

# **USER MANUAL**

Ottobock Kidevo Adapt Wheelchair



**KIDEVOADAPT** 

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#### 1 Foreword

The kidevo adapt mobility base for seating shells has been custom-built in line with the requirements and wishes of future users following extensive adaptations. Numerous options and accessories are available, thus enabling a precise, customised fit to be achieved. The mobility base for seating shells is easy to adjust and adapt. As a rule, the mobility base for seating shells can grow with the user starting from the size supplied.

The manufacturer recommends checking the product settings regularly to ensure optimal fitting over the long term. A six-monthly review is recommended for children and adolescents in particular.

The kidevo adapt is manufactured in accordance with the Medical Device Regulation (MDR) 2017/745.

The mobility base for seating shells has been tested and approved for the safe transport of children in vehicles according to ISO 7176-19 and tested in accordance with the applicable requirements of the European wheelchair standards EN 12182 and EN 12183 with positive results.

Report each serious incident related to the product to the manufacturer and to the relevant authority in your country. This is particularly important when there is any worsening of the state of health.

New information regarding product safety and product recalls as well as the declaration of conformity can be obtained from the manufacturer's service department.

You can request this document as a PDF file from the manufacturer's service department. The PDF file can also be displayed in a larger size.

Veldink4kids is sure this product will meet your expectations and hopes you will enjoy using it.

#### 2 Intended use

The safe use of the product can be ensured only if it is used as intended in accordance with the information contained in these instructions for use. The user is ultimately responsible for accident-free operation.

#### 2.1 Indications for use

The mobility base for seating shells is intended for everyday indoor and outdoor use, by the user or an attendant, of people with temporary or permanent limitations of the ability to walk, inability to walk or difficulty standing up.

The mobility base for seating shells is suitable for users with intact skin whose anatomy (such as body dimensions and weight) permits the intended use of the product.

A seat orthosis must be purchased separately and positioned on the mobility base for seating shells. It is not included in the scope of delivery of the kidevo adapt.

The mobility base for seating shells is available in 3 sizes (size 1, size 2, size 3). The sizes refer to the distance between the side panels / clothing guard. There is also a choice of three base plate lengths (A, B, C).

The maximum user weight is 75 kg.

The mobility base for seating shells may be used only with the corresponding options. The options can be viewed in the Veldink4kids online configurator at www.configurator.veld-ink4kids.com.

The mobility base for seating shells may be used only with the options listed on the product order form.

Veldink4kids assumes no liability for combinations with medical devices and/or accessories for a medical device from other manufacturers outside the modular system.

Exceptions to this are combinations that have been evaluated for effectiveness and safety, for example, based on a combination agreement, as illustrated below:

- Welzorg Nederland BV
- Bert Stevens
- Exello
- Ortho Innovatief
- Perteon
- RZ Groep
- Lewis Seating Systems
- Lewis Specials B.V.
- R82 (xPanda)
- Summit
- Permobil (Supportec) / Orthototaal

#### 2.2 Indications

Minor to pronounced or complete restrictions of mobility

#### 2.3 Contraindications

#### 2.3.1 Absolute contraindications

None known

#### 2.3.2 Relative contraindications

Failure to meet physical or mental requirements

# 3 Safety provisions

#### 3.1 Explanation of warning symbols

 $\triangle$  Caution: Warning regarding possible risks of accident or injury.

 $\triangle$  Warning: Warning regarding possible serious risks of accident or injury.

#### 3.2 Safety notices

Please read these instructions for use carefully before putting the product into use. All users and/or their attendants must be instructed in the use of the product by qualified personnel. In particular, users and/or attendants must be informed of the residual risks with the aid of the safety notices in these instructions for use.

Failure to follow the safety regulations, instructions, warnings and advice may adversely affect the functionality of the product and result in physical injury to the user or damage to the product or the environment.

