never sit on the mudguards or armrests when getting in and out of the chair.
- Never stand on the footplates when getting in and out of the chair.



10.4 Driving and steering the wheelchair

10.4.1 General use for user and attendant

- Ensure the rear wheels are always locked when the chair is not being pushed.
- Always make sure that both feet are safely put on the footplates and the clothing is safely tucked out of the way and cannot get caught in any moving parts.
- Attendants must always use both hands on the push handles to control the chair.
- Do not drive too fast or turn too quickly.
- Use an elevator for transport instead of an escalator.
- Cross the tracks perpendicularly to avoid your wheels getting stuck.
- Avoid steering on steep or uneven surfaces because the chair may tip over.
- Avoid steering on too soft surfaces because the casters may get stuck.



Warning

Never apply the brakes too suddenly when the chair is not stationary as this may tip the user out of the chair.

10.4.2 Pass through doorways

Whenever possible, use a ramp to enter or exit a facility. Keeping your hands on the handrims will allow you to maintain maximum balance. Do not try to force yourself over obstacles by propulsion, and never use the sides of a doorway to pass through.

10.4.3 Cross streets

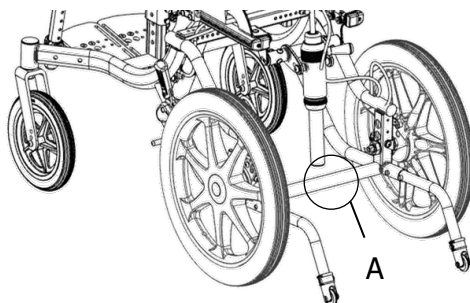
- Always use extreme caution when crossing streets. Reflectors on the chair and/or your clothing will make you more visible to drivers.
- Avoid passing through potholes and rough terrain.

10.4.4 Drive and steer the wheelchair


- Always make sure BOTH brakes are applied before getting in or out of the chair.
- Never stand on the footplates when getting in or out of the chair.
- Never carry more than one passenger on the chair. The wheelchairs are limited to only one user.
- Pay attention to assure your clothing doesn't get tangled with the wheels.

10.4.5 Tipping backwards

1. Release the brakes.
2. Grasp the handle firmly and place one foot against the frame tube (A).



3. Inform the person in the chair that you are going to tilt the chair backwards.
4. Press the stroller handle downwards to bring the center of gravity of chair onto the rear wheels and tip the chair backwards.



 Caution	<ul style="list-style-type: none"> ● Do not step on the anti-tippers. ● Lower the chair forwards slowly and softly until the front wheels are back on the ground.
---	---

10.5 Negotiating steps and curbs

Please note that it is always better to avoid curbs or steps. It's better to use ramps whenever possible.

If possible, ask for help from an assistant/attendant while negotiating steps and curbs.

- Always be careful when going up or down curbs and never negotiate curbs backwards without an attendant.

 Warning	Do not go up or down steps that are higher than 25 mm.
 Caution	<ul style="list-style-type: none"> ● The anti-tippers may get caught on the curb, which may cause the user to fall out. If necessary, deactivate the anti-tippers beforehand. Remember to rotate it back afterwards. ● Avoid strong impacts when going down curb.

10.5.1 Going up steps/curbs

1. The attendant should hold the handle and tip the wheelchair backwards so that the front casters lift off the ground. Refer to 10.4.5.
2. The attendant should then hold the wheelchair in this position, push it carefully down the step and then tilt it forwards until the front casters are back on the ground.



Caution

Never allow the chair to tip forwards when going down a step or curb.

10.5.2 Going down steps/curbs

1. The attendant should hold the handle and tip the wheelchair backwards so that the front casters lift off the ground. Refer to 10.4.5.
2. Pull the rear wheels over the curb until the front casters can be placed back on the ground.

10.6 Going up and down stairs

The first assistant should stand behind the wheelchair, holding the push handles, and tilting the chair back to its balance point. The second assistant should hold a solid part of the front frame to steady the wheelchair in the front. Lift or lower the chair one step at a time until you reach the landing.



