

soma

User manual

Agile Plus

(AGL-PLS)



Contents



NOTE

- Product availability may vary by country/region. Visit 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.

1.	How to contact KARMA.....	1
2.	Declaration of Conformity.....	2
3.	Introduction.....	6
3.1	Serial number.....	6
4.	Used symbols for warning, caution, and note.....	7
5.	Warranty.....	8
6.	Intended use/intended user.....	9
7.	Intended environment.....	9
8.	Safety information.....	10
8.1	Passing through doorways.....	10
8.2	Negotiating slopes and ramps.....	10
8.3	Negotiating steps and kerbs.....	11
8.4	Going up and down stairs.....	11
8.5	Crossing streets.....	11
8.6	Operating the wheelchair.....	11
8.7	Stability and balance when seated.....	12
8.8	Transport.....	12
8.9	Using the anti-tippers.....	13
8.10	Maximum user weight limit.....	13

8.11	Avoiding general misuse.....	13
9.	Wheelchair components and functions.....	14
9.1	Parts description of Agile Plus (AGL-PLS).....	14
9.2	Basic attendant brakes (Optional).....	15
9.3	Push & Pull (P&P) attendant brakes (Optional).....	15
9.4	Wheel locks.....	16
9.5	Backrest.....	17
9.6	Armrests.....	18
9.6.1	Flip-up armrests.....	18
9.6.2	Flip-up height-adjustable armrests (Optional).....	19
9.7	Legrests.....	20
9.7.1	Installing the swing-away legrests.....	20
9.7.2	Removing the swing-away legrests.....	20
9.8	Anti-tippers (Optional).....	21
9.8.1	Standard anti-tippers (Optional).....	22
9.8.2	Ergo anti-tippers (Optional).....	23
9.9	Seat/backrest upholstery.....	24
9.10	Removing and installing the rear wheels.....	24
9.10.1	Removing the rear wheels.....	25
9.10.2	Installing the rear wheels.....	25
9.11	Options and accessories.....	26
9.11.1	Tension adjustable backrest (Optional).....	26
9.11.2	Rear wheel axle extension plate (Optional).....	26
9.11.3	Pelvic positioning belt (Optional).....	28
9.11.4	Cane holder, IV pole holder, and oxygen holder (Optional) ...	29
10.	First setup.....	30
10.1	Seat adjustments.....	30
10.1.1	Adjusting the footplate height.....	30

10.1.1.1	Adjusting the tool adjustable footplate height	30
10.1.1.2	Adjusting the tool-free adjustable footplate height.....	31
10.1.2	Adjusting the seat depth	32
10.1.3	Adjusting the front seat height.....	34
10.2	Backrest height adjustment.....	35
11.	Using the wheelchair	36
11.1	General warnings and advice	36
11.2	Use in combination with other products.....	37
11.3	Hot and cold surfaces.....	37
11.4	Danger of pinching	38
11.5	Surroundings	38
11.6	Precautions to prevent dangerous situations	39
11.7	Folding and unfolding the wheelchair	39
11.7.1	Unfolding the wheelchair	39
11.7.2	Folding the wheelchair.....	40
11.8	Storage	42
11.9	Transferring into and out of the wheelchair.....	43
11.9.1	Transferring into the wheelchair	43
11.9.2	Transferring out of the wheelchair	44
11.10	Operating the wheelchair	45
11.10.1	General use for user and attendant	45
11.10.2	Tipping backwards by the user.....	47
11.11	Negotiating steps and kerbs (curbs)	48
11.11.1	Going down a step with an attendant	48
11.11.2	Going down a step with an attendant	49
11.11.3	Going down a step by the user	49
11.12	Going up and down stairs.....	49
11.13	Negotiating ramps and slopes	50

11.13.1	Use on slopes: travelling on downhill slopes	50
11.13.2	Use on slopes: travelling on uphill slopes.....	51
11.14	Stability and balance when seated	52
11.14.1	Leaning forward.....	52
11.14.2	Leaning backward.....	52
12.	Transport of the wheelchair	53
12.1	Four-point tie down restraint system	53
12.1.1	Transportation guideline.....	55
12.1.2	Safety belt	56
12.2	Transportation on an airplane	60
12.2.1	The wheelchair’s dimensions and weight	60
13.	Maintenance and repairs	61
13.1	Daily check	61
13.2	Maintenance schedule	62
13.3	Drum brakes (optional) inspection and maintenance.....	65
13.4	Tools.....	66
13.5	Cleaning.....	66
13.5.1	Upholstery, cloth/airmesh.....	67
13.5.2	Metal surfaces.....	67
13.5.3	Plastic covers	67
14.	Refurbishment and re-use of the product.....	68
15.	Disposal of the product	68
16.	Troubleshooting.....	69
17.	Technical specifications	70

1. How to contact KARMA

Karma

Head office

KARMA Medical

Address: No. 2363, Sec. 2, University Rd., Min-Hsiung Shiang,
Chia-Yi 621, Taiwan

Phone: +886 5 206 6688

Email: globalsales@karma.com.tw

Website: www.karmamedical.com

European representative

KARMA Mobility S.L.

Address: C/ Periodista Francisco Carantoña Dubert,
23 Bajo 33209 Gijón - Asturias (Spain)

Phone: +34 984 390 907

Email: karma@karmamobility.es

Website: www.karmamobility.es

UK representative

KARMA Mobility Ltd.

Address: Unit 6 Target Park, Shawbank Road, Redditch,
B98 8YN England United Kingdom

Phone: +44 845 630 3436

Email: info@karmamobility.co.uk

Website: www.karmamobility.co.uk

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2. Declaration of Conformity



Document No.: DOC-EU-Agile Plus-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:	471987385AgileZE
Device:	Manual wheelchair
Trade Name or Mark:	Agile Plus Series
Model Number:	AGL-PLS
Product Code according to EMDN:	Y122103, Y122106
Product Code according to GMDN:	41512, 41630
Classification:	Rule 1 of Class I
UDI-DI:	04719892871129

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. 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: 12th 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:

Basic UDI-DI of MDR (Annex VI):	471987385AgileZE
Device:	Manual wheelchair
Trade Name or Mark:	Agile Plus Series
Model Number:	AGL-PLS
Product Code according to EMDN:	Y122103, Y122106
Product Code according to GMDN:	41512, 41630
Classification:	Rule 1 of Class I
UDI-DI:	04719892871129

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EN 12183	Manual wheelchairs - Requirements and test methods	2014
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.

Intended Purpose: To provide mobility to person limited to a seating position.

Date of issue: 12th 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

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 Serial number

The serial number is very important. Your wheelchair will be stored in our data system under this main number. You can find the number on the right side of cross braces. Please also carefully read all the labeling on the wheelchair before using it and do not remove them.



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 which 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.
- Use within our guidelines and with reasonable care, and your safety will be increased. Be aware that careless use endangers your own safety as well as that of others.
- 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 operate the wheelchair for the first time.

5. Warranty

KARMA Medical supplies the warranty that frame and cross braces are guaranteed for a period of 5 years and gas strut (if available) for a period of 1 year after delivery to the customer. Your local supplier will carry out this warranty.

For a warranty claim, you get in contact with our local authorized KARMA reseller or directly with KARMA Mobility S.L. The wheelchair must be repaired by a KARMA Medical designated Customer Service agent. This warranty is VOID if the original chair 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 to be appointed by KARMA Medical.

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, labour costs, fees, etc.

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 Agile Plus manual wheelchair is meant to provide mobility to people who are not able to walk, stand, or use a walking device, but who are very well able to control and use the manual wheelchair. It could be used for independent or assisted transport of a person with mobility difficulty. The wheelchair is designed for a maximum user weight of 136 kg, or 115 kg when equipped with Push & Pull attendant brakes.

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

When it is used without an assistant, it should only be used by persons who are physically and mentally able to use the wheelchair safely.

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 wheelchair is not restricted to only indoor or only outdoor use, but it should only be used on level ground and accessible terrain outdoors.

It is allowed to use the wheelchair in different weather conditions. It must be noticed that metal or plastic surfaces of the wheelchair can become very hot when exposed to direct sun for longer time.

Because of the harmful combination of salt water and sand, it is advised not to use the wheelchair on beaches. We advise cleaning the wheelchair after having been in contact with sand and/or salt water as described in [13.5 Cleaning](#).

8. Safety information

8.1 Passing through doorways

The safest way to operate the chair is on level floors that are free of obstacles. 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.

8.2 Negotiating slopes and ramps

- Never make a turn on a slope due to the danger of tipping.
- When assisted transport of a person, go straight up a slope. (See Figure 8.1.) If the user needs to go down the slopes, go backwards until the user is on level ground. (See Figure 8.2.)
- Avoid stopping on a slope because it may potentially cause you to lose control of the chair.
- Do not use the wheel locks to slow down or stop the wheelchair because it may cause it to seize up, lose control or fall out of the chair.
- If possible, ask for help from an assistant/attendant while negotiating slopes.



Figure 8.1



Figure 8.2

8.3 Negotiating steps and kerbs

- If possible, ask for help from an assistant/attendant while negotiating steps and kerbs.
- Avoid strong impacts when going down kerbs. A strong impact could lead the damage of wheelchairs.
- Do not go up or down steps or kerbs that are higher than 50 mm.
- Always be careful when going up or down kerbs and never negotiate kerbs in reverse direction without an assistant.
- The anti-tippers prevent the wheelchair from tipping backwards when activated.

8.4 Going up and down stairs

- Always use two or more assistants for assistance. The first assistant should stand behind the wheelchair, and the second assistant should hold the front frame to steady the wheelchair in the front.
- If you brake for a long time when going down slopes, a lot of frictional heat is produced at the handrims.
- Remember to use an elevator for transport instead of using an escalator.

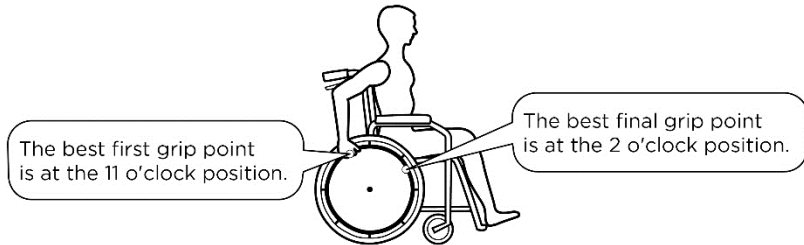
8.5 Crossing streets

- 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 that might cause the casters stuck.

8.6 Operating 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. KARMA wheelchairs are limited to only one user.
- Pay attention to assure your clothing does not get tangled with the wheels.

