

**soma**

*User manual*

**Agile**



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## 2. How to contact Karma

### Head office Karma

# karma

Karma Medical  
NO.2363, Sec. 2  
University Road  
Min-Hsiung Shiang  
Chia-Yi 621  
Taiwan  
[www.karma.com.tw](http://www.karma.com.tw)

### European representative:

# karma

Karma Mobility S.L.  
C/ Periodista Francisco Carantoña Dubert,  
23 Bajo 33209 Gijón - Asturias (Spain)  
phone: +34 984 390 907  
[karma@karmamobility.es](mailto:karma@karmamobility.es)

EC	REP
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**Karma Medical European representative:**  
KARMA MOBILITY, S.L.

C/ PERIODISTA FRANCISCO CARANTOÑA DUBERT, 23 Bajo 33209 GIJÓN - ASTURIAS (SPAIN)  
Tel: (+34) 984 390 907 E-mail : [karma@karmamobility.es](mailto:karma@karmamobility.es)

Produced and published by Karma Medical, Taiwan.  
Technical changes and print errors prohibited.

### 3. Declaration of conformity

**karma**

#### Declaration of Conformity

As a wheelchair manufacturer, the company:

KARMA MEDICAL PRODUCTS CO., LTD  
No.2363 Sec.2 UNIVERSITY RD., MIN-HSIUNG  
SHIANG, CHIA-YI 621, TAIWAN

And the European representative:


KARMA MOBILITY, S.L.  
C/ PERIODISTA FRANCISCO CARANTOÑA  
DUBERT, 23 Bajo 33209 GIJÓN - ASTURIAS (SPAIN)

declare under his sole responsibility that the wheelchair products:

Manual Wheelchairs products: AGL Series

have been classified as Class I and are manufactured in conformity with the provisions of the Medical Device Directives 93/42/EEC 2007 and 2007/47/EC, and are in conformity with relevant European harmonization standards of EN 12183:2014.

Signature :

  
\_\_\_\_\_  
Kenny I.C. Chen  
General Manager

Date :

2020  
Feb.12

## 4. Introduction

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

Before you use the Karma product, we strongly recommend you to 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 continuously product improvement. Therefore, pictures of products or options as shown in this manual might be different from what you see in the product. Karma reserves the right to make changes to the product without prior notice.

### 4.1 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 driving it and do not remove them.





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

General warnings are indicated by using a symbol. There are three levels of warnings:

### 1. Warning



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

### 2. Caution



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

### 3. Note



If you see this symbol, we provide additional information which might be good to know. Please 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.
- 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 person when you drive the wheelchair for the first time.

## 6. Warranty

Karma Medical supplies the warranty that frame and cross-braces are guaranteed for a period of 3 years and gas strut for a period of 1 year after delivery to the customer. Your local supplier will carry out this warranty.

For warranty claim, you can get in contact with our local authorized Karma dealers. 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.

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

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

The Agile manual wheelchair is meant to provide mobility to persons who are not able to walk, stand or use a walking device, but who are 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 125 kg.

It is strongly suggested 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 five years, presuming that the product is used daily in accordance with the safety operation instructions, inspection and maintenance instructions, and intended use, which described in this manual.

## **8. 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 to clean the wheelchair after having been in contact with sand and/or salt water as described in the paragraph "Cleaning".

## **9. Safety information**

### **9.1 Pass 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.

### **9.2 Negotiate 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. If the user needs to go down the slopes, go backwards until the user is on level ground.
- Avoid stopping on a slope because it may potentially cause you to lose control of the chair.
- Do not use the parking brakes 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.

### **9.3 Negotiate 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 30 mm.
- Always be careful when going up or down kerbs and never negotiate kerbs in reverse direction without an assistant.
- An activated anti-tippers prevent the wheelchair from tipping backwards.

#### 9.4 Go up and down stairs

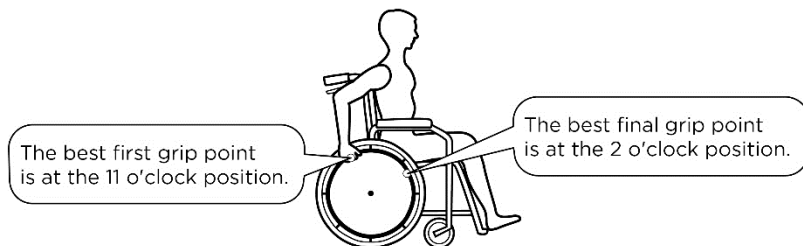
- Always use two or more assistants for assistance. The first assistant should stand behind the wheelchair and the second assistant should hold the front frame to steady the wheelchair in the front.
- If you brake for a long time when going down slopes, a lot of frictional heat is produced at the handrims.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

#### 9.5 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 that might cause the casters stuck.

#### 9.6 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. Karma wheelchairs are limited to only one user.
- Pay attention to assure your clothing doesn't get tangled with the wheels.
- When operating the wheelchair via 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.



### **9.7 Stability and balance when seated**

- If you lean too far sideways, you could tip your wheelchair over or fall out of it.
- 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.
- 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.