Warning

- Always use two assistants when negotiating stairs with more than one step.
- Don't attempt to lift the wheelchair by any removable parts. This may result in injury to the user and/or assistants or damage to the wheelchair.

10.7 Negotiating ramps and slopes

Driving on ramps and slopes must always be performed with great care and attention.



Warning

- Always have an assistant behind the wheelchair when approaching long slopes.
- Never drive on slopes steeper than 7°. This might result in uncontrollable behavior of the wheelchair.



Caution

- Never make a turn on a slope due to the danger of tipping.
- Avoid stopping on a slope because it may potentially cause you to lose control of the chair. If you need to stop the wheelchair on a slope, lock the wheels from the attendant brakes or parking brakes to keep it stationary.
- 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.
- Avoid holes and bumps as much as possible. Drive slowly and well controlled.
- Avoid sudden maneuvers and never operate the wheelchair at a speed higher than needed to maneuver the wheelchair in a safe and secure way.

Going downhill

The attendant should stand behind the wheelchair and slowly walk down the ramp or slope backwards while constantly checking ahead. Keep going backwards until the wheelchair is on level ground.



Warning

- The position of the seat in height and angle or the position of the backrest has great influence on the stability of the wheelchair when driving on slopes. Make sure the seat is in the optimal driving position to avoid tipping over.

Going uphill

The attendant should push the chair straight up the slope.

10.8 Stability and balance when seated

Leaning forwards, backwards, or sideways will affect the wheelchair's stability. The user may fall out when leaning too far in the chair or overreaching for objects.

When leaning, use the pelvic belt and follow the instructions bellow to keep the user stable and safe.

10.8.1 Leaning forward

- Point the front casters forward by move the wheelchair backwards to increase the wheelchair stability.
- Lock the wheels.



Warning

- Never shift and bend too far forwards in your seat.
- Do not bend forwards between your knees to reach the floor.

10.8.2 Leaning backward

- Point the front casters forward by moving the wheelchair backwards to increase the wheelchair stability.
- Make sure the anti-tippers are in the active position.
- Unlock the wheels.



Warning

- Never reach too far backwards in your seat.
- Do not lean out over the backrest.

11. Transport

11.1 Transporting the wheelchair with occupant



Note

Karma strongly recommends transferring the wheelchair user to a vehicle seat for better safety.

A restraint system must be installed in the vehicle to transport the wheelchair with occupant. The wheelchair tiedowns and occupant restraint systems must be approved according to ISO 10542-2.



Warning

Do not get transported on any vehicles while seated in your wheelchair if it has not been successfully tested according to the requirements of ISO 7176-19.



Note

This product fulfils all requirements according to the ISO 7176-19:2008 standard (Wheeled mobility devices for use in motor vehicles). When transporting the wheelchair with occupant in motor vehicles, please note that:

- The wheelchair must be positioned in a forward-facing position and secured by the tie downs in accordance with the WTORS (wheelchair tiedown and occupant restraint system) manufacturer's instructions.
- An Unwin restraint system like model Gemini 3 or a different brand with equivalent specifications must be used.
- A Klippan Safety AB belt, model 907428 or a different brand with equivalent specification must be used as a car safety belt.
- Fix the restraint system on the specific points of the wheelchair, which show a label of a transportation hook.
- Use the head restraint system during transportation. This device must be suitably positioned and able to stay on during transport.
- The center point of gravity of the wheelchair during transportation should be as low as possible. The backrest should be upright, the seat should be horizontal, and the legrest should be positioned in normal seating positions.

- Lock the wheelchair during transportation to prevent it from moving by accident.

11.1.1 Four-point strap-type tiedown system

In all transportation situations, the wheelchair needs to be appropriately fixed using a **four-point strap-type tiedown system** to secure the wheelchair. Please be aware of the following statements.