### **⚠** Warning

- The kidevo adapt has been tested and approved for the safe transport of children in vehicles according to ISO 7176-19.
- If possible, we recommend using a properly approved seat in the vehicle during transport and storing the product securely in the vehicle's cargo compartment.
- Use an approved 4-point restraint system to secure the seat and its occupant in a transport vehicle. The optional seat belt is not a safety belt.
- Also use an approved 3-point safety belt to transport the user safely (in the forward-facing position).
- If you need to sit in the wheelchair for extended periods of time, you should regularly change your sitting position, move around or try to stand up briefly. Check that there are no seams, folds or other irregular pressure points on the back support and seat. This helps prevent sores (pressure ulcers).
- Check your skin for intactness before and during use of the product. If skin damage or other problems occur during use, stop using the product. Consult the qualified personnel.
- Never reach too far out of the product, as you may fall over.
- Drive slowly when crossing obstacles (e.g. steps, curbs) and negotiating uphill or down-hill slopes and inclines.
- Never cross obstacles at an angle. Always approach obstacles head on (at an angle of 90°). Raise the caster wheels before crossing obstacles.
- Avoid collisions with obstacles and dropping off curbs/ledges.
- Avoid driving on unpaved ground.
- Cross railway property and railway tracks only in the designated areas. Negotiate level
  crossings so the caster wheels of the product cannot get caught in the gap between
  the rail and the road surface.
- Speeds above 5 km/h can be dangerous if you have not had enough practice.
- Never drive at too high a speed through a bend or swerve quickly and sharply. This
  could make you fall over.
- Do not cross obstacles unless you are sure you can perform the manoeuvre safely.
- Attaching loads (e.g. backpacks) can adversely affect stability. Therefore, suspending additional loads on the product is not permitted.
- Use anti-tipper supports unless you are an experienced wheelchair user.
- Never lift the product by its moving or removable parts. Only lift the product by firmly mounted components.
- If your wheelchair is equipped with height-adjustable push handles, ensure that the clamping levers are always firmly tightened.
- The seat and back support upholstery as well as seat cushions, pads and covers comply with the normative requirements for flame resistance. However, they may still ignite if fire is handled improperly or negligently. Keep away from all ignition sources.

- The upholstery and the frame can become very hot during prolonged exposure to sunlight. Do not expose the product to any extreme temperatures (e.g. direct sunlight, sauna, extreme cold). Do not leave the product in the immediate vicinity of heaters.
- When negotiating an incline, the centre of gravity shifts to the rear and the product tilts more easily.
- When ascending slopes or ramps, or when crossing obstacles on upward slopes, always lean your upper body far forward. If users cannot lean their body forward, attendants must secure the rear.
- When descending a slope, the centre of gravity shifts forward and the user can more easily fall forward out of the product.
- Do not reach into the spokes of the rotating drive wheel.
- Pay attention not to pinch parts of your body at the wheel lock lever or between the side or frame parts.
- Do not reach between the drive wheel and wheel lock or drive wheel and side panel when driving the product.
- Never change the design of the product.
- The product has labels, safety symbols and instructions attached to it. They must not be covered or removed. They must remain in place and be clearly legible throughout the lifetime of the product.
- Before using the product, verify that all parts of the product are properly assembled and tightened.
- Always firmly re-tighten the mounting screws and nuts after changing settings. Observe
  the tightening torques specified in section 19.2 Tightening torques of the screw connections.
- Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite 241).
- Always replace self-locking screws and nuts with new self-locking screws and nuts after disassembly.
- Check the product for safety and functionality after changing the settings. In case of problems with the settings, please contact the qualified personnel who adjusted your product.
- Keep packaging materials out of the reach of children.
- Note that the product includes small parts that can be loosened and removed without tools. Ensure that small children, for example, do not swallow them.
- Using the product beyond the specified expected lifetime leads to increased residual risk. Observe the specified lifetime.
- Ensure that examinations and treatments are carried out only under the prescribed conditions in order to avoid impairing the examination results or the effectiveness of treatment due to interactions of the product with devices that are used.
- When using public transit, always observe the currently applicable legal requirements and the safety notices of the public transit operator. Use the permanently installed seats in the vehicle. If you depend on using your product as a seat, please use the designated wheelchair spaces and safety securing equipment provided. Always ensure that you are held in place securely.

Putting the belt or positioning aid on incorrectly can lead to strangulation and suffocation. Follow the instructions for putting these on properly so that the user cannot slip into a position that would endanger them. Note that the user's back must be up against the back support pad when securing the belt or positioning aid and during use of the product.