- When operating the wheelchair by using the handrims, please push the wheelchair gently. DO NOT apply a sudden huge force on the handrims. It could cause the chair to tip backwards. Please refer to the photo below for the best grip points for using the handrims.



(Only for the Agile Plus with 20"/24" rear wheels)

8.7 Stability and balance when seated

- If you lean too far sideways, you could tip your wheelchair over or fall out of it. (See Figure 8.3.)
- If you lean forwards out of the wheelchair, you could fall out of it. Do not bend forwards between your knees to pick up something off the floor. (See Figure 8.4.)
- If you lean too far backwards, you could tip your wheelchair over. Do not lean out over the backrest or use anti-tippers if possible.



Figure 8.3



Figure 8.4

8.8 Transport

- Do not use other transportation to pull the wheelchair.
- Risk of injury might happen if the wheelchair is not properly secured.

8.9 Using the anti-tippers

- KARMA strongly recommends the use of anti-tippers when using your backrest tubes with additional load.
- Anti-tippers that are incorrectly set or no longer working can lead to personal injury.
- Always advise the user if you deactivate the anti-tippers.
- Please install the anti-tippers to prevent the wheelchair from tipping backwards.

8.10 Maximum user weight limit

- Refer to “Maximum User Weight” in the Technical specifications chapter. Loads exceeding maximum capacity can damage your wheelchair and cause malfunctions yielding a safety hazard. The warranty does not cover damage caused by improper overloading of the wheelchair.

8.11 Avoiding general misuse

- DO NOT stand or let children play on the wheelchair. (See Figure 8.5.)
- DO NOT hang any items other than an IV bag on the IV Pole Holder. (See Figure 8.6.)



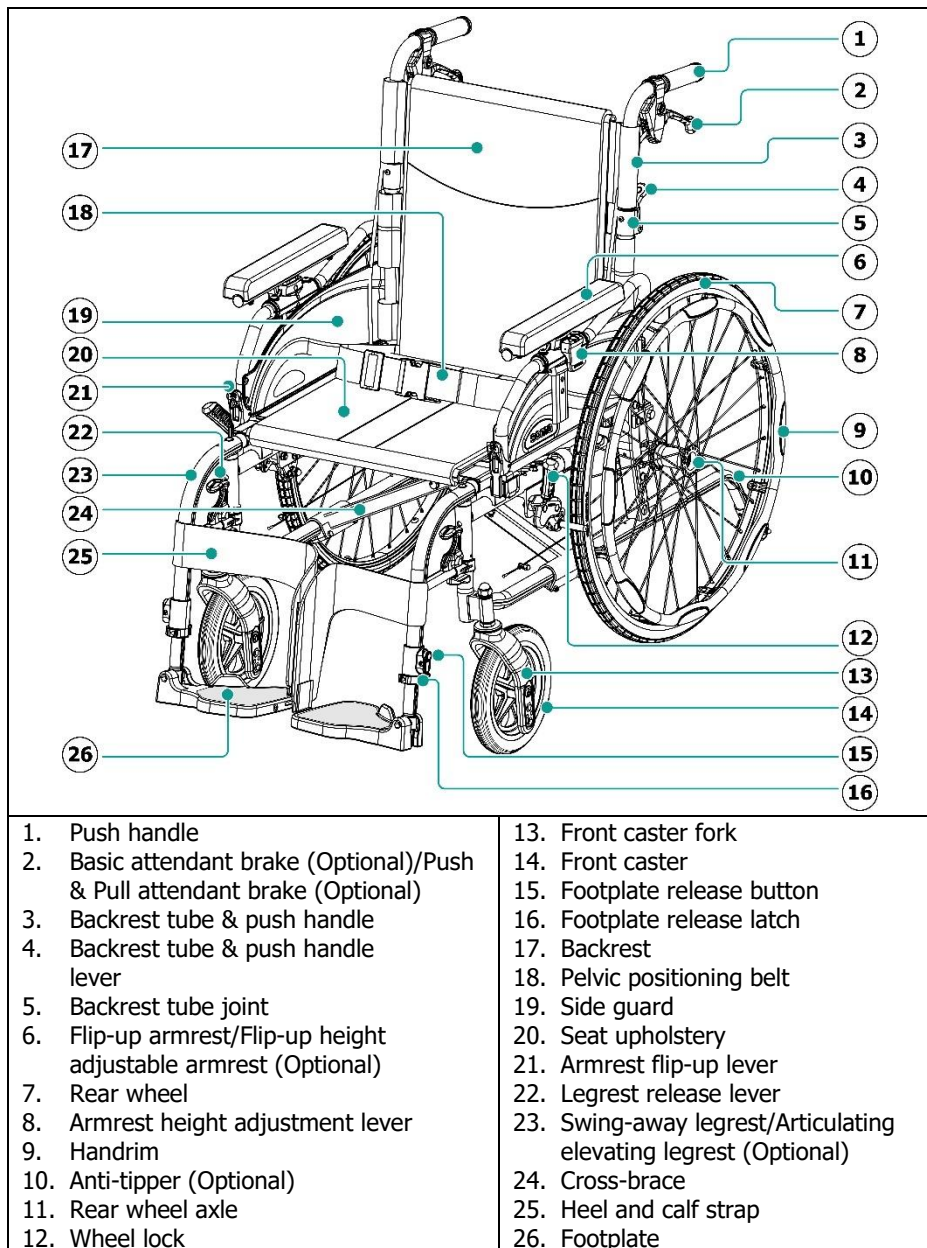
Figure 8.5



Figure 8.6

9. Wheelchair components and functions

9.1 Parts description of Agile Plus (AGL-PLS)





NOTE

- Standard features and available options may differ depending on regional market specifications. Please refer to the configuration of the product as purchased.
- The drum brake system is offered as a paid optional upgrade, available only for 14" rear wheel models equipped with P&P attendant brakes, and 20" rear wheel models equipped with both wheel locks and P&P attendant brakes.

9.2 Basic attendant brakes (Optional)

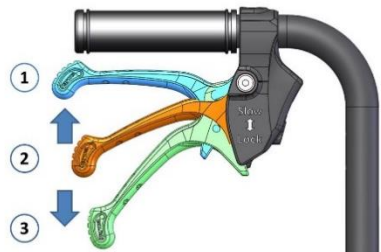
The basic attendant brakes can be used to decelerate the wheelchair while it is moving. To use the brakes, pull the brake levers on the push handle. To release the brakes, release the brake levers gently.



9.3 Push & Pull (P&P) attendant brakes (Optional)

The Push & Pull 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 upwards to slow down and stop the wheelchair (①).
- The innovative Push & Pull attendant brakes allow the caregiver access to the wheel locks without having to continuously lean forward. Just push the attendant brakes to lock the rear wheels and park the wheelchair (③), and pull to unlock (②).



NOTE

Pressing the brake levers downward requires a force approximately equivalent to 7 kg.

9.4 Wheel locks

The wheel locks can lock the wheels when stationary to prevent them from moving.

- To engage the wheel locks, push the wheel lock levers forward as far as possible. (See Figure 9.1.)
After engaging the wheel locks, you may pull and flip the levers back into the fixed position for easy transfer.
- To release the wheel locks, pull the wheel lock levers backward. (See Figure 9.2.)



Figure 9.1



Figure 9.2



WARNING

- Never apply the wheel locks while you are moving. If you do so, the wheelchair may become uncontrollable and stop suddenly, which can lead to a collision or falling out of wheelchair.
- Do not apply the wheel locks to slow down the wheelchair. And do not lean on the wheel locks for support. All these actions may lead to the uncontrollable conditions of wheelchair.
- Do not park or leave the wheelchair unattended on a slope. Doing so may result in loss of control, tipping, or personal injury. Always park on a flat, level surface and engage the wheel locks fully.



NOTE

The distance between the brake pin and the tire can be adjusted. To keep the braking efficacy, the adjustment must be carried out by an authorized dealer.

9.5 Backrest

There are two types of backrests available: Fixed and Foldable.

- **Fixed backrest:** No adjustment is required.
- **Foldable backrest:**

To reduce the wheelchair's size for transport, the backrest can be folded.

Push down on both levers (see Figure 9.3) and fold the upper section of the backrest tube & push handle downward.

Then, put the backrest back into place, simply lift up on the handles, and push until you hear a click.



Figure 9.3

9.6 Armrests

The armrests are used to support the upper limbs of wheelchair users. They could also be flipped up for easy side transfer.



WARNING

Never lift the wheelchair by holding the armrests, as the armrests are not securely engaged with the wheelchair frame.



CAUTION

Please keep your fingers away from all movable parts when lifting, returning, or adjusting the armrest. Be careful of potential pinch points.

9.6.1 Flip-up armrests

To flip up the armrest, press and hold the release lever located at the front socket of the armrest (see Figure 9.4). Then lift the armrest by pulling straight up and flip it up (see Figure 9.5).

To return the armrest to its original position, push the armrest down until the front release lever snaps into the armrest socket hole.



Figure 9.4



Figure 9.5

9.6.2 Flip-up height-adjustable armrests (Optional)

The flip-up height-adjustable armrests can be flipped up for easier transfers and can also be adjusted in height to accommodate different user needs. For instructions on how to flip up the armrests, refer to [9.6.1 Flip-up armrests](#).

To adjust the armrest height, follow the steps below:

1. Flip up the armrest height-adjustment lever (**A**), and then adjust the armrest to the desired height (**B**). (See Figure 9.6).
2. Flip down the armrest height-adjustment lever until it locks into place.
3. Repeat the same procedure for the armrest on the other side.

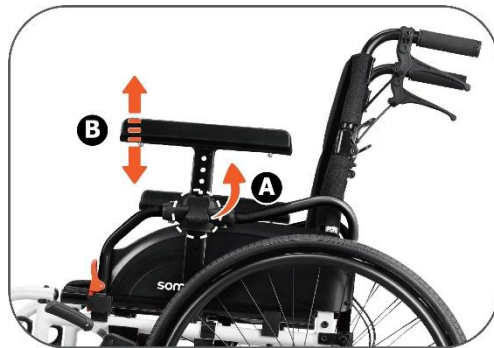


Figure 9.6



CAUTION

When transferring in/out, pay attention to the following:

- There is a risk of structural damage or breakage if the armrest is subjected to high lateral pressure. Please be particularly cautious when using it.
- It is recommended to use transfer aids (such as a transfer board) or mobility aids (such as a walker).
- When transferring in/transferring out, always lower the seat to its lowest position to maintain a sitting posture.