- Check that the wheels are locked.
- Secure the wheelchair according to the manufacturer of the vehicle restraint systems instructions.
- Use four strap assemblies to secure the wheelchair on the vehicle, attaching to the wheelchair at four separate securement points (each marked with an indication sticker) and to the vehicle at four anchor points.
- Make sure that the strap assemblies are well attached and anchored.
- Tighten the fastening straps to keep optimal security.
- The strap assemblies should create an angle of around 45° within the side view zone to provide maximum effect in vertical and horizontal directions.

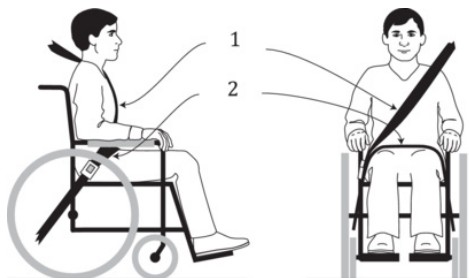


Warning

- Alterations or substitutions should not be made to the wheelchair securement points or structural and frame parts or components without consulting the wheelchair manufacturer.
- Poor fixations of the wheelchair in a vehicle might cause damage to the vehicle, the wheelchair, or the passengers.

11.1.2 Three-point belt restraint

It is necessary to use the three-point belt restraint to secure the wheelchair occupant. Three-point belt restraint is comprised of a pelvic-belt restraint (2) and a shoulder-belt restraint (1) that connect together near the hip of the occupant.

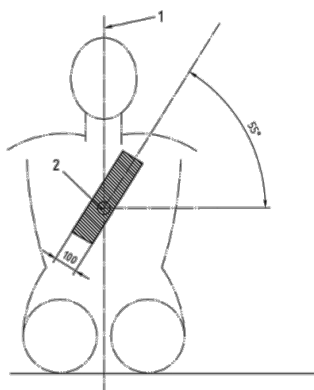


Warning

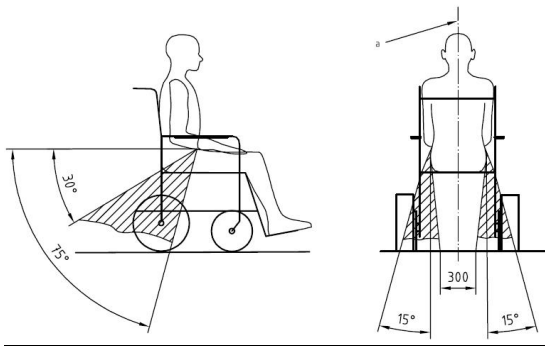
Not using a three-point belt restraint when transporting the wheelchair with occupant might lead to severe injuries in case of an accident.

Please be aware of the following statements.

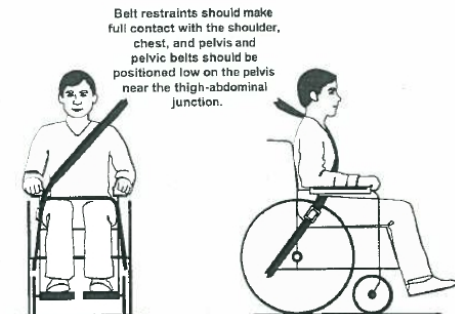
- The shoulder-belt restraint should be positioned as shown in the figure, fitting over the shoulder and across the chest



The pelvic-belt restraint should create an angle of 30°-75° within the front view zone and no more than 15° within the side view zone.



- Belt restraints must not be held away from the body by wheelchair components such as armrests or wheels. Belt restraints should make full contact with the shoulder, chest, and pelvis, and pelvic-belt restraint should be positioned low on the pelvis near the thigh-abdominal junction.



- Belt restraints should be adjusted as tightly as possible, consistent with user comfort.
- Belt restraints should lie flat against the body, without twists, when in use.



Warning

- Any wheelchair anchored occupant restraint i.e. 3-point belt, harness or postural supports (lap straps, lap belts) should not be used or relied on for occupant restraint in a moving vehicle, regardless if labeled ISO 7176-19, ISO 10542-1, SAE J2249 or any other. Use a vehicle anchored and certified occupant restraint system instead.