#### **↑** Caution

- When manoeuvring in confined spaces, make sure you do not get stuck. If you do get stuck, try to drive the same route in the opposite direction. Make sure there's help around.
- The product has protruding parts that could cause injury or damage in the event of a collision. Avoid collisions for this reason.
- The seat is more than 420 mm wide and the wheels have a camber of 7°, which can cause problems in terms of the passage width.
- Always have attendants help you negotiate steps and other obstacles. Use equipment (e.g. ramps or lifts). If such equipment is not available, have 2 assistants carry you over the obstacle.
- Do not exceed the max. load (see nameplate and section 6 Technical data).
- Please note that certain accessories and add-on components will reduce the remaining load capacity.
- The product may be used by one person only.
- As a wheelchair user, you are particularly at risk on the road. Make sure you are always seen by other road users. Observe the applicable traffic rules. Wear bright clothing or clothing with reflectors.
- Install active lighting on your product. Ensure that the reflectors on the product are clearly visible.
- If the product is stored for an extended period of time, it must be kept in a dry room. The checklist in section 13 must be followed when it is time to start using the product again.
- Make sure that the push bar, back support height, forearm supports, lower leg length and possibly the head support are set to the correct height.
- Maintain a minimum distance of 5 cm between the foot plate and the floor.
- Wear wheelchair gloves when travelling at high speeds in order to protect yourself against burns while braking using the handrims.
- If any faults, defects or other hazards that could lead to personal injury are detected, the product must be taken out of service immediately. This includes uncontrolled movements as well as unexpected or previously not noted sounds or odours that deviate significantly from the state of the product at the time of delivery.

#### Additional information

- Veldink4kids assumes no liability for damage or injury caused by negligence or failure to observe safety notices. Depending on the particular circumstances or the accessories used, additional safety notices may be required.
- Ensure that the product is always in good condition.
- Practise on level, open ground first.

- With the support of an assistant, learn how the product reacts to changes in centre of gravity, e.g. on downward or upward slopes, inclines or when crossing obstacles.
- The maximum tyre pressure for the drive wheels is 6 bar (87 psi). If this is exceeded, the tyre can run off the rim. The information about tyre pressure stated on the tyre itself may differ from the maximum tyre pressure recommended by Veldink4kids. A tyre pressure of 6 bar means less wear and tear and better driving comfort.
- You can repair a flat tyre yourself or have it repaired at your local bicycle shop or by your distributor. After repair, the tyre can be inflated by connecting the bicycle pump to the valve nipple and pumping it.
- Check the dimensions and adjust them optimally as described in these instructions for use.
- In case of problems with the settings, please contact the qualified personnel who adjusted your product.
- Only use original parts and accessories from Veldink4kids. These have been tested and are safe.

#### 3.3 Explanation of symbols

On this page and the next, you will find explanations of the stickers used on the product and their positions on it.

Label	Meaning		
Veldink4kids, Drentse Poort 15A 9521 JA Nieuw-Buirjen www.veldink4kids.com  PRODUCT  MAX USER WEIGHT  (01)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	<ol> <li>CE marking</li> <li>WARNING! Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).</li> <li>Max. load belonging to the serial number</li> <li>Manufacturer information/address</li> <li>Category (model name)</li> <li>Data matrix of the Unique Device Identifier</li> <li>Symbol for medical device</li> <li>Unique Device Identifier (UDI)         <ul> <li>(01) = fixed sequence of numbers</li> <li>(11) = date of manufacture: YYMMDD</li> <li>(21) = serial number</li> </ul> </li> <li>Year of manufacture</li> <li>The product has not been approved by the man-</li> </ol>		
	porting persons with reduced mobility. 1)		
TISO 7176-19	Tested to ISO 7176-19; the product has been approved by the manufacturer for use as a seat in vehicles for transporting persons with reduced mobility. 1)		
	Fixation point to attach the product in vehicles for transporting persons with reduced mobility  The positions of the four attachment points on the product are indicated by this hook symbol.		

<sup>&</sup>lt;sup>1)</sup> Only one of these two stickers is attached to the product.

#### 3.4 Positioning of the stickers

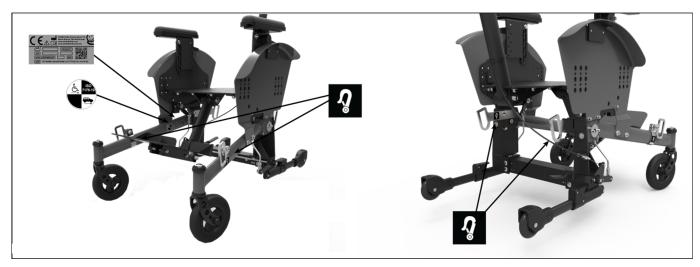


Figure 1: Signage on the product

If a sticker on the kidevo adapt is unusable or no longer legible, a new sticker can be requested from info@veldink4kids.com. The affixed CE marking can also be replaced via the customer file.