If you have further questions about transferring, please consult your therapist for professional advice.

9.7 Legrests

The swing-away legrests are used to support the lower limbs of wheelchair users. The legrests can also be swung outward or detached for easy transfer in tight spaces.

9.7.1 Installing the swing-away legrests

1. Turn the swing-away legrest to the side and insert the legrest into the wheelchair frame. (See Figure 9.7.)
2. Push the legrest toward the inside of the wheelchair until it locks into place. (See Figure 9.8–9.9.)
3. Repeat the steps above for the other legrest.

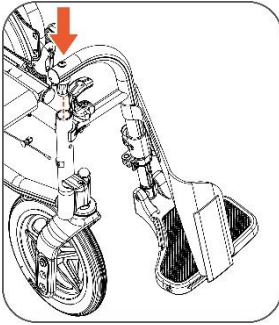


Figure 9.7

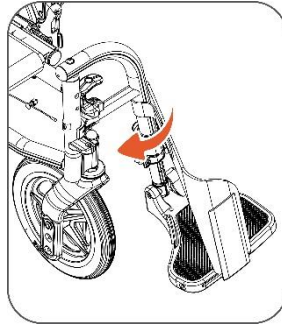


Figure 9.8

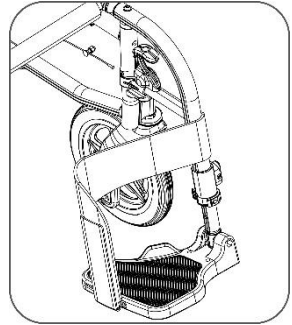


Figure 9.9

9.7.2 Removing the swing-away legrests

1. Pulling the release lever, swing the legrest to the side, and then lift it up. (See Figure 9.10-9.12.)
2. Repeat the removal procedure above for the other legrest.

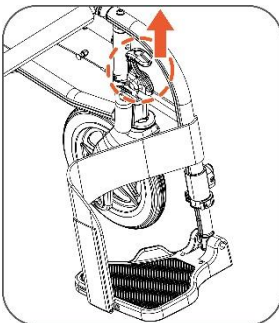


Figure 9.10

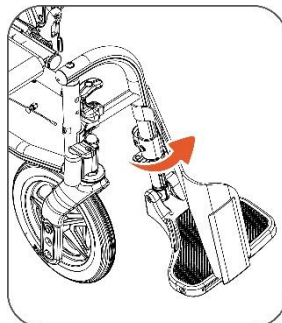


Figure 9.11

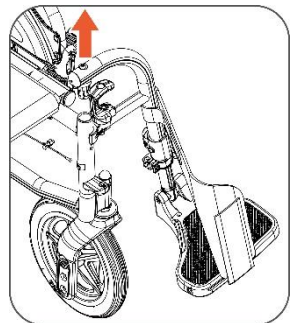


Figure 9.12



WARNING

DO NOT attempt to lift the wheelchair by any removable (detachable) parts, such as the legrest. Lifting by means of any removable (detachable) parts of the wheelchair may result in injury to the user and/or assistant/attendant or damage to the wheelchair.



CAUTION

Please keep your fingers away from all movable parts or swing mechanisms during removing, installing, or adjusting the legrest. Be careful of potential pinch points.



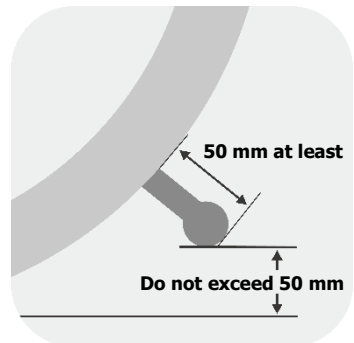
NOTE

The distance between the brake pin and the tire can be adjusted. To keep the braking efficacy, the adjustment must be carried out by an authorized dealer.

9.8 Anti-tippers (Optional)

Anti-tippers prevent the wheelchair from tipping backwards. When you install the anti-tippers, if the anti-tippers are adjustable, please make sure:

- The distance between the end of each anti-tipper and the rear wheel is at least 50 mm.
- The distance to the floor does not exceed 50 mm.



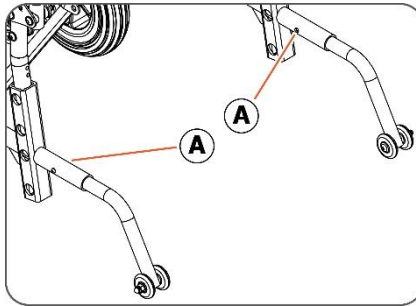


WARNING

- 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 re-adjusted.
- The activated anti-tippers may bump into the ground when navigating steps or kerbs (curbs). Therefore, deactivate the anti-tippers if needed.

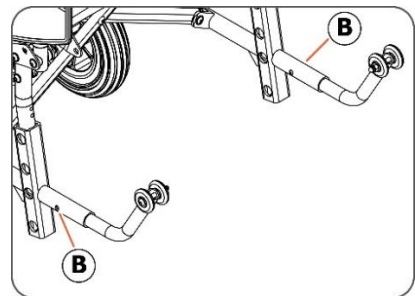
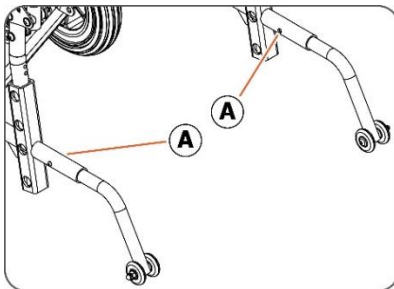
9.8.1 Standard anti-tippers (Optional)

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



Active Position

To turn the anti-tippers into the inactive position, rotate the anti-tippers by pressing the release buttons (A) and turning them up. Ensure the release buttons pop out again into place (B).



Inactive Position



CAUTION

- Do not use standard anti-tippers as a tipping lever to overcome obstacles.
- When the caregiver pushes the wheelchair over uneven surfaces or needs to climb kerbs (curbs) and other obstacles, the standard anti-tippers may contact the ground and interfere with maneuvering. In such cases, temporarily rotate the standard anti-tippers upward to the "Inactive Position" as described above. After crossing the obstacle, always return the standard anti-tippers to the "Active Position" to restore proper anti-tipping protection.
- Crossing kerbs (curbs) or obstacles involves inherent risk. Whenever possible, choose an accessible alternative route, such as a properly designed ramp, elevator, or lift, or use assistive equipment such as a portable ramp board. If step crossing is unavoidable, it is recommended that two caregivers assist together to stabilize and safely guide the wheelchair.

9.8.2 Ergo anti-tippers (Optional)



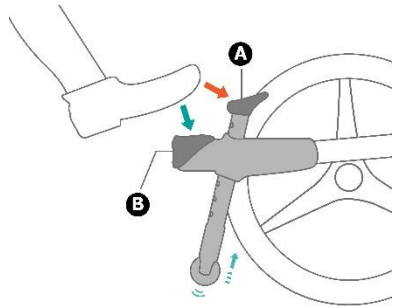
NOTE

For the installation of Ergo anti-tippers (optional), please refer to the corresponding assembly instructions included in the accessory package, or scan the QR code to watch the instructional video.



The Ergo anti-tippers feature a caregiver-friendly, single-foot operation design that allows easy control without bending down:

- **Safety Mode:** Step on the tipper head (A) to lower and automatically lock the anti-tipper in the safe operating position.
- **Curb-climbing Mode:** Step on the tipper pedal (B) to automatically raise the anti-tipper out of the way for curb climbing.



CAUTION

- Do not use Ergo anti-tippers as a tipping lever to overcome obstacles.
- When the caregiver pushes the wheelchair over uneven surfaces or needs to climb kerbs (curbs) and other obstacles, the Ergo anti-tippers may contact the ground and interfere with maneuvering. In such cases, switch to “Curb-climbing Mode” as described above. After crossing the obstacle, always return the Ergo anti-tippers to “Safety Mode”.
- Crossing kerbs (curbs) or obstacles involves inherent risk. Whenever possible, choose an accessible alternative route, such as a properly designed ramp, elevator, or lift, or use assistive equipment such as a portable ramp board. If step crossing is unavoidable, it is recommended that two caregivers assist together to stabilize and safely guide the wheelchair.

9.9 Seat/backrest upholstery

Seat/backrest upholstery is supplied as a single layer as standard. A dual-layer upholstery is available as an optional feature, depending on the wheelchair configuration. If the optional dual-layer upholstery is provided, the upper layer can be detached from the lower layer for easier cleaning.

9.10 Removing and installing the rear wheels

If your rear wheels are equipped with quick-release axles, follow the instructions below to remove or install the rear wheels.

9.10.1 Removing the rear wheels

1. Release the brakes.
2. Hold the wheelchair upright with one hand.
3. With your other hand, hold the wheel through the external spoke rim around the wheel hub.
4. Using your thumb, press and hold the quick-release axle button in the center, then pull the wheel straight out.

9.10.2 Installing the rear wheels

1. With one hand, hold the wheelchair upright.
2. With the other hand, hold the wheel through the external spoke rim around the wheel hub. (See Figure 9.13.)
3. Using your thumb, press the removable axle button and hold it down. Then push the axle into the adapter. (See Figure 9.14.)
4. Release the removable axle button and make sure that the wheel is secure.



Figure 9.13



Figure 9.14



WARNING

Always ensure that the removable axles are fully engaged whenever you fit a wheel. Otherwise the wheel can become loose during use and lead to the chair turnover.

9.11 Options and accessories

9.11.1 Tension adjustable backrest (Optional)

Tension adjustable backrest could be adjusted the tension of the backrest cover as user's requirements.

To adjust the backrest cover, first remove the backrest upholstery. Loosen the hook-and-loop straps on the rear of backrest cover by simply pulling on them. Then tighten or loosen the straps as required.



WARNING

If the straps are set too loose, the tipping point of wheelchair may be changed to increase the risk of tipping. Please ensure that the straps are set correctly.

9.11.2 Rear wheel axle extension plate (Optional)

Rear wheel axle could be adjusted to forward, middle and rearward position for user's propelling needs.

To install the extension plate, first remove the rear wheel. Equip with the extension plate to the desired axle position. Then put back the rear wheel and re-adjust the position of brakes. Repeat the process on the other side.





WARNING

- Always ensure that the rear wheels are fully secured whenever you remove and put back the rear wheels.
- If the optional rear wheel axle extension plates are installed on 20" and 24" rear wheels, anti-tippers are required and must be properly fitted before use.
- If the rear wheel axle position has been adjusted, a qualified rehabilitation therapist must assess and measure wheelchair stability and reposition the anti-tippers to ensure safe operation.