Note

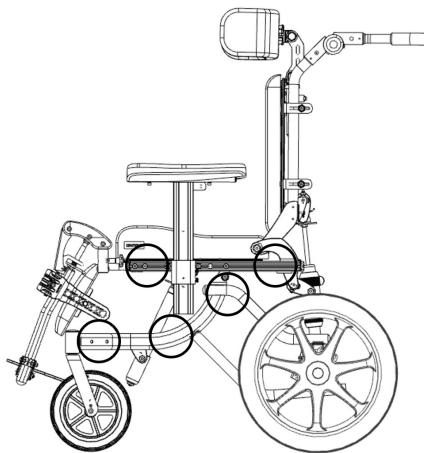
- This wheelchair is suitable for transporting in vehicles and has met the performance requirements for traveling forwards-facing in frontal impact conditions. Transporting in other configurations within a vehicle has not been tested.
- The wheelchair was dynamically tested in a forward-facing orientation with the ATD (anthropomorphic test device) restrained by shoulder and pelvic belts.
- Always use both shoulder and pelvic-belt restraints when using the wheelchair as a seat in a motor vehicle.
- Auxiliary wheelchair equipment must be either secured to the wheelchair or removed from the wheelchair and secured in the vehicle during transit.
- A manufacturer's representative should inspect the wheelchair before reuse following any vehicle-related incidents.
- The positioning belt of the wheelchair must always be used in addition to, not as a substitute for, the three-point belt restraint.

11.2 Transporting the wheelchair without occupant

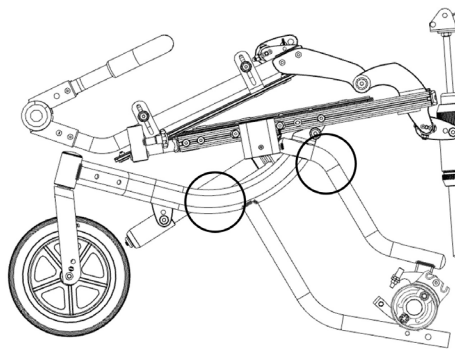
To fold or unfold the wheelchair, refer to [Section 10.2.1](#) or [Section 10.2.2](#).

11.2.1 Lifting the wheelchair

Always lift the wheelchair by grabbing the frame at the points shown in the picture.



Lifting the wheelchair



Lifting the folded wheelchair



Warning

Never lift the wheelchair by any parts not circled above.

11.2.2 Airplane

Always check with the airline regulations before transporting the wheelchair on an airplane.

12. Maintenance and repairs

The user and attendant must take care of maintenance, service, and occasionally fault-finding activities. The following instructions should be carried out under the supervision of your Karma authorized dealer.



Warning

Alterations or substitutions must not be made to the wheelchair securement points or structural and frame parts or components without consulting the wheelchair manufacturer.

12.1 Daily checks

Check the following items before driving. If you find anything abnormal, do not operate the wheelchair and visit your Karma authorized dealer for service.



1. Examine the brakes, checking for wear, damage, and misalignment. Replacing or adjusting the brakes must only be carried out by your authorized technician.
2. Check that the handgrips are not damaged and firmly attached to the push handles.
3. Check that the anti-tippers wheels and frame are not damaged and are securely mounted.
4. Before using the wheelchair, make sure all bolts and nuts are tightened. Check all parts for proper adjustment. Have a qualified technician repair the damaged parts if necessary.

5. The wheels and tires should be checked periodically for cracks and wear.
Have a qualified technician replace them if necessary.

Please contact a Karma authorized dealer for a qualified technician.

12.2 Maintenance schedule

To ensure your wheelchair is in good condition, regularly visit your Karma authorized dealer for maintenance (and keep records accordingly) **every six months** after purchase.