### **9.8 Transport**

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

### **9.9 Use the anti-tippers**

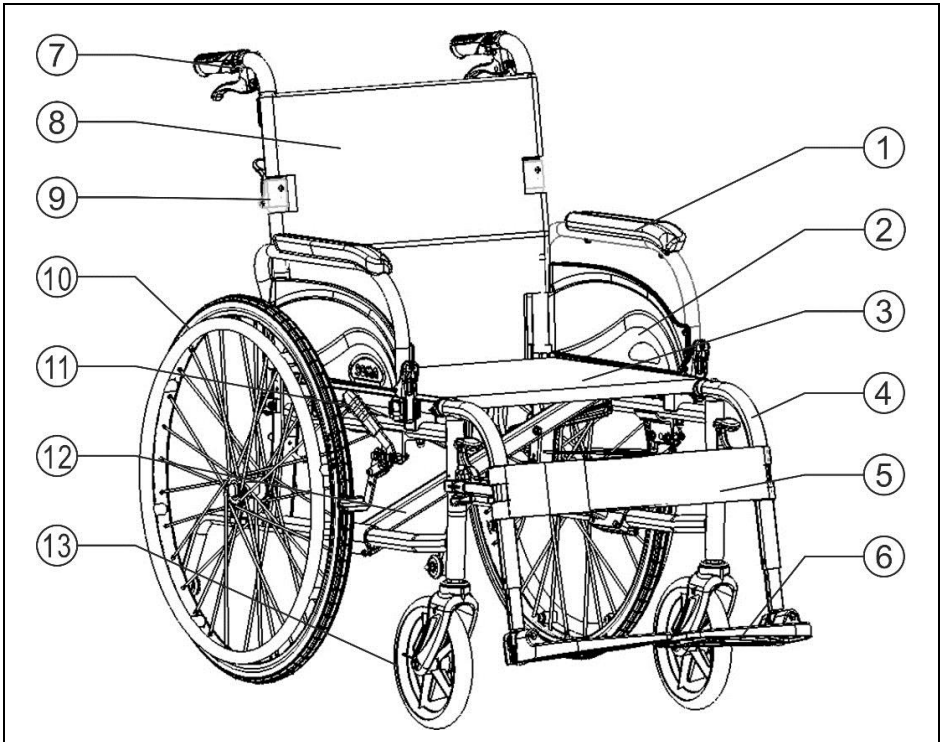
- Karma strongly recommend the use of anti-tippers when using your back tubes with additional load, the backrest is in reclined position or the backrest is in larger back angle.
- Anti-tippers that are incorrectly set or no longer working can lead to personal injury.
- Always advise the user if you deactivate the anti-tippers.
- Prevent tipping, please install an anti-tipper device.

### **9.10 Maximum user weight limit**

- Refer to "Maximum User Weight" in the Section Technical specifications. 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.

# 10. Wheelchair components and functions

## 10.1 Wheelchair overview



- 1. Armrest
- 2. Side Panel
- 3. Seat Upholstery
- 4. Footrest
- 5. Calf Strap
- 6. Footplate
- 7. Push Handle

- 8. Backrest Upholstery
- 9. Backrest Joint
- 10. Rear Wheel
- 11. Parking Brake
- 12. Cross Braces
- 13. Caster

## 10.2 Parking brakes

The parking brakes are used to secure the wheelchair when it is stationary to prevent it from moving.

To apply the brake, pull the brake lever backwards as far as possible. To release the brake, push the brake lever forwards with the palm.



*Apply the brake to lock*



*Release the brake to unlock*

### WARNING

Never apply the parking brakes 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.

### WARNING

Do not apply the parking brakes to slow down the wheelchair. And do not lean on the parking brakes for support. All these actions may lead to the uncontrollable conditions of wheelchair.

### NOTE

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



### 10.3 Backrest

There are two types of backrests (Fixed and Folding) available.

For fixed backrest, it doesn't require adjustments.

For folding backrest, to save the transporting space of wheelchair, the backrest can be folded back. Please operate the lever by pulling it and fold the top of the backrest. If you want to unfold it, please repeat the reverse procedure and it locks automatically.



### 10.4 Armrests

The flip-back armrests are used to support the upper limbs of wheelchair users. It could be also flipped-back for easy side transfer.

To flip back the armrest, press and hold the release lever located at the front socket of the armrest. Then remove the armrest by pulling straight up and flip it back.

If you want to put the armrest back, push the armrest down until the front release lever snaps into its armrest socket hole.



**⚠ WARNING**

Never hold the armrest in order to lift the wheelchair since the armrests do not engage into the wheelchair.

**⚠ CAUTION**

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

### 10.5 Footrest

The swing-away footrests are used to support the lower limbs of wheelchair users. The footrest could be also swing outside and detachable for easy transfer in tight spaces.

To swing-away the footrest, activate the release lever and swing it outside. To detach the footrest, just pull the footrest upwards after activating the release lever. If you want to put the footrest back, swing it to the reverse direction until it engages.