Forward axle position

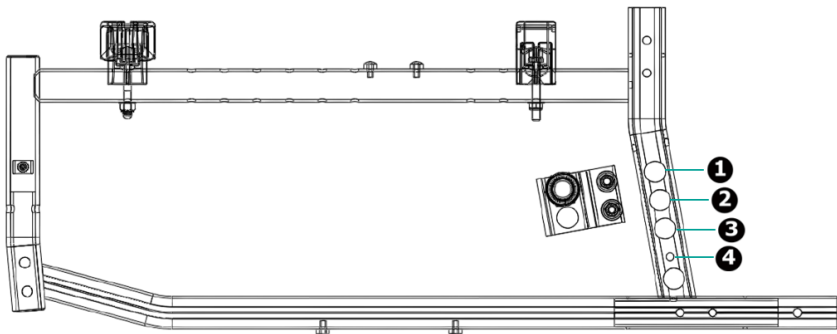


Rearward axle position



NOTE

If the optional rear wheel axle extension plates need to be installed on 20" and 24" rear wheels, please mount to the corresponding holes according to the seat height. Please refer to the matrix table below.



Mounting Hole Seat Height	1.2	2.3	3.4
460 mm (18")	V		
485 mm (19")		V	
510 mm (20")			V

9.11.3 Pelvic positioning belt (Optional)

The wheelchair can be equipped with a pelvic positioning belt. It prevents the user from sliding downward in the wheelchair or from falling out of the wheelchair.

To adjust the length of a pelvic positioning belt, follow the steps below:

1. Identify the required length of the pelvic positioning belt. (See Figure 9.15.)
2. Push the two parts of belt through buckle to make the belt longer or shorter. (See Figure 9.16.)
3. Pull the two parts of belt tight. (See Figure 9.17.)
4. Push buckle up to the plastic clip so that the belt cannot slip out of position. Please check that there is no gap between the clip and buckle.



Figure 9.15



Figure 9.16



Figure 9.17



WARNING

- A loose belt can allow the user to slip downward and create a risk of injury. It should be mounted by a qualified technician.
- In a vehicle, a wheelchair user must be secured by a safety belt, which is mounted in the vehicle he or she is transported in. A pelvic positioning belt is not sufficient as a personal restraint device.

9.11.4 Cane holder, IV pole holder, and oxygen holder (Optional)

This product could be equipped with cane holder, IV pole holder, and oxygen holder as user's requirement. Please note the IV pole stand must always be placed in a vertical position to the ground.



Cane holder



IV pole holder



Oxygen holder



WARNING

Installing these holders and adding extra load can reduce the wheelchair's rearward stability, increasing the risk of tipping backward. We strongly recommend using anti-tippers.

10. First setup

Before using it, the wheelchair needs to be adjusted and set up for the user. In this chapter, we will explain all the setup which needs to be done before the first use.



CAUTION

Before using the wheelchair, it is essential to adjust it properly for the user. Improper adjustment may affect wheelchair control and could result in loss of stability, leading to personal injury or damage to property.

10.1 Seat adjustments

Before using the wheelchair, the seat must be set to the right size for the user. Most of the time this will be done by your local supplier, together with your therapist. A well-adjusted seat will give you optimum support and comfort.

10.1.1 Adjusting the footplate height

The footplate height should be adjusted according to the user's calf length.

10.1.1.1 Adjusting the tool adjustable footplate height

Use the open wrench and Allen Key provided in the KARMA Tool Kit to loosen and remove the bolt and nut at the side of the legrest. Adjust the footplate height and re-tighten the bolt and nut. (See Figure 10.1.) Now the legrests are set in to a different position.

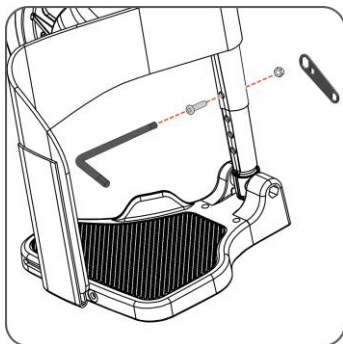


Figure 10.1

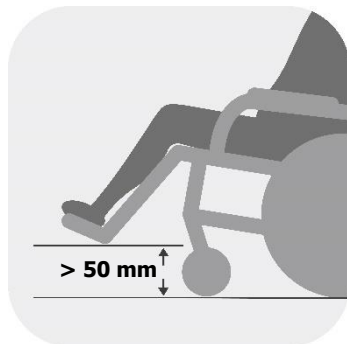


Figure 10.2

10.1.1.2 Adjusting the tool-free adjustable footplate height

The Easy Fit swing-away legrests feature tool-free adjustment mechanisms on both sides, allowing you to adjust the footplate height easily.

1. Unlock the height-adjustment mechanism by releasing the latch (A) on the legrest hanger tube. (See Figure 10.3.)
2. Hold the footplate with one hand and press the orange button on the legrest hanger with the other (B). Adjust the footplate to the desired height, ensuring the mounting holes are properly aligned. (See Figure 10.3.)
3. Release the orange button and ensure the locking pin is fully engaged in the selected hole. Finally, return the latch to its original position to secure the adjustment.



Figure 10.3



CAUTION

- Please make sure the minimum distance between the footplate and the ground should be more than 50 mm. (See Figure 10.2.)
- By loosening the bolt on the legrest, the footplate might suddenly start to slide down. If the user has his or her foot on the footplate, this sudden movement might cause a shock reaction. Please hold the footplate with one hand and loosen the bolt with another hand.



CAUTION

- When adjusting the footplate height, ensure the user's legs are properly laid on the seat upholstery in order to have optimal pressure distribution on buttocks and thighs for maximal comfort. The feet should be safely laid on the footplates. (See Figure 10.4–10.5.)



Figure 10.4



Figure 10.5

10.1.2 Adjusting the seat depth



NOTE

Seat depth adjustment is only available when the wheelchair is equipped with the optional dual-layer upholstery.

If your wheelchair is equipped with the optional dual-layer upholstery, follow the steps below to adjust the seat depth:

1. Remove the upper-layer seat upholstery (see Figure 10.6, **A**).
2. Detach the hook-and-loop straps on the front seat upholstery (see Figure 10.7, **B**).
3. Adjust the position of the front seat upholstery on the extension fabric to achieve a 1" adjustment:
 - When the front edge of the front seat upholstery is aligned with the front end of the seat tube, there will be a 1" gap between the seat tubes (see Figure 10.8, **C**).

Depending on your wheelchair configuration, the seat depth will be either 18" (460 mm) or 17" (435 mm) to match the frame.

- To reduce the seat depth by 1", push the front seat upholstery inward so that it aligns with the rear seat upholstery (see Figure 10.9, **D**). This will create a 1" gap at the front end of the seat tube.

Depending on your wheelchair configuration, the seat depth will then be adjusted to $18" - 1" = 17"$ (435 mm) or $17" - 1" = 16"$ (410 mm) to match the frame (see Figure 10.10, **E**).

4. Reattach the hook-and-loop straps on the extension fabric (see Figure 10.10, **F**).
5. Reattach the upper-layer seat upholstery (see Figure 10.11, **G**).



Figure 10.6



Figure 10.7

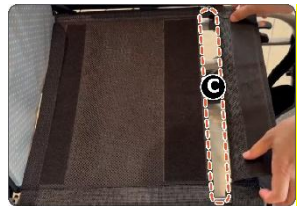


Figure 10.8



Figure 10.9

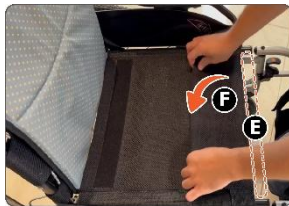


Figure 10.10

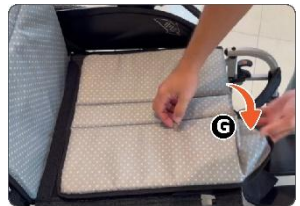


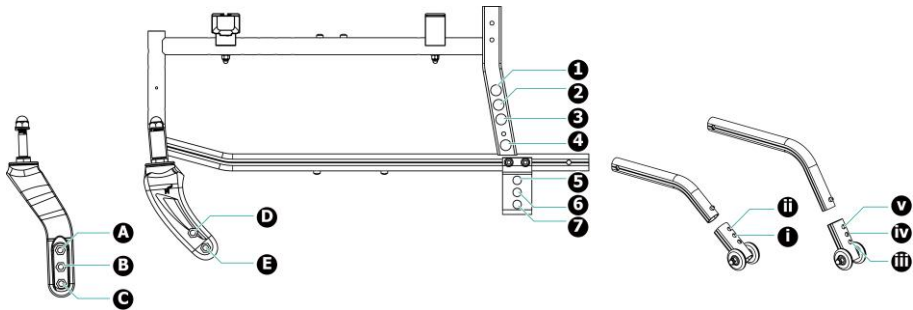


Figure 10.11

10.1.3 Adjusting the front seat height

Depending on your wheelchair configuration, you can adjust the front seat height by repositioning the front casters and rear wheels. For detailed specifications and adjustment combinations, refer to the matrix table below.

Front caster fork	Front seat height	Self-propel type	Transit type
 Short front caster fork (Whirl plastic caster fork)	410 mm (16")	6" front caster x 20" rear wheel	6" front caster x 14" rear wheel
	435 mm (17")		N/A
 Long front caster fork	460 mm (18")	8" front caster x 24" rear wheel	8" front caster x 14" rear wheel
	485 mm (19")		
	510 mm (20")		



Front seat height	Mounting position						
	6" front caster (with short front caster fork)	8" front caster (with long front caster fork)	14" rear wheel	20" rear wheels	24" rear wheels	Short anti-tipper	Long anti-tipper
410 mm (16")	D	N/A	4	1	N/A	i	N/A
435 mm (17")	E	N/A	N/A	2	N/A	ii	N/A
460 mm (18")	N/A	A	5 (F14 rear wheel bracket required)	N/A	1	N/A	iii

485 mm (19")	N/A	B	6 (F14 rear wheel bracket required)	N/A	2	N/A	iv
510 mm (20")	N/A	C	7 (F14 rear wheel bracket required)	N/A	3	N/A	v



CAUTION

- Adjusting the front seat height does not affect the seat plane angle.
- If the 24" rear wheels are equipped with pneumatic tires (optional), the seat height can only be set to 485 mm (19") or 510 mm (20").