#### 4 Side effects

The following side effects may occur during use of the product:

- · Neck, muscle and joint pain
- Circulatory disorders, risk of pressure sores

Contact a doctor or therapist in case of problems.

# 5 Warranty

Veldink4kids products are assembled with passion and care, and are carefully checked before they leave the factory. Should a product fail to meet your expectations, you can contact the distributor from whom you purchased the product.

The expected lifetime of the kidevo adapt is 5 years. Veldink4kids provides a 5-year warranty on the product against frame breaks. Wear and tear parts such as upholstery, tyres, colour varnish, etc. are excluded from the warranty/statutory rights (unless these are manufacturing defects that are reported to the manufacturer within 3 months of delivery).

#### 5.1.1 Terms and conditions

Repairs and/or replacements of spare parts must be carried out by a distributor authorised by Veldink4kids.

The warranty/statutory rights are only valid if, in the event of a complaint, the distributor receives information about the nature of the problem and the circumstances under which the problem occurred.

For repair or replacement, the manufacturer must be provided with the serial number together with the correct specifications.

Within the warranty/statutory rights period, the part in question will be repaired or replaced free of charge.

The warranty/statutory rights do not apply if the cause of the damage is due to any of the following:

- If the product is not maintained according to the instructions provided.
- If any parts used are not original parts supplied by the manufacturer. These are available from stock and can be ordered from the manufacturer.
- Damage due to improper handling, negligence or accident.
- Changes and/or adaptations made by third parties to the product originally supplied by the factory without the manufacturer's express written consent.

The product described in the instructions for use is not necessarily the version that was delivered. The deviations are due to individual requests and/or changes. However, the instructions apply universally to every version.

The manufacturer reserves the right, without prior notice, to make changes to the design, dimensions, etc. in order to improve the product.

### **△** Important:

The information in these instructions for use refers to the standard product version. Veld-ink4kids assumes no liability for damage caused by the product being changed or modified after the date it was first sold.

Furthermore, Veldink4kids cannot be held responsible for damage caused by the work of third parties.

# $\triangle$ Important:

The kidevo adapt is supplied without spare parts. Spare parts can be ordered from Veldink4kids and installed by Veldink4kids authorised dealers.

# $\triangle$ Important:

Veldink4kids can contact you through its contact database in case of unforeseen events. All Veldink4kids customers are included in this telephone contact database. You will be informed of any necessary notifications relating to the warranty or safety.

# 6 Technical data

The following information applies to the kidevo adapt:

Max. total load [kg]		100		
Max. user weight [kg]	Kg.	75		
Max. weight of seat orthosis [kg]		25*		
Weight [kg]	Kg.	From 17.4		
Weight of the product without wheels [kg]	Kg.	From 14.8		
Weight of the heaviest part [kg]		From 11.3		
Installation dimensions [mm] **		Size 1: 300 - 400 Size 2: 400 - 500 Size 3: 500 - 600		
Front seat height [mm]		Dependent on orthosis		
Rear seat height [mm]		Dependent on orthosis		
Height of base plate		350-510		
Seat depth [mm]		Dependent on orthosis		
Length of base plate		A: 320 B: 370 C: 420		
Overall length [mm]		From 720		
Overall width [mm]	Č.	From 520 ***		
Overall height [mm]		1200		

Back support angle [°]		Dependent on orthosis
Back support height [mm]		Dependent on orthosis
Lower leg length [mm]		Dependent on orthosis
Distance from base plate to foot support	Ź	230-470
Angle between leg support and seat bottom [°]	l	Up to 10
Height of forearm supports [mm]	=	±160
Horizontal axle position [mm]	2	255, 280, 305 or 330
Ground clearance [mm]	1	100
Wheel camber [*]		3
Seat inclination [°]	-	-10 to +10
Tilt range [°]	-	-10 to +52
Drive wheels ["]		20, 22, 24, 26
Caster wheels ["]		6
Permissible tyre type	9	Solid rubber, pneumatic
Min. tyre pressure [bar]	2	4.5
Minimum turning radius [mm]		500
Handrim diameter [mm]	Ţ	504, 554, 604
Max. permissible inclination [°]	1	10

<sup>\*:</sup> The maximum individual weights must not be exceeded..

<sup>\*\*:</sup> The seat width can be adjusted in increments of 2 cm.

<sup>\*\*\*:</sup> Values may be higher than those recommended in Annex A.1.1 of EN 12183 and Annex M of the "Technical specifications for interoperability relating to accessibility for persons with reduced mobility" (PRM TSI). Consider the negative effects this may have in terms of driving through doorways and along escape routes, as well as during transport.