**⚠ WARNING**

Never hold the footrest or legrest in order to lift the wheelchair since there is a risk of injury.

**⚠ CAUTION**

Please keep your fingers away from movable parts or swing mechanisms during removing, returning or adjusting the footrest. Be careful of the risk of pinching.

**i NOTE**

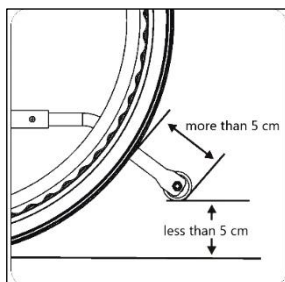
The distance between the brake shoe and the tire can be adjusted. To keep the braking efficacy, the adjustment must be carried out by an authorized dealer.

### 10.6 Anti-tippers (Optional)

Anti-tippers prevent the wheelchair from tipping backwards.

To equip with anti-tippers, press the spring button before inserting them into the back of side frame. Ensure the spring button is secure in the fixing hole.

If the anti-tipper is adjustable, the minimum distance between the rear wheel and the anti-tipper should be more than 5cm and the maximum distance between the ground and the anti-tipper should be less than 5 cm.



**! WARNING**

Anti-tippers which are incorrectly set or damaged can lead to tipping. Please always check that the anti-tippers are working before using the wheelchair. Please ask for an authorized dealer when anti-tippers need to be installed or readjusted.

**! WARNING**

An activated anti-tipper may bump into the ground when negotiating steps or kerbs. Therefore, deactivate the anti-tippers if needed.

**! WARNING**

If the position of the rear wheel axle has been adjusted, please re-evaluate the wheelchair to check if installing the anti-tippers is necessary.

Seat upholstery or backrest upholstery can be one layer or two layers. It depends on the specifications of the wheelchair. If the wheelchair is equipped with the option of two layers of upholstery, the top one can be detached from the bottom one, which makes it possible to clean the upholsteries.

## **10.8 Removing and Fitting the rear wheels**

### **10.8.1 Removing the rear wheels**

- 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 Using your thumb, press the removable axle button in the middle. Keep it pressed and pull the wheel out

### **10.8.2 Fitting 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.
- ③ Using your thumb, press the removable axle button and hold it down. Then push the axle into the adapter.
- ④ Release the removable axle button and make sure that the wheel is secure.





## 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.

## 10.9 Options and Accessories

### 10.9.1 Height adjustable armrests

The flip-back, height adjustable armrests could be flipped-back for easy side transfer and adjustable in height to meet various user's requirements. The function of flip-back and put back the armrest is just the same as flip-back armrest as mentioned before.

To adjust the height of armrest, simply pull the lock lever upward and adjust the armrest to the desired position. Then push the lock lever downward and perform the setting on both sides.



### 10.9.2 Elevating legrests

The elevating legrest is for those who need to elevate their legs or keep their legs at a certain angle for more comfort and support.

To detach the legrest, hold the legrest tube and lift it up to release. Depending on the environment the user is in, you can swing it inward or outward. The legrest can also be detached by lifting it up directly.

To adjust the angle of legrest, simply lift up the legrest to the desired angle in one hand. If you want to return the original angle of legrest, press down the orange lever with one hand while supporting the legrest with another hand.



### 10.9.3 Attendant brake

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



#### 10.9.4 Tension adjustable backrest

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.

#### 10.9.5 Rear wheel axle extension plate

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.



*Forward axle position*



*Rearward axle position*

### 10.9.6 Pelvic belt

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



#### **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.

#### **WARNING**

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 belt is not sufficient as a personal restraint device.



### 10.9.7 Cane Holder, IV Pole Holder and Oxygen Tank Holder

This product could be equipped with cane holder, IV pole holder and oxygen tank 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 Tank Holder*

#### **WARNING**

The rearward stability of wheelchair may be changed to increase the risk of tipping backward while installed these holder and adding the load. Therefore, we strongly recommend the use of anti-tippers.

## 11. First setup

Before using, 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 vital to make the right setup for the user. An improper setup of the wheelchair might lead to uncontrolled driving which can result in personal or material damage.

## 11.1 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.

### 11.1.1 Footrest Length

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



Use 10mm open wrench and 5mm Allen Key from KARMA Tool Kit to loosen the bolt and nut at the side of the footrest. Adjust the footrest height and re-tighten the bolt and nut. Now the footrests are set in to a different position. Please make sure the minimum distance between the footplate and the ground should be more than 5cm.

#### CAUTION

By loosening the bolt on the footrest, 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 footrest length, 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.

## 12. Using the wheelchair

### 12.1 General warnings and advices

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 in driving on unequal surfaces such as slopes, unequal pavements and during descending from footpaths.
- It is not allowed to carry passengers other than the user on the wheelchair.
- On slippery surfaces, like ice and snow, the driving speed must be reduced accordingly.
- Do not drive through water puddles, you cannot see how deep they are. This might lead to dangerous situations. Water can damage the wheelchair.
- Note that no other persons or animals are in the direct contact zone of the wheelchair when using it.
- Always drive slowly in the near surrounding of other people or animals.
- 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.
- There may be a small gap between the rear wheel and the parking brake with the risk that you could trap your fingers. Ensure that you always propel your wheelchair using the handrims only.