10.2 Backrest height adjustment

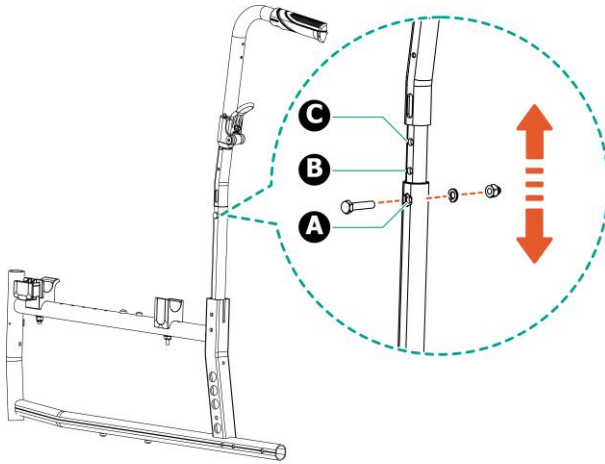


NOTE

Backrest height adjustment is only available when the wheelchair is equipped with the optional adjustable backrest tubes.

If your wheelchair is equipped with the optional adjustable backrest tubes, follow the steps below to adjust the backrest height:

1. Flip up the armrest and locate the nut positioned on the inner side beneath the backrest tube.
2. Using the wrench provided in the KARMA Tool Kit, loosen and remove the nut, screw, and washer from the backrest tube bracket (see the figure below).
3. Based on your preferred backrest height, vertically move the adjustable backrest tube to align with the corresponding hole. You can set the backrest height to one of the following positions:
 - Backrest height 435 mm (see **A** in the figure below)
 - Backrest height 460 mm (see **B** in the figure below)
 - Backrest height 485 mm (see **C** in the figure below)
4. After aligning the holes, reinstall the nut, washer, and screw securely to fix the backrest tube in place.



11. Using the wheelchair

11.1 General warnings and advice

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



WARNING

- Special care should be taken when using the wheelchair on uneven surfaces, such as slopes, irregular pavements, or when descending kerbs (curbs).
- It is not allowed to carry passengers other than the user on the wheelchair.
- On slippery surfaces, such as ice or snow, the wheelchair should be used at a reduced speed.
- Do not travel through water puddles, as their depth may be unclear and could create hazardous situations. Water may also damage the wheelchair.
- Note that no other persons or animals are in the direct contact zone of the wheelchair when using it.
- Always move slowly in the near surroundings of other people or animals.
- When using front casters that are too small, the wheelchair may get stuck on kerbs (curbs) or in floor grooves. Make sure the front casters are suitable for the surface you are moving over.



WARNING

- There may be a small gap between the rear wheel and the wheel lock with the risk that you could trap your fingers. Ensure that you always propel your wheelchair using the handrims only.

11.2 Use in combination with other products



WARNING

- The used materials are in compliance with the accepted standards mentioned in EN 12183 regarding flame resistance and bio-compatibility.
- 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.
- Changes which are made by third parties are not covered by the warranty and responsibility of KARMA Medical.

11.3 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.
- 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.

11.4 Danger of pinching

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 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 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

All areas where there might be a risk of pinching are indicated by these warning decals:



11.5 Surroundings

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

- When operating the wheelchair, make sure that no persons or animals are in the near surroundings.
- When using the tilt adjustment, make sure that no persons 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.

11.6 Precautions to prevent dangerous situations

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

- Only proceed at a slow speed when you are close to other people or animals.
- Please do not allow any persons to stand or sit in the wheelchair except for the user.
- Have the wheelchair checked by your supplier after any collision or when the wheelchair is otherwise (visually) 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.
- Have the wheelchair checked at least on a yearly basis by your supplier.

11.7 Folding and unfolding the wheelchair

11.7.1 Unfolding the wheelchair

1. If your wheelchair is fitted with a foldable backrest, hold the push handles and fold up the back joints until you hear them click into place. (See Figure 11.1.)
2. Hold the armrests and pull outwards. (See Figure 11.2.)
3. Point your fingers inwards with the palm of your hand on the frame and push it down until the seat is fully lowered. (See Figure 11.3.)



CAUTION

- When completing the step above, never put your fingers around the sides or under the wheelchair, as they can be trapped between the seat and the frame. (See Figure 11.4.)
- Ensure the seat tubes are securely positioned in their U-shaped holders. (See Figure 11.5.)

4. Mount the legrests on the wheelchair and ensure they're engaged properly. (See [9.7.1 Installing the swing-away legrests](#) for details).
5. Flip the footplates down (See Figure 11.6). Now the wheelchair is ready for use!



Figure 11.1

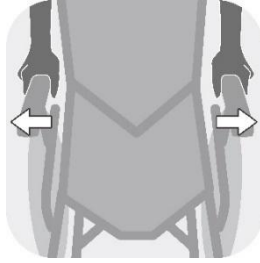


Figure 11.2

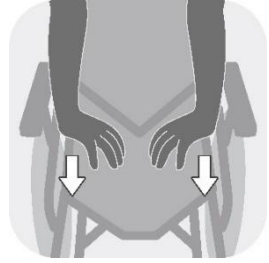


Figure 11.3



Figure 11.4



Figure 11.5



Figure 11.6

11.7.2 Folding the wheelchair

1. Flip up the footplates. (See Figure 11.7.)
2. Remove the legrests. (See [9.7.2 Removing the swing-away legrests](#) for details).
3. Pull up the seat upholstery by holding its central portion of the front and rear ends. (See Figure 11.8.)
4. Fold down the backrest by pressing the backrest levers on both sides, if your wheelchair is fitted with a foldable backrest (Figure 11.9–11.10).
5. Folding is now completed.



Figure 11.7

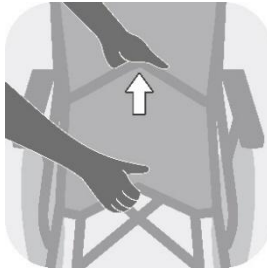


Figure 11.8

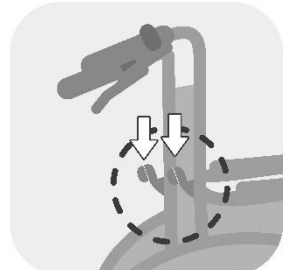


Figure 11.9

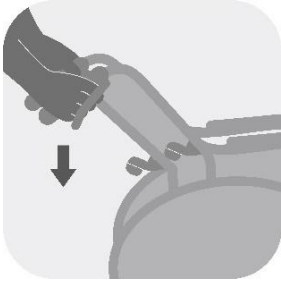


Figure 11.10



CAUTION

Be careful not to get your fingers caught when folding the wheelchair.

11.8 Storage

Make sure the wheelchair is folded and both brakes are engaged when stored.

After long-term storage (more than three months) the wheelchair must be inspected. To do so, please refer to [Chapter 13. Maintenance and repairs](#).



NOTE

Please store the wheelchair in a location where it is out of direct sunlight, rain and water. Do not store the product near heat sources. For more detailed information, consult your KARMA dealer.



WARNING

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



11.9 Transferring into and out of the wheelchair

11.9.1 Transferring into the wheelchair

1. Engage both wheel locks.

The wheel lock levers must be pushed to lock. Besides, they can be pulled and flipped back to the fixed position for easy transfer. (See Figure 11.11–11.13.)

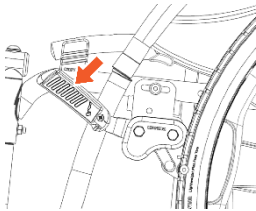


Figure 11.11

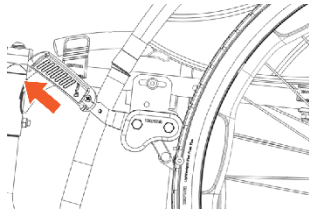


Figure 11.12

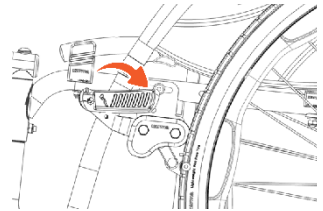


Figure 11.13

2. Flip up the footplates, then swing the legrests outward or remove them if needed.
3. The user lowers his or her body into the seat using the armrests for support.
4. Sit on the wheelchair seat slowly to prevent the wheelchair from tipping.
5. Swing the legrests back into position or reinstall them, then flip the footplates down. Adjust the footplate height so the user's feet can rest comfortably and evenly on the footplates.
6. Fasten the pelvic positioning belt.
7. Release both wheel locks.



CAUTION

Always ensure that the front casters are in line with the rear wheels, the front caster forks are pointing forwards, and the back of the wheelchair is secure either against a wall or firmly held by an attendant.

11.9.2 Transferring out of the wheelchair

1. Make sure that the wheelchair is near your final destination.
2. Move the wheelchair back sufficiently to ensure that the front casters are pointing forward, i.e., in line with the rear wheels and usually with the front caster forks pointing forward. Ensure that, where possible, the rear of the wheelchair is against a wall or, if not, it must be firmly held by an attendant.
3. Engage both wheel locks.
4. Flip up the footplates, then swing the legrests outward or remove them if needed.
5. Unfasten the pelvic positioning belt.
6. For users transferring from the front, move your hips forward, bring your feet back as much as possible, and place them on the floor, then slowly bend forward to stand up.
7. Move to your final destination.



CAUTION

- Always ensure that the front casters are in line with the rear wheels and facing straight to the front for gaining maximum stability when transfer in or out the wheelchair.
- When transferring into and out of the wheelchair, make sure that the wheel locks are applied to prevent the wheelchair from sliding away. Also, ensure that the footplates are flipped up for ease of entering or exiting. (See Figure 11.14.)
- Never stand on the footplates when getting into or out of the wheelchair. (See Figure 11.15.)
- Please ensure that neither the tread on your tyres (tires) nor the brake block becomes too worn.
- When on smooth or waxed floors, ensure the wheelchair is positioned against a wall or supported by a caregiver to prevent sliding or displacement caused by impact, which may lead to falls.
- Please ensure that the occupant's fingers do not get caught in the brake.
- Do not get in or out of the wheelchair on slopes, uneven ground, or other unsafe environments.



CAUTION

- Never sit on the armrests when getting in and out of the wheelchair.



CAUTION

When transferring in/out, pay attention to the following:

- There is a risk of structural damage or breakage if the armrest is subjected to high lateral pressure. Please be particularly cautious when using it.
- It is recommended to use transfer aids (such as a transfer board) or mobility aids (such as a walker).
- When transferring in/transferring out, always lower the seat to its lowest position to maintain a sitting posture.

If you have further questions about transferring, please consult your therapist for professional advice.