# 7 Product overview

Below is an illustration of the kidevo adapt.

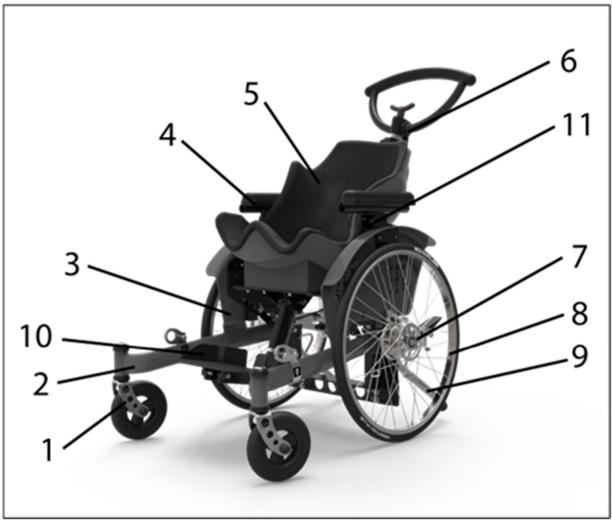


Figure 2: kidevo adapt

- 1 Caster wheel
- 2 Frame
- 3 Clothing guard
- 4 Forearm support
- 5 Sitting orthosis (not included in the scope of delivery of kidevo adapt)
- 6 Push bar

- 7 Braking system
- 8 Drive wheel
- 9 Anti-tipper
- 10 Leg support
- 11 Tilt mechanism

# 8 Handing over the product

The following steps must be performed for the safe handover of the product:

- A sitting test has to be conducted with the user of the product. Pay special attention to proper positioning according to medical considerations.
- The user and any attendants must be instructed by qualified personnel on how to use the product safely. In particular, the enclosed instructions for use are to be used.
- The instructions for use must be given to the user/attendant when the product is handed over.
- Depending on equipment: the supplied instructions for use for accessories must be handed over as well.

# 9 Settings

Based on the instructions, the user can adapt the product to changed conditions without consulting the manufacturer.

Since everyone is built differently and there are large differences in the degree and extent of people's disabilities, the product has been designed so it can be adapted to the person in question.

The many settings that can be adjusted on a wheelchair like this offer numerous advantages when it comes to achieving an optimal sitting posture and position.

Observe the following instructions for all settings:

 $\triangle$  Warning: Incorrect settings may reduce the level of comfort when sitting in the product and stop it being used as intended! In case of problems with the settings, please contact the qualified personnel who adjusted your product.

Initial adjustments have been made to the product prior to delivery. However, further adaptations may be required if the user has grown taller or for medical reasons. Practical experience has also shown it is desirable to adjust the setting slightly.

Follow the step-by-step instructions below to set the product correctly in the most logical and effective way. To adapt the product to the user properly, the steps must be performed correctly. Each adaptation is dealt with separately. In practice, each setting has a greater or lesser impact on the sitting posture and/or centre of gravity. Therefore, check after each adjustment whether these factors have been affected and need to be corrected.

The descriptions of the various settings refer to the tightening of screws and nuts until they are "finger-tight". This corresponds to a tightening torque of 10 Nm.

#### 9.1 Knee and foot angle

#### 9.1.1 Adjusting the knee angle

- 1. Loosen the hexagon socket screw (see Figure 3, item 1).
  - → This allows the entire leg support to move.
- 2. Adjust the position of the leg support.
- 3. Retighten the hexagon socket screw (see Figure 3, item 1).



Figure 3: Adjusting the leg support angle

#### 9.1.2 Adjusting the height of the foot plate

- 1. Fold up the foot plate (see Figure 4).
- 2. Loosen the hexagon socket screw (see Figure 5, item 2) by several turns.
  - → Loosening the hexagon socket screw loosens the inner tube inside the outer tube.
- 3. Position the foot plate at the desired height (see Figure 6) and retighten the hexagon socket screw.



Figure 4: Folding up the foot plate

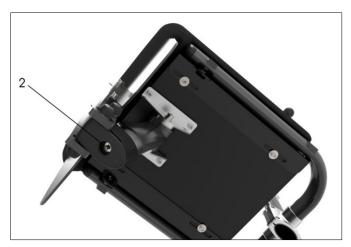


Figure 5: Loosening the hexagon socket screw



Figure 6: Repositioning the inner tube

Notice: A "normal" foot and knee angle is 90° between the foot and lower leg and between the thigh and lower leg. For the depth and angle adjustment of the foot plate, therefore, the foot plate has the same angle as the seat and the rear edge of the foot plate is aligned vertically with the front edge of the seat.