### 12.2 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.

**⚠ WARNING**

Changes which are made by third parties are not covered by the warranty and responsibility of Karma Medical.

### 12.3 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.

**⚠ WARNING**

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.

### 12.4 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:



## **12.5 Surroundings**

Special care has been taken to make sure that the chance that the surroundings pinches 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 driving the wheelchair, make sure that no persons or animals are in the near surrounding.
- When using the tilt adjustment, make sure that no persons or animals are in the near surrounding, because it is possible to get pinched by the moving mechanism, although the moving parts are designed to be as safe as possible.

## **12.6 Precautions to prevent dangerous situations**

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

- Only drive at slow speed in the direct surrounding of other people or animals.
- Please do not allow any persons to stand or sit on the wheelchair except for the user.
- Have the wheelchair checked by your supplier after any collision or when the wheelchair is otherwise (visual) damaged.
- Check the tire pressure and refill the tires if necessary every four weeks.
- Check the tires at the same time for wear and damage. Replace them if necessary.
- Have the wheelchair checked at least on a yearly basis by your supplier.

## **12.7 Folding and unfolding the wheelchair**

### **12.7.1 Unfolding the wheelchair**

- ① Hold the armrests and pull outwards (Figure 12.1).
- ② Point your fingers inward with the palm of your hand on the seat frame. Press down until the seat is fully lowered. Make sure the seat frame is firmly seated in its holders (Figure 12.2).
- ③ If your wheelchair is fitted with a fold-down backrest, pull up the backrest at the push-handles until it is fully engaged.

- ④ Mount the footrests on the wheelchair and ensure they're engaged properly.
- ⑤ Flip the footplates down (Figure 12.3).



Figure 12.1



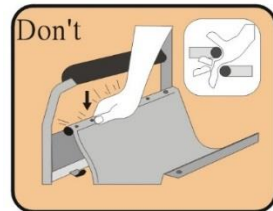
Figure 12.2



Figure 12.3

**⚠ CAUTION**

When pressing down the seat frame in step 2, never put your fingers around the seat edge or under the chair as they can be trapped between the seat and the frame.



### 12.7.2 Folding the wheelchair

- ① Flip up the footplates. (Figure 12.4).
- ② Press the release lever of swing-away footrests outwards and detach them. Then lift the footrest off its mounting bracket.
- ③ Pull up on the seat upholstery by holding it in the center of its front and back edge (Figure 12.5).
- ④ Fold the backrest backwards, if your wheelchair is fitted with a fold-down backrest (Figure 12.6).



Figure 12.4



Figure 12.5



Figure 12.6

## 12.8 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 Maintenance and Repairs chapter.

### 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 details 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.



### 12.9.1 Transfer in the wheelchair

- ① Engage firmly both parking brakes.
- ② Detach the footrests or swing them outwards.
- ③ Flip back the armrests out of the way.
- ④ Hold the armrest of wheelchair and move slowly to the seat.
- ⑤ Sit on the wheelchair seat slowly to prevent the wheelchair from tipping.
- ⑥ Put back the footrests or swing them inwards.
- ⑦ Release both parking brakes for driving.

### 12.9.2 Transfer out the wheelchair

- ① Move the wheelchair as near as possible to the seat you want to move to.
- ② Engage firmly both parking brakes.
- ③ Detach the footrests or swing them outwards.
- ④ Flip back the armrests out of the way.
- ⑤ Hold the armrest of wheelchair and move slowly to the seat. Do not put all your weight or apply large lateral force on the armrests.

#### 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.



## CAUTION

- When transferring in and out of the chair, make sure that the parking brakes are applied to prevent the chair from sliding away.
- Do not get in or out of the chair 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.



## 12.10 Driving and steering the wheelchair

### 12.10.1 General use for user and attendant

- Ensure that the parking brakes 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 the rolling wheels.
- Always use both hands on the push handles to control the chair for attendants.
- 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.
- Always be careful not to drive too fast or turn too quickly and try to achieve a smooth steady ride.

- Cross the tracks perpendicularly to avoid your wheels getting stuck.

 **WARNING**

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

### **12.10.2 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 tipping backwards, it's better to install anti-tippers.

### **12.10.3 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 chair into the rear wheels.

 **CAUTION**

- 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 forwards to the ground when you are going to tilt the chair forwards.

### **12.11 Negotiating steps and kerbs**

Please note that it is always better to avoid kerbs 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, which may cause the user to fall out. Deactivate the anti-tippers before doing it.

#### **12.11.1 Going down a step with an attendant**

- ① The user moves the wheelchair right up to the kerb and hold 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 forwards until the front casters are back on the ground.

 **CAUTION**

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

### 12.11.2 Going down a step with an attendant

- ① The user moves the wheelchair backwards until the rear wheels nearly touch the kerb.
- 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 until the front casters can be placed back on the ground.