Figure 11.14



Figure 11.15

11.10 Operating the wheelchair

11.10.1 General use for user and attendant

- Ensure that the wheel locks are always locked when the chair is not being pushed. (See Figure 11.16.)
- 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 the rolling wheels. (See Figure 11.17.)

- Always use both hands on the push handles to control the chair for attendants. (See Figure 11.18.)
- Always avoid steering too steep or uneven surfaces because the chair may tip over.
- Avoid steering too soft surfaces because the casters may get bogged down. (See Figure 11.19.)
- Always take care not to move too fast or turn too quickly and try to maintain a smooth and steady ride.
- Cross the tracks perpendicularly to avoid your wheels getting stuck.



Figure 11.16



Figure 11.17



Figure 11.18



Figure 11.19



WARNING

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

11.10.2 Tipping backwards by the user

1. Release the brakes.
2. Roll backwards a short distance, grasp both handrims firmly and push forwards with a slight kick.
3. The shift in weight and steering in opposite directions with the handrims will enable you to keep the balance.



CAUTION

- This method should only be applied by experienced wheelchair users. It is always better to have the help of an attendant.
- To prevent the wheelchair from tipping backwards, it's better to install anti-tippers.

11.10.3 Tipping backwards by the attendant

1. Release the brakes.
2. Grasp both push handles firmly and put one of your feet on the relevant tipping lever at the back of the chair.
3. Inform the person in the chair that you are going to tilt the chair backwards.
4. Pull backwards with both hands and push down with the foot. This will bring the center of gravity of chairs into the rear wheels.



CAUTION

- To prevent the wheelchair from tipping backwards, it's better to install anti-tippers. When a chair is tilted to about 25 degrees, it will balance on its rear wheels and be easy to hold.
- Lower the chair slowly and softly forward to the ground when you are going to tilt the chair forward.

11.11 Negotiating steps and kerbs (curbs)

Please note that it is always better to avoid kerbs (curbs) or steps if possible. It's better to use the slope board instead.



WARNING

Do not go up or down steps that are higher than 25 mm. It could lose your balance and tip the wheelchair over.



CAUTION

Be careful that the anti-tippers do not get caught on the kerb (curb), which may cause the user to fall out. Deactivate the anti-tippers before doing it.

11.11.1 Going down a step with an attendant

1. The user moves the wheelchair right up to the kerb (curb) and holds the handrims.
2. The attendant should hold both push handles, place one foot on the tipper aid, and tilt the wheelchair backwards so that the front casters lift off the ground.
3. The attendant should then hold the wheelchair in this position, push it carefully down the step, and then tilt it forward until the front casters are back on the ground.



CAUTION

Never allow the chair to tip forward when going down a step or kerb (curb).

11.11.2 Going down a step with an attendant

1. The user moves the wheelchair backwards until the rear wheels nearly touch the kerb (curb).
2. The assistant should tilt the wheelchair using both push handles so that the front casters lift off the ground.
3. Then pull the rear wheels over the kerb (curb) until the front casters can be placed back on the ground.



WARNING

Always use a tipper aid when going up steps or kerbs (curbs) if possible. Frequent operation can result in earlier than expected fatigue break of the backrest.

11.11.3 Going down a step by the user

1. The user moves the wheelchair right to the kerb (curb), lifts the front casters, and keeps the wheelchair balanced.
2. Now slowly roll both rear wheels over the kerb (curb). While doing this, hold the handrims firmly with both hands until the front casters are back on the ground.



WARNING

Learn how to balance on the rear wheels, please refer to [11.10 Operating the wheelchair](#).

11.12 Going up and down stairs

You can go up and down stairs by taking them one step at a time, as described above. The first assistant should stand behind the wheelchair holding the push handles. The second assistant should hold a solid part of the front frame to steady the wheelchair in the front.



WARNING

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

11.13 Negotiating ramps and slopes



WARNING

- Always have an assistant behind the wheelchair when approaching long slopes.
- Avoid jerking when changing direction on a slope.



CAUTION

Use the wheel locks if your wheelchair is stationary on sloping ground.

11.13.1 Use on slopes: travelling on downhill slopes

Travelling 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 keep in mind that controlling the wheelchair on downhill slopes differs from controlling it on level ground.



NOTE

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



WARNING

- Never travel downhill on slopes bigger than 7°. This might result in uncontrollable behavior of the wheelchair. This can lead to material or personal damage.



CAUTION

If you brake for a long time, a lot of frictional heat is produced at the handrims. We recommend you wear suitable gloves.

11.13.2 Use on slopes: travelling on uphill slopes

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



NOTE

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



WARNING

Never travel uphill on slopes bigger than 7°. This might result in uncontrollable behavior of the wheelchair. This can lead to material or personal damage.

11.14 Stability and balance when seated

Sometimes you have to lean forward, sideways, or backwards out of the wheelchair. This has a major effect on the wheelchair's stability. Please follow the steps listed below.

11.14.1 Leaning forward

1. Point the front casters forward. You could move your wheelchair forward slightly, then back again.
2. Apply both wheel locks.
3. When leaning forward, your upper body must remain over the front casters.



WARNING

- Never bend too far forward, and do not shift forward in your seat to reach an object.
- Do not bend forward between your knees to pick up something off the floor.

11.14.2 Leaning backward

1. Point the front casters forward. You could move your wheelchair forward slightly, then back again.
2. Do not apply the wheel locks.
3. When reaching backwards, do not reach so far that you have to change your sitting position.



WARNING

Do not lean out over the backrest. If you lean too far backwards, you could tip your wheelchair over.

12. Transport of the wheelchair

12.1 Four-point tie down restraint system

The wheelchair must only be transported in a vehicle that is approved or adapted for such purposes. It is safest if the wheelchair is separated from the driver's compartment. Transportation in a trailer is also an optional recommendation. Should the wheelchair be transported in an MPV/estate car or other vehicle, it is vital that the wheelchair is properly fixed and that the fixing points of the car are well anchored. In all situations of transportation, the wheelchair needs to be properly fixed using a four-point heavy duty webbing restraint to prevent the wheelchair from sliding or tilting while driving. Check that the wheelchair is properly fastened and that the wheel locks are engaged. The wheelchair can be locked into position by using fastening straps through the brackets or securing points in the front and the back of frame, each marked with an indication sticker.



Fixation points in the front



Fixation points in the rear



NOTE

The specifications of the wheelchair are in accordance with the requirements specified in ISO 7176-19:2022 (TWR2603042 001).

Secure the wheelchair according to the manufacturer of the vehicle restraint systems instructions. Always make sure that the fastening points on the transport vehicle are well anchored. Use of this is strongly advised since the wheelchair can cause serious problems in case of a car accident. The wheelchair fulfils all requirements according to the ISO 7176-19:2022 (TWR2603042 001) standard ("Wheeled mobility devices for use in motor vehicles").



NOTE

KARMA Medical Taiwan would always recommend transferring to a car seat within a vehicle; however, should this not be possible, the following is the safest method:

- a. The wheelchair must be positioned in a forward-facing position.
- b. An Unwin restraint system like model Gemini 3 or a different brand with equivalent specification must be used.
- c. As a car safety belt, a Klippan Safety AB belt, model 907428, or a different brand with equivalent specification must be used.
- d. The restraint system must be fixed on the specific points of the wheelchair, which show a label of a tie-down loop.
- e. A head restraint system must be fitted during transportation. This device must be suitably positioned and able to stay on during transportation.
- f. 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 in a horizontal position, and the legrest should be positioned in a normal seating position.
- g. During transportation, the wheelchair should be locked to prevent it from moving by accident.
- h. Make sure the tire pressure of each wheel of the wheelchair is in the optimal condition. Too low tire pressure can result in an unstable behavior of the wheelchair during transportation.



NOTE

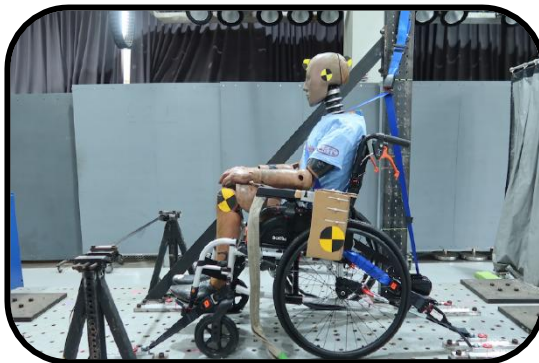
- The position belt of a wheelchair is not meant to be used as a car safety belt. It only prevents the user from sliding out of the seat while operating the wheelchair. If a user is transported in his or her wheelchair, he or she should wear an extra car safety belt, which is attached to the vehicle like all the car safety belts.
- When shipped by boat, please give special attention to prevent contact with salt water or air. Salt water is extremely corrosive and might lead to unwanted damage to the product.

12.1.1 Transportation guideline

The wheelchair has a four-point heavy duty webbing restraint. Using two securing points on the front end and two securing points on each rear side of the frame. The securing points are indicated with a sticker. These securing points and its location have been designed according to ISO 7176-19:2022 (TWR2603042 001).



The angle of the straps should be around 45° to the horizontal plane. This is to have maximum effect in vertical and horizontal directions.



The straps must be connected to the vehicle at suitable anchor points. Make sure that the tire pressure is at the recommended level if it's used pneumatic tires, so straps can have maximum effect. Make sure straps are tightened to keep optimal security.

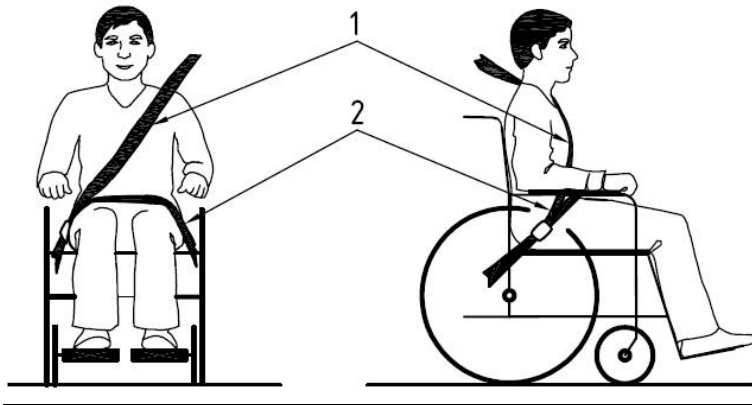


WARNING

- Poor fixations of the wheelchair in a vehicle might cause damage to the vehicle itself, the wheelchair, or the passengers inside the vehicle while driving. Not using a car safety belt for fixation while sitting in a wheelchair might lead to serious injuries in case of an accident.
- Alterations or substitutions should not be made to the wheelchair securement points or to structural and frame parts or components without consulting the wheelchair manufacturer.