 Caution	<ul style="list-style-type: none"> ● If you find anything abnormal, stop using the wheelchair immediately and visit a Karma authorized dealer for inspection and maintenance. ● Check the wheels and tires of the wheelchair periodically for cracks and wear and replace them if needed. If using pneumatic tires, failure to keep tires at the correct pressure will reduce the braking efficiency. ● Never disassemble or modify the wheelchair frame structure. Otherwise, injury or damage may occur, which will negate the warranty.
 Note	<p>Even if you don't use the wheelchair for a long time, it should still be regularly maintained to keep it clean and safe.</p>

	Weekly	Monthly
GENERAL		
● Wheelchair rolls straight (no excessive drag or pull to one side)		✓
FRAME		
● Inspect frame for cracks		✓
● Inspect for a bent frame		✓
BRAKES		
● Do not interfere with tires when rolling		✓
● Free of wear and are not loose		✓
● Easy to engage	✓	
● Prevent chair from moving when engaged	✓	

SEAT & BACKREST		
● Inspect for rips or sagging	✓	
● Inspect for loose or broken hardware		✓
CASTERS		
● Inspect the casters for smooth rotation of the caster wheel and caster assembly		✓
● Inspect the caster for wear in the bearings/mountings and tire wear or damage		✓
REAR WHEELS		
● Quick-release axles lock properly (if installed); lubricate if necessary	✓	
● No side movement or binding when lifted and spun		✓
● Inspect for cracked, bent, or broken spokes	✓	
ARMRESTS		
● Inspect the removable armrest button for effective locking (if installed)		✓
● Make sure the armrest detaches and flips back properly		✓
FOOTRESTS		
● Inspect the footplate height adjustment screws for securely tightened		✓
● Inspect the swing-away footrest release lever for effective locking		✓
TIRES		
● Inspect for flat spots, cracks, and wear	✓	
● If pneumatic tires, check for proper inflation	✓	
● Check tire tread depth is more than 1 mm		✓
● Check tire pressure. Find the tire pressure value on the side of the tire. (If using pneumatic tires.)	✓	

12.3 Tools

The wheelchair comes with a tool kit to be able to adjust most settings.

 Warning	<ul style="list-style-type: none">● Damage caused by self-servicing or servicing by unauthorized personnel cannot be claimed under warranty.● If you have any doubt about the capability of yourself or the service engineer, please get in touch with your local authorized supplier to help you.
 Note	<ul style="list-style-type: none">● Some repairs may require tools other than those supplied with the wheelchair.● Any unauthorized alterations to the wheelchair and its systems may lead to an increased risk of accident

12.4 Cleaning

Regular care and maintenance will prevent unnecessary wear and damage to your wheelchair. The following is general advice recommended by Karma. For severe soiling of the upholstery or damage to the surface finish, contact Karma or your local authorized supplier for service.

12.4.1 Upholstery

Use a soft cloth or brush with warm water and mild non-abrasive soap for regular cleaning. Before the surface dries, wipe off any water/soap residues with a clean, dry cloth. Repeat the procedure to remove stubborn dirt or stains. If necessary, remove the cover before cleaning. See also the washing instructions on the label of the upholstery materials.

12.4.2 Metal surfaces


Use a soft cloth or sponge with warm water and mild detergent for regular cleaning. Wipe down carefully with a cloth and water, and dry off.

Remove scuff marks from semi-matte surfaces with soft wax (follow manufacturer's instructions).

Remove scuff marks and scratches from shiny surfaces using car polish, either liquid or paste. After polishing, apply soft car wax to restore the original surface gloss.

12.4.3 Plastic covers



Use a soft cloth with mild detergent and warm water for regular cleaning. Rinse thoroughly and dry with a soft cloth.

 Warning	<ul style="list-style-type: none">● Never use solvents, abrasive kitchen cleaners, or aggressive chemical cleaners which will damage the surface and structure of the material.● Never use a sponge with an abrasivesurface.
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13. Refurbishment and reuse

This wheelchair is suitable for refurbishment and reuse. 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 reuse.

Clean (refer to “Cleaning” section) and inspect (refer to “Maintenance schedule” section) the wheelchair before refurbishment.