#### 9.2 Push bar

#### 9.2.1 Adjusting the push bar height

- 1. Turn the screw (see Figure 7, item 1) anticlockwise by a few turns.
- 2. Slide the push bar up or down until the desired height is reached.
- 3. Then tighten the screw so it is finger-tight again.

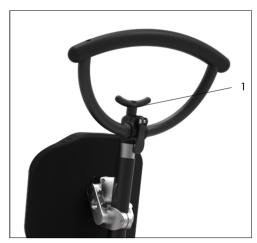


Figure 7: Adjusting the push bar



Figure 8: Adjusting the height

### 9.2.2 Aligning the handle screw

After tightening, you can use the red button to align the handle screw with the push bar.

- 1. Press the red button with your thumb and pull the screw up with your index and middle fingers.
- 2. Turn the screw to the desired position.
- 3. Lower the screw back down.



Figure 9: Aligning the rotary knob

#### 9.3 Head support (optional)

#### 9.3.1 Adjusting the head support

The product is often delivered in combination with a head support. You can choose a head support with or without a belt spacer. This section describes how to adjust a head support with a belt spacer.

- 1. Loosen the hexagon socket screws (see Figure 10, item 1) slightly and slide the entire head support system up or down until the desired position is reached.
- 2. Then tighten the hexagon socket screws so they are finger-tight again to attach the head support system.



Figure 10: Adjusting the height of the head support

#### 9.3.2 Removing the head support

Before removing the head support, perform the following steps.

- 1. Turn the clamping lever (see Figure 11, item 2) by one turn to release the head support (see Figure 11, item 3).
- 2. Remove the head support if necessary or adjust the height of the fixing lug (see Figure 11, item 4). The fixing lug ensures that the head support is always reattached at the same level after it has been removed from the product.
- 3. To attach the head support, slide it back into the tube clamps and tighten the clamping lever so it is finger-tight again.



Figure 11: Removing the head support

#### 9.3.3 Adjusting the head support angle

The head support holder consists of loose joint plates (see Figure 12, item 5) which can be adjusted so that the head support is above the back support at the desired height and at the desired angle.

- 1. Loosen the cap nuts (see Figure 12, item 6) by one turn and move the head support to the desired position.
- 2. Tighten the cap nuts so they are finger-tight again.



Figure 12: Adjusting the head support

The head support shown in Figure 12 has a belt spacer with fixing closures (see Figure 12, item 7). These fixing closures are used to attach belts.

#### 9.4 Assembling the seat orthosis

Qualified personnel is responsible for the kidevo adaption of seat orthoses. Qualified personnel is obliged to ensure the safe use and in particular the static stability of the entire product comprising the kidevo adapt and seat orthosis.

- 1. Use suitable screw connections to secure the seat orthosis in the holes provided in the base plate (see Figure 13).
- 2. If necessary, you can drill new holes in the base plate.

The indicated holes (see Figure 13, left) can be used to secure the seat orthosis.

There are various options for adjusting the installation depth to influence the centre of gravity for the entire product.

The base plate is available in different depths. If the plate is too deep or not deep enough, you can order a new base plate.

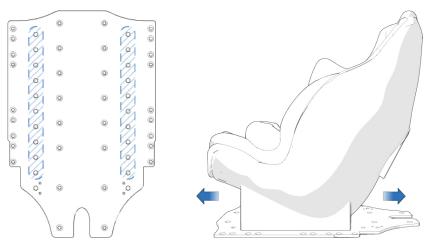


Figure 13: Securing the seat orthosis

#### 9.4.1 Adjusting the depth by repositioning the base plate

- 1. Fully unscrew the four countersunk screws (see Figure 14).
- 2. Then slide the base plate forwards or backwards.

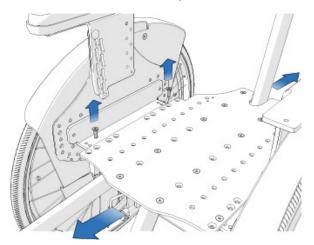


Figure 14: Adjusting the depth by repositioning the base plate

The indicated holes (see Figure 15, left) can be used to secure the base plate. The number of holes and options varies according to how the base plate and holders are combined.