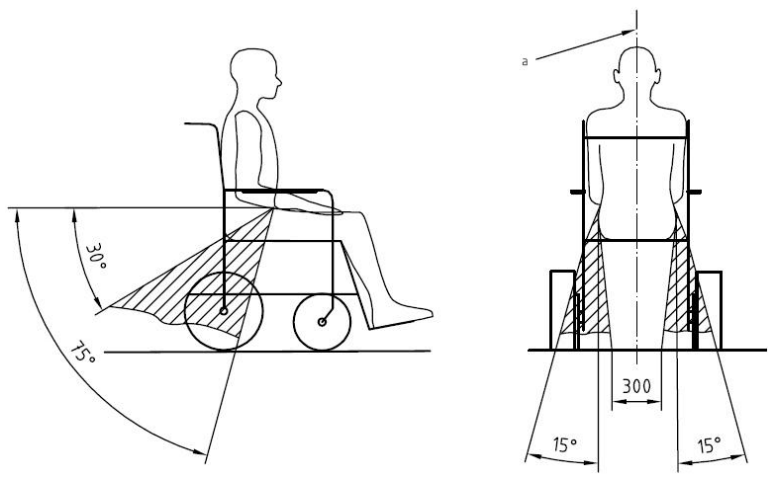
12.1.2 Safety belt

If the user is transported in his wheelchair, it is necessary to use a car safety belt to secure the wheelchair user.



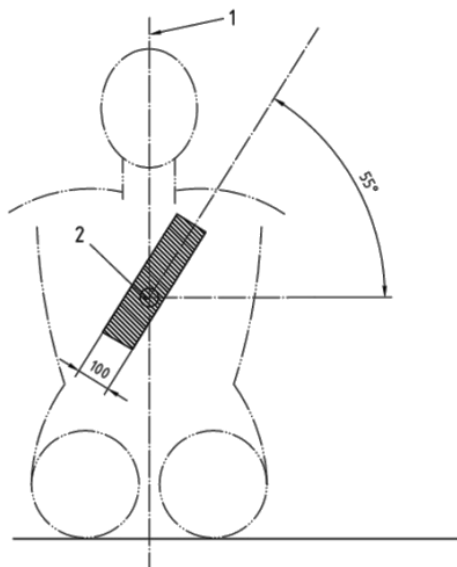
Positioning of the car safety belts for wheelchair users.

It is very important to use the safety belt at the right angles according to the wheelchair user. The angle for the pelvis part (2) of the safety belt must be in angle of 30–75° with the horizontal plane. (See the picture below). Also, the side angle should stay between the vertical planes to maximum of 15° angle with the vertical plane. (See the picture below).



Optimal angles for a safety belt used by the wheelchair user

The shoulder part (1) of the safety belt should be positioned according to the figure below.



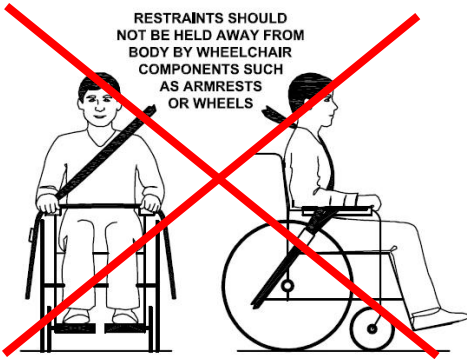
Shoulder safety belt positioning



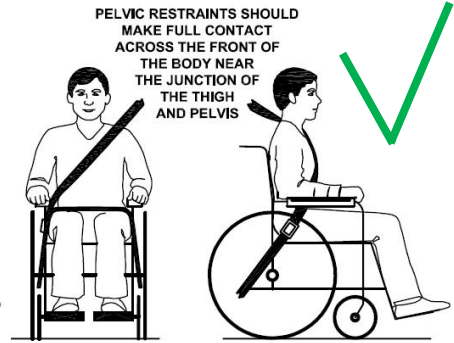
NOTE

Please obtain the following points for an optimal personal safety of the wheelchair user:

- The pelvic positioning belt should be worn low across the front of the pelvis, so that the angle of the pelvic positioning belt is within the preferred zone of 30° to 75° to the horizontal, as shown in figure above.
- A steeper (greater) angle within the preferred zone is desirable.
- Belt restraints should not be held away from the body by wheelchair components or parts, such as the wheelchair armrests or wheels, along with an illustration similar to that of the figure shown above.
- Upper torso belts should fit over the shoulder and across the chest, as illustrated in figure of the shoulder safety belt positioning.
- Belt restraints should be adjusted as tightly as possible, consistent with user comfort.
- Belt webbing should not be twisted when in use.



Picture of improper belt fit



Picture of proper belt fit



NOTE

Please, make sure the following conditions are fulfilled to obtain safe transportation:

- Whenever possible, the occupied wheelchair shall be located in a forward-facing configuration and secured by the tie downs in accordance with the WTORS (wheelchair tie down and occupant-restraint system) manufacturer's instructions.
- This wheelchair is suitable for use in vehicles and has met the performance requirements for travelling forward-facing in frontal impact conditions. Its use in other configurations within a vehicle has not been tested.
- The wheelchair has been dynamically tested in a forward-facing orientation with the ATD (anthropomorphic test device) restrained by both pelvic and upper torso belts.
- Both pelvic and upper torso belts should be used to reduce the possibility of head and chest impacts with vehicle components.
- When possible, other auxiliary wheelchair equipment should be either secured to the wheelchair or removed from the wheelchair and secured in the vehicle during transit, so that it does not break free and cause injury to vehicle occupants in the event of a collision.
- Positioning supports should not be relied on for occupant restraint in a moving vehicle unless they are labeled as being in accordance with the requirements specified in ISO 7176-19:2022.



NOTE

- The wheelchair should be inspected by a manufacturer's representative before reusing following involvement in any type of vehicle impact.



NOTE

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

12.2 Transportation on an airplane

When transporting your wheelchair by air, you should primarily pay attention to the following three things:

12.2.1 The wheelchair's dimensions and weight

How much the wheelchair weighs and how large it is are important, depending on the type of airplane in which the wheelchair is to be transported.

The smaller the airplane is, the smaller the wheelchair may be/weigh, and vice versa. Always check with the airline what rules apply.

13. Maintenance and repairs

The user and attendant must take care of some maintenance, service, and occasionally fault-finding activities. Other activities as described in this paragraph should be carried out under supervision of your authorized dealer.



WARNING

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

13.1 Daily check

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

1. Examine the brakes, checking for wear, damage, and misalignment. Replacing or adjusting the brakes should be carried out by your authorized technician.
2. Check that the hand grips are not damaged and are securely bonded to the push handles.
3. Check anti-tippers are not damaged and are securely attached.
4. Check that the anti-tippers' wheels and frame are not damaged and are securely mounted.
5. Before using the wheelchair, make sure all bolts and nuts are tightened. Check all parts for damage or wear and have a qualified technician repair them if necessary. Check all parts for proper adjustment.
6. The wheels and tires should be checked periodically for cracks and wear and should be replaced by a qualified technician.
7. Please contact KARMA authorized distributor/dealer for a qualified technician.

13.2 Maintenance schedule

To make sure your wheelchair is in good condition, visit your KARMA wheelchair dealer regularly for maintenance (and keep records accordingly) **every six months** after purchasing.



NOTE

Even if you don't use the wheelchair for a long time, it should still be maintained regularly. You should clean your wheelchair regularly to keep it clean and safe.



CAUTION

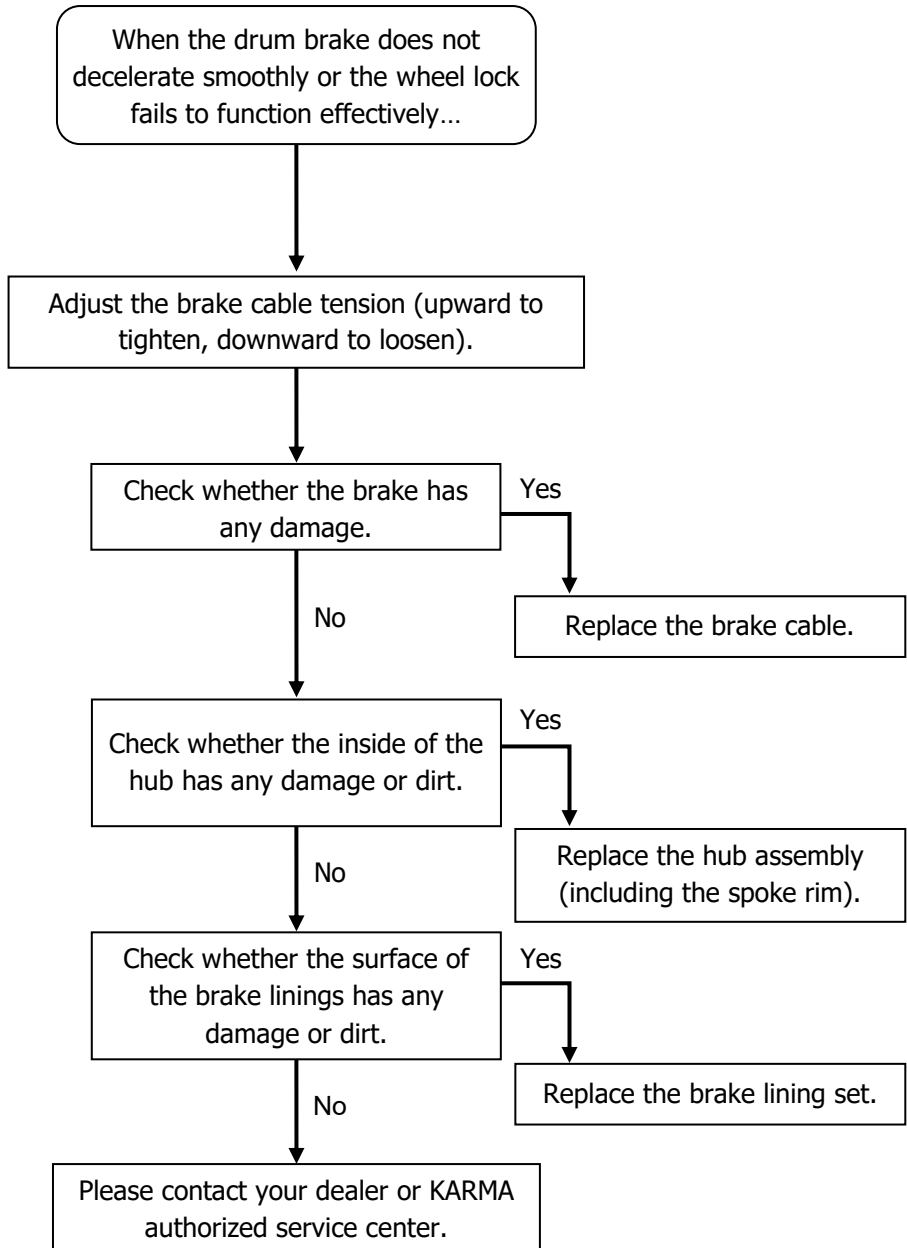
- If you find anything abnormal, stop using the wheelchair immediately and visit a KARMA wheelchair dealer for inspection and maintenance.
- The wheels and tires of wheelchair should be checked periodically for cracks and wear and should be replaced if needed. Failure to keep tires at the correct pressure will reduce the braking efficiency.
- Never disassemble or modify the wheelchair frame structure. Otherwise, injury or damage may occur. This will negate the warranty.