#### **WARNING**

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

### 12.11.3 Going down a step by the user

- ① The user moves the wheelchair right to the kerb, lift the front casters and keep the wheelchair balanced.
- ② Now slowly roll both rear wheels over the kerb. 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 Driving and Steering the wheelchair chapter.

## 12.12 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.

### 12.13 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 parking brakes if your wheelchair is stationary on sloping ground.

#### 12.13.1 Use on slopes: going on downhill slopes

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

 **NOTE**

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

 **WARNING**

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

 **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.

## **12.14 Use on slopes: driving on uphill slopes**

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

 **NOTE**

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

 **WARNING**

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

## **12.15 Stability and balance when seated**

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

### **12.15.1 Leaning forward**

- ① Point the front casters forwards. You could move your wheelchair forwards slightly then back again.
- ② Apply both parking brakes.
- ③ When leaning forwards, your upper body must remain over the front casters.

 **WARNING**

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

### **12.15.2 Leaning backward**

- ① Point the front casters forwards. You could move your wheelchair forwards slightly then back again.
- ② Do not apply the parking brakes.
- 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.

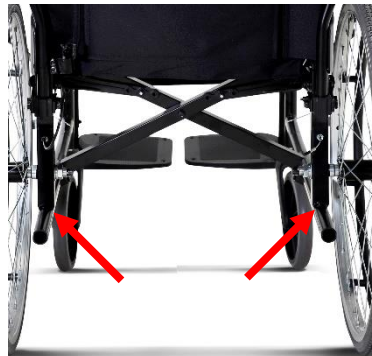
# 13. Transport of the wheelchair

## 13.1 4-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 4-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 parking brakes 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*

**i NOTE**

The specifications of the wheelchair are in accordance with the requirements specified in ISO 7176-19:2008

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 7176-19:2008 standard ("Wheeled mobility devices for use in motor vehicles).



**i 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 transportation hook.
- 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 positions.
- g. During transportation the wheelchair should be locked to prevent it from moving by accidents.
- 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 instable behavior of the wheelchair during transportation.

**i 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 driving 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.

**i NOTE**

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 of the product.

### 13.1.1 Transportation guideline

The wheelchair has a 4-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 ISO7176-19:2008



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



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**

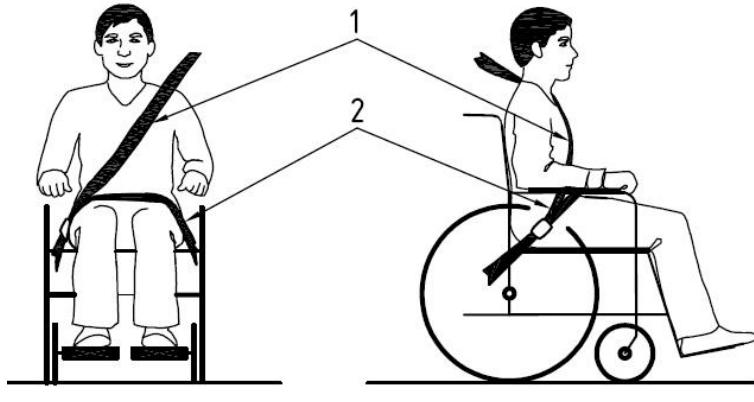
Poor fixations of the wheelchair in a vehicle might cause damage to the vehicle itself, the wheelchair or the passengers inside the vehicle while driving. Not using a car safety belt for fixation while sitting in a wheelchair might lead to serious injuries in case of an accident.

#### **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 manufacturer.

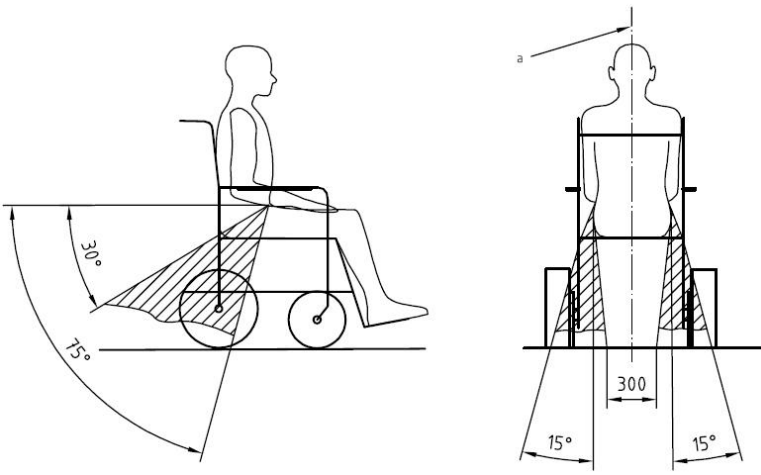
### 13.1.2 Safety belt

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



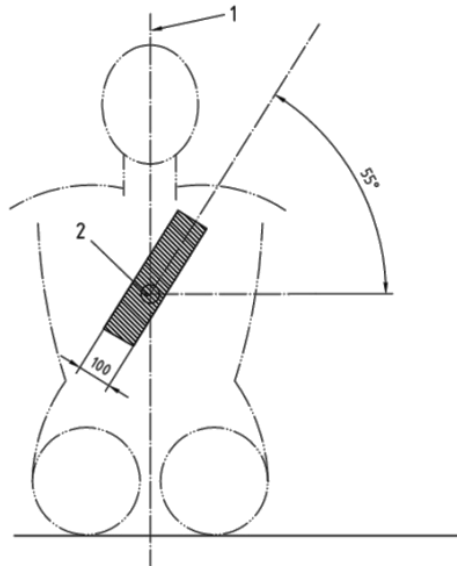
*Positioning of the car safety belts for wheelchair users.*