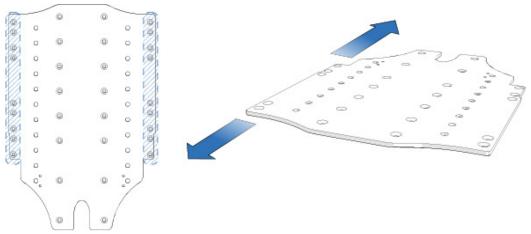


Figure 15: Hole pattern in the base plate (left), repositioning the base plate (right))

#### 9.4.2 Adjusting the depth by repositioning the base plate holders

- 1. Fully unscrew the four countersunk screws (on the left and right, see Figure 16).
- 2. Then slide the base plate holders forwards or backwards (see Figure 17, right).

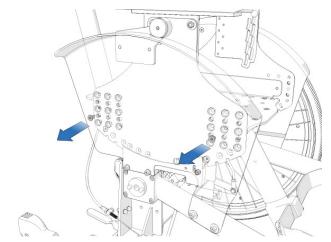


Figure 16: Adjusting the depth by repositioning the base plate holders

The indicated holes can be used to secure the base plate holders (see Figure 17, left).

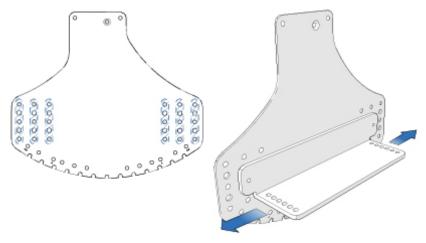


Figure 17: Hole pattern in the tilt plate (left), repositioning the base plate holders (right)

#### 9.5 Assembling the seat orthosis (seat orthosis from RZ Groep used as example)

The information below describes how to assemble a seat orthosis from RZ Groep.

- 1. Position the seat orthosis on the base plate (see Figure 18, Detail 1).

  The orthosis features inserts or insert nuts (M6 or M8, see Figure 18, Detail 2).
- 2. Adjust the position of the inserts/nuts to fit the mounting holes in the kidevo adapt base plate (185 mm  $\times$  185 mm mounting holes).
- 3. Screw 4 hexagon socket screws (see Figure 18, Detail 2) along with washers into the inserts / insert nuts.

If the installation width is 30 cm to 34 cm, 4 countersunk screws should be used instead, as the screw heads would otherwise collide with the base plate holders.

The back support of the orthosis is supplied with inserts or insert nuts (M5).

The position of these inserts / insert nuts determines the position of the back support mounting adapter (see Figure 18, Detail 3)

1. Screw 4 hexagon socket screws (ISO 4762 M5x40, see Figure 18, Detail 4) through the mounting adapter and into the inserts / insert nuts.

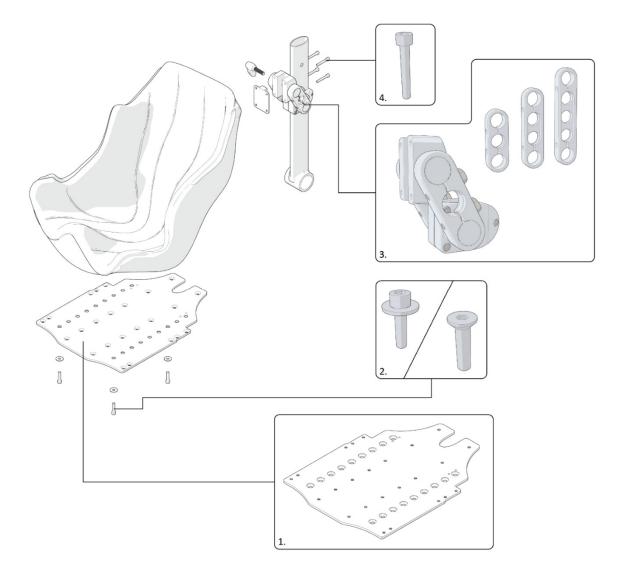


Figure 18: Assembly of a seat orthosis from RZ Groep;

- 1: Base plate
- 2: M6 or M8 hexagon socket / countersunk screws
- 3: Back support mounting adapter
- 4: M5 hexagon socket screw

The back support mounting adapter can be ordered in different lengths (with 3, 4 or 5 holes) to enable the correct position between the seat orthosis and back support tube to be achieved.

### 10 General operation

An illustration of how the kidevo adapt can be disassembled is shown below. Disassembling the mobility base for seating shells makes it easier to transport (without a user) and store. All the necessary steps are described in the next section.