 Warning	<ul style="list-style-type: none">● The refurbishment of the wheelchair is only allowed to be executed by an authorized supplier.● If a non-authorized supplier or institute refurbishes the wheelchair, Karma cannot be held responsible for this product, and all warranty claims will be voided.
 Note	Karma will refurbish the wheelchair according to our refurbishment guidelines, including replacing all upholstery parts, a total disinfection of the product, and a complete technical check of the wheelchair and its accessories.

14. Disposal

Please follow the local regulations for disposals. We strongly recommend contacting your local authorized supplier to dispose of your wheelchair.

15. Troubleshooting

The table below shows some faults and suggested corrective actions. Note that this table does not cover all the problems, and you should always contact your local authorized supplier or Karma in case of doubt.

Fault	Checking Points and Corrective Action
Chair veers right/left	<ul style="list-style-type: none">● Check tires for correct and equal pressure● Check caster bracket angle● Check that rear wheels are equally spaced from the seat frame
Sluggish turn or performance	<ul style="list-style-type: none">● Check tires for correct and equal pressure● Check for loose nuts and bolts
Caster flutter/wobble	<ul style="list-style-type: none">● Check tires for correct and equal pressure● Check for loose nuts and bolts● Check caster bracket angle
Squeaks and rattles	<ul style="list-style-type: none">● Check for loose nuts and bolts
Looseness in chair	<ul style="list-style-type: none">● Check for loose nuts and bolts

16. Technical specifications

Product Model	Flexx Adapt	
	Minimum	Maximum
Nominal seat width (mm/in) ¹	255 / 10	355 / 14
Nominal seat depth (mm/in) ²	230 / 9	380 / 15
Front caster / Rear wheel size (in)	6 / 16	8 / 16
Backrest height without cushion (mm)	400	550
Backrest height with cushion (mm)	350	500
Headrest height above seat (mm)	360	690
Armrest to seat distance without cushion (mm)	75	295
Armrest to seat distance with cushion (mm)	10	230
Front location of armrest structure (mm)	0	460
Seat surface height at front edge without cushion (mm)	430	480
Seat surface height at front edge with cushion (mm)	480	530
Footrest to seat distance without cushion (mm)	85	285
Footrest to seat distance with cushion (mm)	160	360
Effective seat width (mm)	290	390
Effective seat depth (mm)	285	410
Seat plane angle (X°)	0	45
Backrest angle (X°)	0	40
Seat to backrest angle (X°)	90	130
Leg to seat angle (X°)	100	-
Overall length with legrest (mm)	1070	1385
Overall width (mm)	570	-

Product Model	Flexx Adapt	
	Minimum	Maximum
Overall height (mm)	1060	1190
Folded length (mm)	770	-
Folded width (mm)	570	-
Folded height (mm)	530	-
Total mass (kg)	29.8	-
Mass of the heaviest part (kg)	18.6	-
Maximum user weight (kg)	-	75
Minimum turning radius (mm)	940	-
Minimum turning radius without user (mm)	850	-
Pivot width (mm)	1100	1500
Static stability downhill (X°)	13	-
Static stability uphill (X°)	18 (with anti-tippers)	-
Static stability sideways (X°)	14	-
Handrim diameter (mm)	N/A	N/A
Horizontal location of axle (mm)	90	235

1. **Nominal seat width** is the width of the seat cushion at 120mm in front of the backrest. This value is mainly for 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 for the product ordering process.

- The actual product specifications differ from the data in the table by $\pm 1 \text{ cm} \pm 0.5 \text{ kg}$.

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

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

- Please scan the **QR code** to watch more instructions on the measurement methods on the Karma website.



We have a big dream

Whether a customized wheelchair, standing chair, general-purpose chair, or other mobility aid device, they are all carefully designed with the 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 worldwide.

Karma is continuously improving the products and accessories.

The information in this document is subject to change without notice.

karma

A Better Wheelchair, A Better Fit



KARMA MOBILITY S.L. European Support Center.
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