It is very important to use the safety belt in 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 picture below). Also, the side angle should stay between the vertical planes to maximum of 15° angle with the vertical plane. (See 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.

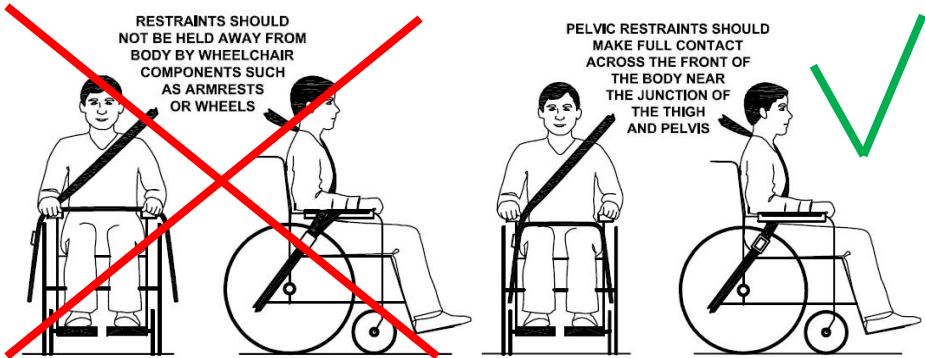


*Shoulder safety belt positioning*

**i NOTE**

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

- The pelvic belt should be worn low across the front of the pelvis, so that the angle of the pelvic 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*

**i NOTE**

**Please, make sure the following conditions are fulfilled to obtain a 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 forwards-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 7176/19-2008.
- The wheelchair should be inspected by a manufacturer’s representative before reuse 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.

## **13.2 Transportation on an airplane**

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

### **13.2.1 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/weight and vice versa. Always check with the airline what rules apply.

## 14. 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 manufacturer.

### 14.1 Daily check

Check the following items before driving. 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 to repair it 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 with Karma authorized distributor/dealer for a qualified technician.

## 14.2 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
<b>GENERAL</b>		
● Wheelchair rolls straight (no excessive drag or pull to one side)		✓
<b>FRAME AND CROSS BARS</b>		
● Inspect frame structure for small cracks/fissures		✓
● Inspect for bent frame or cross bars		✓



<b>BRAKES</b>		
● Do not interfere with tires when rolling		✓
● Pivot points free of wear and looseness		✓
● Easy to engage	✓	
● Prevent chair from moving when engaged	✓	
<b>SEAT &amp; BACKREST</b>		
● Inspect for rips or sagging	✓	
● Inspect for loose or broken hardware		✓
<b>CASTERS</b>		
● Inspect the casters for smooth rotation of the caster wheel and caster assembly		✓
● Inspect the caster for wear in the bearings/mountings and for tire wear or damage		✓
<b>REAR WHEELS</b>		
● If Installed, quick-release axles lock properly; lubricate if necessary	✓	
● No excessive side movement or binding when lifted and spun		✓
● Inspect for cracked, bent or broken spokes	✓	
<b>ARMRESTS</b>		
● If installed, inspect the detachable armrest button for effective locking		✓

● Make sure the armrest detaches and flips back properly		✓
<b>FOOTRESTS</b>		
● Inspect the footplate height adjustment screws are securely tightened		✓
● Inspect the swing-away footrest release lever for effective locking		✓
<b>TIRES</b>		
● 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; tire pressures are located on the side of the tire	✓	

### 14.3 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.

## 14.4 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 information.

### 14.4.1 Upholstery, cloth / air mesh

For normal cleaning, wash the upholstery with hand warm water and a 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.

### 14.4.2 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.

### 14.4.3 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 cleaner or cleaning fluids. These will damage the surface and structure of the material.

#### WARNING

Never use a sponge with a hard surface. This will damage the surface and structure of the material.

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

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

The following actions should be taken, including cleaning (refer to Cleaning section) and inspection (refer to Maintenance Schedule section).

### WARNING

The refurbishment of the wheelchair is only allowed to be executed by an authorized supplier.

### WARNING

If the wheelchair is refurbished by a non-authorized supplier or institute, Karma Medical cannot be held responsible for this product, and all warranty claims will be voided.