	Weekly	Monthly
GENERAL		
● Wheelchair rolls straight (no excessive drag or pull to one side)		V
FRAME AND CROSS-BRACES		
● Inspect frame structure for small cracks/fissures		V
● Inspect for bent frame or cross-braces		V
BRAKES		
● Do not interfere with tires when rolling		V
● Pivot points free of wear and looseness		V
● Easy to engage	V	
● Prevent chair from moving when engaged	V	
SEAT & BACKREST		
● Inspect for rips or sagging	V	
● Inspect for loose or broken hardware		V
CASTERS		
● Inspect the casters for smooth rotation of the caster wheel and caster assembly		V
● Inspect the caster for wear in the bearings/mountings and for tire wear or damage		V
REAR WHEELS		
● If installed, quick-release axles lock properly; lubricate if necessary	V	
● No excessive side movement or binding when lifted and spun		V

	Weekly	Monthly
● Inspect for cracked, bent or broken spokes	V	
ARMRESTS		
● If installed, inspect the detachable armrest button for effective locking		V
● Make sure the armrest detaches and flips back properly		V
LEGRESTS		
● Inspect the footplate height adjustment screws are securely tightened		V
● Inspect the swing-away legrest release lever for effective locking		V
TIRES		
● Inspect for flat spots, cracks and wear	V	
● If pneumatic tires, check for proper inflation	V	
● Heck tire tread depth is more than 1 mm		V
● Check tire pressure: tire pressures are located on the side of the tire	V	

13.3 Drum brakes (optional) inspection and maintenance

If your wheelchair is equipped with the optional drum brakes, please follow the steps below for maintenance and adjustment.





NOTE

- Push & Pull Attendant Brake with Drum Brake System is only available on 14-inch rear wheels.
- Push & Pull Attendant Brake with Drum Brake System and Push-to-Lock Wheel Lock is only available on 20-inch rear wheels.

13.4 Tools

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



NOTE

- 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.



WARNING

- Damage caused by self-servicing or servicing by unauthorized personnel cannot be claimed under warranty.
- If you have any doubt in the capability of yourself or the service engineer, please contact your local authorized supplier to help you.

13.5 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 information.

13.5.1 Upholstery, cloth/airmesh

For normal cleaning, wash the upholstery with hand warm water and mild nonabrasive soap. Use a soft cloth or brush. Before the surface dries, wipe off any water/soap residues with a clean, dry cloth. This procedure may be repeated to remove stubborn dirt or stains.

If necessary, the cover may be removed before cleaning. See also the washing instructions on the label of the upholstery materials.

13.5.2 Metal surfaces

For normal cleaning, it is best to use a soft cloth/sponge, hand warm water, and a mild detergent. Wipe down carefully with a cloth and water, and dry off. Remove scuff marks from semi-matt 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.

13.5.3 Plastic covers

For normal cleaning, wash plastic surfaces with a soft cloth, mild detergent, and hand warm water. Rinse thoroughly and dry with a soft cloth. Do not use solvents or abrasive kitchen cleaners.



WARNING

- Never use aggressive chemical cleaners or cleaning fluids. These will damage the surface and structure of the material.
- Never use a sponge on a hard surface. This will damage the surface and structure of the material.

14. 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.

The following actions should be taken, including cleaning (refer to [13.5 Cleaning](#)) and inspection (refer to [13.2 Maintenance schedule](#)).



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.

15. Disposal of the product

In the case of disposal of the used wheelchair, you need to follow the local legal regulations for disposal.

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

16. Troubleshooting

The following troubleshooting guide describes a number of faults and events that may occur when you use your wheelchair, together with suggested remedies. Note that this guide cannot describe all the problems and events that may occur, and you should always contact your local authorized supplier or KARMA in case of doubt.

Problem	Checking Points and Corrective Action
1. 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
2. Sluggish Turn or Performance	<ul style="list-style-type: none">• Check tires for correct and equal pressure• Check for loose nuts and bolts
3. 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
4. Squeaks and Rattles	<ul style="list-style-type: none">• Check for loose nuts and bolts
5. Looseness in Chair	<ul style="list-style-type: none">• Check for loose nuts and bolts

Note that this guide cannot describe all the problems that may occur, and you should always contact your local authorized supplier or KARMA when in doubt.

17. Technical specifications



NOTE

The available features, specifications, and configurations may vary depending on the country/region where you purchase the product. Contact your local sales representative for details.

Product Model	Agile Plus (AGL-PLS)							
Nominal seat width (mm/in) ¹	410/16	435/17	460/18	510/20	410/16	435/17	460/18	510/20
Nominal seat depth (mm/in) ²	410/16 435/17 460/18	410/16 435/17 460/18	410/16 435/17 460/18	410/16 435/17 460/18	410/16 435/17 460/18	410/16 435/17 460/18	410/16 435/17 460/18	435/17 460/18
Front caster/Rear wheel size (in)	6/14 8/14	6/14 8/14	6/14 8/14	6/14 8/14	6/20 8/24	6/20 8/24	6/20 8/24	6/20 8/24
Backrest height (mm)	435 435–485 510	435 435–485 510	435 435–485 510	435 435–485 510	435 435–485 510	435 435–485 510	435 435–485 510	435 435–485 510
Headrest height above seat (mm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Armrest to seat distance (mm)	220	220	220	220	220	220	220	220
Front location of armrest structure (mm)	0–340	0–340	0–340	0–340	0–340	0–340	0–340	0–340
Seat surface height at front edge (mm)	410 460 485 510	410 460 485 510	410 460 485 510	410 460 485 510	410 435 460 485 510	410 435 460 485 510	410 435 460 485 510	410 435 460 485 510
Footrest to seat distance (mm)	310-390 350–450	310-390 350–450	310-390 350–450	310-390 350–450	310-390 350–450	310-390 350–450	310-390 350–450	310-390 350–450
Effective seat width (mm)	440	460	480	530	440	460	480	530

Product Model	Agile Plus (AGL-PLS)							
Effective seat depth (mm)	410	410	410	410	410	410	410	410
	435	435	435	435	435	435	435	435
	460	460	460	460	460	460	460	460
	410–435 435–460	410–435 435–460	410–435 435–460	410–435 435–460	410–435 435–460	410–435 435–460	410–435 435–460	410–435 435–460
Seat plane angle (X°)	5	5	5	5	5	5	5	5
Backrest angle (X°)	12	12	12	12	12	12	12	12
Seat to backrest angle (X°)	98	98	98	98	98	98	98	98
Leg to seat angle (X°)	105	105	105	105	105	105	105	105
Overall length with legrest (mm)	1040–1090	1040–1090	1040–1090	1040–1090	1040–1090	1040–1090	1040–1090	1040–1090
Overall width (mm)	600	625	650	700	615	640	665	715
Overall height (mm)	880–1020	880–1020	880–1020	880–1020	880–1020	880–1020	880–1020	880–1020
Folded length (mm)	760–920	760–920	760–920	760–920	760–920	760–920	760–920	760–920
Folded width (mm)	250–290	250–290	250–290	250–290	250–290	250–290	250–290	250–290
Folded height (mm)	675–780	675–780	675–780	675–780	675–780	675–780	675–780	675–780
Total mass (kg)	13.35–16	13.35–16	13.35–16	13.35–16	13.35–16	13.35–16	13.35–16	13.35–16
Mass of the heaviest part (kg)	9.75–12.25	9.75–12.25	9.75–12.25	9.75–12.25	9.75–12.25	9.75–12.25	9.75–12.25	9.75–12.25
Maximum user weight (kg)	115/ 136	115/ 136	115/ 136	115/ 136	115/ 136	115/ 136	115/ 136	115/ 136
Minimum turning radius (mm)	842–892	842–892	842–892	842–892	842–892	842–892	842–892	842–892
Minimum turning radius without user (mm)	730–800	730–800	730–800	730–800	730–800	730–800	730–800	730–800

Product Model	Agile Plus (AGL-PLS)							
Pivot width (mm)	1170	1170	1170	1170	1170	1170	1170	1170
Static stability downhill (X°)	10	10	10	10	10	10	10	10
Static stability uphill (X°)	10	10	10	10	10	10	10	10
Static stability sideways (X°)	10	10	10	10	10	10	10	10
Handrim diameter (mm)	N/A	N/A	N/A	N/A	430 515	430 515	430 515	430 515
Horizontal location of axle (mm)	17–22	17–22	17–22	17–22	17–22	17–22	17–22	17–22

- 1. Nominal seat width** is measured the width of the seat cushion at 120 mm in front of the backrest. 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 backrest 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.** Q = Quick-release axles
- 5.** F = Fixed axles
- 6.** The Agile Plus (AGL-PLS) supports a maximum user weight (including personal belongings) of 136 kg. For models equipped with the Push & Pull attendant brake, this limit is 115 kg.
 - This wheelchair conforms to the requirements and test methods for static, impact, and fatigue strengths (ISO 7176-8).
 - The actual product specifications differ from the data in the table by ± 10 mm ± 0.5 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 of the measurement methods on the KARMA website.



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.

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KARMA Medical is continuously improving their products and accessories.

Changes might take place without further notice.

soma



KARMA MOBILITY S.L European Support Center
www.karmamobility.es
+34 984 390 907
karma@karmamobility.es

KARMA MOBILITY LTD. UK representative
www.karmamobility.co.uk
+44 845 630 3436
info@karmamobility.co.uk

KARMA MEDICAL PRODUCTS CO., LTD.
www.KarmaMedical.com
+886 5 206 6688
globalsales@karma.com.tw

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