### NOTE

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

## 16. Disposal of the product

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

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

## 17. Trouble shooting

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

<b>Problem</b>	<b>Checking Points and Corrective Action</b>
1. Chair Veers Right/Left	<ul style="list-style-type: none"><li>• Check tires for correct and equal pressure</li><li>• Check caster bracket angle</li><li>• Check that rear wheels are equally spaced from the seat frame</li></ul>
2. Sluggish Turn or Performance	<ul style="list-style-type: none"><li>• Check tires for correct and equal pressure</li><li>• Check for loose nuts and bolts</li></ul>
3. Caster Flutter/Wobble	<ul style="list-style-type: none"><li>• Check tires for correct and equal pressure</li><li>• Check for loose nuts and bolts</li><li>• Check caster bracket angle</li></ul>
4. Squeaks and Rattles	<ul style="list-style-type: none"><li>• Check for loose nuts and bolts</li></ul>
5. Looseness in Chair	<ul style="list-style-type: none"><li>• Check for loose nuts and bolts</li></ul>

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

## 18. Technical specifications

Product Model	Agile				
Nominal seat width (in)	16	18	16	18	20
Nominal seat depth (in)	16	16	18	18	18
Caster x Rear wheel size (in)	7 x 14				
Maximum user weight (kg)	125				
Overall length with legrest (mm)	1025 ~ 1035		1085 ~ 1095		
Overall width (mm)	600	650	600	650	700
Overall height (mm)	915 / 995**				
Folded length (mm)	710* / 780		760* / 830		
Folded width (mm)	280	280	280	280	280
Folded height (mm)	735* / 915				
Total mass (kg)	12.3 ~ 12.8 / 12.6 ~ 13.1* / 12.8 ~ 13.3**				
Mass of the heaviest part (kg)	11.1 ~ 11.6 / 11.4 ~ 11.9* / 11.6 ~ 12.1**				
Handrim diameter (mm)	-	-	-	-	-
Horizontal location of axle (mm)	40	40	40	40	40
Minimum turning radius (mm)	805	840	870	845	845
Minimum turning radius without user (mm)	745	780	810	905	905
Pivot width (mm)	1230	1250	1280	1390	1390
Static stability downhill (X°)	N/A				
Static stability uphill (X°)	N/A				
Static stability uphill with anti-tippers (X°)	N/A				
Static stability sideways (X°)	N/A				
Seat plane angle (X°)	8	8	8	8	8
Effective seat depth (mm)	510	510	560	560	560
Nominal seat depth (mm)	420	420	465	465	465
Effective seat width (mm)	430	480	430	480	530
Seat surface height at front edge (mm)	480	480	480	480	480
Backrest angle (X°)	14	14	14	14	14
Seat to backrest angle (X°)	95	95	95	95	95
Backrest height (mm)	430 / 510**				
Headrest height above seat (mm)	-	-	-	-	-
Leg to seat angle (X°)	116	116	116	116	116
Footrest to seat distance (mm)	380 ~ 480				
Armrest to seat distance (mm)	220	220	220	220	220
Front location of armrest structure (mm)	360	360	360	360	360
* 430 mm foldable backrest/ ** 510 mm foldable backrest					

Product Model	Agile				
Nominal seat width (in)	16	18	16	18	20
Nominal seat depth (in)	16	16	18	18	18
Caster x Rear wheel size (in)	7 x F22				
Maximum user weight (kg)	125				
Overall length with legrest (mm)	1055 ~ 1075		1105 ~ 1125		
Overall width (mm)	610	660	610	660	710
Overall height (mm)	920 / 1000**				
Folded length (mm)	710* / 770		760* / 820		
Folded width (mm)	280	280	280	280	280
Folded height (mm)	765* / 920				
Total mass (kg)	12.9 ~ 13.4 / 13.2 ~ 13.7* / 13.4 ~ 13.9**				
Mass of the heaviest part (kg)	11.7 ~ 12.2 / 12.0 ~ 12.5* / 12.2 ~ 12.7**				
Handrim diameter (mm)	485	485	485	485	485
Horizontal location of axle (mm)	40	40	40	40	40
Minimum turning radius (mm)	865	865	915	915	915
Minimum turning radius without user (mm)	805	805	855	855	855
Pivot width (mm)	1290	1290	1340	1340	1340
Static stability downhill (X°)	17				
Static stability uphill (X°)	15.6				
Static stability uphill with anti-tippers (X°)	N/A				
Static stability sideways (X°)	16				
Seat plane angle (X°)	8	8	8	8	8
Effective seat depth (mm)	505	505	555	555	555
Nominal seat depth (mm)	415	415	465	465	465
Effective seat width (mm)	430	480	430	480	535
Seat surface height at front edge (mm)	480	480	480	480	480
Backrest angle (X°)	14	14	14	14	14
Seat to backrest angle (X°)	95	95	95	95	95
Backrest height (mm)	430 / 510**				
Headrest height above seat (mm)	-	-	-	-	-
Leg to seat angle (X°)	116	116	116	116	116
Footrest to seat distance (mm)	380 ~ 480				
Armrest to seat distance (mm)	220	220	220	220	220
Front location of armrest structure (mm)	360	360	360	360	360

\* 430 mm foldable backrest/ \*\* 510 mm foldable backrest

Product Model	Agile				
Nominal seat width (in)	16	18	16	18	20
Nominal seat depth (in)	16	16	18	18	18
Caster x Rear wheel size (in)	<b>8 x 14</b>				
Maximum user weight (kg)	125				
Overall length with legrest (mm)	1025 ~ 1035		1085 ~ 1095		
Overall width (mm)	600	650	600	650	700
Overall height (mm)	935 / 1015**				
Folded length (mm)	750 / 790*		800 / 840*		
Folded width (mm)	280	280	280	280	280
Folded height (mm)	760* / 930				
Total mass (kg)	12.2 ~ 12.7 / 12.5 ~ 13.0* / 12.7 ~ 13.2**				
Mass of the heaviest part (kg)	11.0 ~ 11.5 / 11.3 ~ 11.8* / 11.5 ~ 12.0**				
Handrim diameter (mm)	-	-	-	-	-
Horizontal location of axle (mm)	40	40	40	40	40
Minimum turning radius (mm)	805	840	890	890	875
Minimum turning radius without user (mm)	745	780	830	830	815
Pivot width (mm)	1230	1250	1300	1300	1400
Static stability downhill (X°)	N/A				
Static stability uphill (X°)	N/A				
Static stability uphill with anti-tippers (X°)	N/A				
Static stability sideways (X°)	N/A				
Seat plane angle (X°)	8	8	8	8	8
Effective seat depth (mm)	505	505	555	555	555
Nominal seat depth (mm)	415	415	465	465	465
Effective seat width (mm)	430	480	430	480	530
Seat surface height at front edge (mm)	505	505	505	505	505
Backrest angle (X°)	14	14	14	14	14
Seat to backrest angle (X°)	95	95	95	95	95
Backrest height (mm)	430 / 510**				
Headrest height above seat (mm)	-	-	-	-	-
Leg to seat angle (X°)	116	116	116	116	116
Footrest to seat distance (mm)	380 ~ 480				
Armrest to seat distance (mm)	220	220	220	220	220
Front location of armrest structure (mm)	360	360	360	360	360

\* 430 mm foldable backrest/ \*\* 510 mm foldable backrest



Product Model	Agile				
Nominal seat width (in)	16	18	16	18	20
Nominal seat depth (in)	16	16	18	18	18
Caster x Rear wheel size (in)	<b>8 x Q24</b>				
Maximum user weight (kg)	125				
Overall length with legrest (mm)	1065 ~ 1070		1115 ~ 1120		
Overall width (mm)	605	655	605	655	705
Overall height (mm)	940 / 1020**				
Folded length (mm)	850* / 1020		900* / 1070		
Folded width (mm)	280	280	280	280	280
Folded height (mm)	750	750	750	750	750
Total mass (kg)	13.9 ~ 14.4 / 14.2 ~ 14.7* / 14.4 ~ 14.9**				
Mass of the heaviest part (kg)	8.6 ~ 9.1 / 8.9 ~ 9.4* / 9.1 ~ 9.6**				
Handrim diameter (mm)	535	535	535	535	535
Horizontal location of axle (mm)	0	0	0	0	0
Minimum turning radius (mm)	805	810	855	900	900
Minimum turning radius without user (mm)	745	750	795	840	840
Pivot width (mm)	1245	1340	1295	1400	1400
Static stability downhill (X°)	17				
Static stability uphill (X°)	15.6				
Static stability uphill with anti-tippers (X°)	N/A				
Static stability sideways (X°)	16				
Seat plane angle (X°)	8	8	8	8	8
Effective seat depth (mm)	505	505	555	555	555
Nominal seat depth (mm)	415	415	465	465	465
Effective seat width (mm)	430	480	430	480	530
Seat surface height at front edge (mm)	505	505	505	505	505
Backrest angle (X°)	14	14	14	14	14
Seat to backrest angle (X°)	95	95	95	95	95
Backrest height (mm)	430 / 510**				
Headrest height above seat (mm)	-	-	-	-	-
Leg to seat angle (X°)	116	116	116	116	116
Footrest to seat distance (mm)	380 ~ 480				
Armrest to seat distance (mm)	220	220	220	220	220
Front location of armrest structure (mm)	360	360	360	360	360

\* 430 mm foldable backrest/ \*\* 510 mm foldable backrest

\* The actual product specifications differ from the data in the table by  $\pm 1$  cm  $\pm 0.5$  kg.

\* The actual product specifications may vary according to different configurations.

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

\* If you want to know more about the measurement methods of wheelchair specifications, please scan the QR code to watch the instructions 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 abilities around the world.

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

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](http://www.karmamobility.es)  
+34 984 390 907  
[karma@karmamobility.es](mailto:karma@karmamobility.es)

KARMA MEDICAL PRODUCTS CO., LTD.  
[www.KarmaMedical.com](http://www.KarmaMedical.com)  
+886 5 206 6688  
[globalsales@karma.com.tw](mailto:globalsales@karma.com.tw)

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