#### 10.1 Disassembly and weight

The weight of each detachable unit is given below. This information is important when you are installing, removing and/or carrying the mobility base for seating shells. The specified weights vary according to the selected options and variants.

You can choose a removable back support so that the seating unit can be disassembled into the seat and the entire back support can be disassembled too.

1 Chassis + orthosis approx. 12 kg (min.) approx. 25 kg (max.)

2 Wheels approx. 5 kg



Figure 19: Disassembling the kidevo adapt

Since the mobility base for seating shells weighs more than 10 kg after removing the wheels, care must be taken when lifting the mobility base for seating shells without wheels. Figure 20 shows where the mobility base for seating shells should be lifted. In this case, the mobility base for seating shells is assumed to be lifted from the left side (seen from the user's perspective).

- 1. Place your hand on the underside of the front.
- 2. Grasp the seat tube from the back with the other hand.

Always remember to keep your back straight when lifting such a weight.



Figure 20: Lifting points on the kidevo adapt

# 10.2 Fold-up foot plate

The foot plate on the kidevo adapt can be folded up. This can be important when transporting the mobility base for seating shells or during a transfer.



Figure 21: Foot plate



Figure 22: Foot plate, folded up

#### 10.3 Wheel assembly and function of the drum wheel lock

#### 10.3.1 Removing/attaching the drive wheel

- 1. To assemble a wheel on a quick-release axle, press the foot pedal for vacuum control of the wheel lock (see Figure 23, item 1) down.
  - $\rightarrow$  The wheel lock is engaged and the mobility base for seating shells is in the parking position.
- 2. Tip the mobility base for seating shells with one hand on the forearm support.
- 3. Hold the wheel and press the quick-clamp button (see Figure 24, item 2).
- 4. Slide the axle (see Figure 24, item 3) into the guide (see Figure 24, item 4) until the wheel is fully inserted into the chassis.
- 5. Let go of the button.
  - $\rightarrow$  The button jumps out and the axle engages in the guide.
- 6. After assembling a wheel with a quick-release axle, check whether the axle has engaged in the guide. You can do this by taking hold of a mounted wheel by the spokes of the wheel hub and trying to move it horizontally. If this is not possible, the axle is locked.

#### \*Freewheel = wheel lock not active



Figure 23: Foot pedal for vacuum control of the wheel lock



Figure 24: Removing/attaching the drive wheel

#### 10.3.2 Operating the drum wheel lock



Figure 25: Drive wheel with wheel lock lever



Figure 26: Adjustment screw opening

1. Push the wheel lock lever forward or backward (from the sitting position) to bring the wheel lock into the parking position with a perceptible click.

#### 10.3.3 Adjusting the drum wheel lock

To carry out the following steps, it is easier to place something under the anti-tipper support so that the wheel can rotate freely. Alternatively, the action can be performed by two people.

The drum wheel lock can be adjusted to ensure it functions optimally at all times.

- 1. There is a slot on the underside of the wheel lock cover that allows you to reach an adjustment screw (only when idling\*). Use a 3 mm Allen key to turn the adjustment screw.
- 2. Allow the wheel to rotate freely while simultaneously turning the adjustment screw inward (clockwise). At a certain point, the wheel lock begins to engage.
- 3. Then turn the adjustment screw back a quarter of a turn and check that the wheel lock no longer engages.

\*Freewheel = wheel lock not active

#### 10.4 Anti-tipper

The anti-tipper prevents the mobility base for seating shells from tipping backward. The anti-tipper can be deactivated, for example when crossing obstacles.

#### 10.4.1 Adjusting the anti-tipper

- 1. Lift the lever on the plastic clamp (see Figure 27).
- 2. Pull or push the inner tube backward or forward by the wheel to determine how far the product can tip backward.

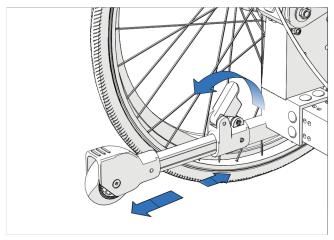


Figure 27: Adjusting the anti-tipper

#### 10.5 Seating unit

#### 10.5.1 Tilting the seating unit using the hand control lever

- 1. To tilt, operate the tilt control lever (see Figure 28) located on the attachment rod of the push handle.
- 2. Now push or pull on the push bar with your hands and tilt the seating unit to the desired position.
- 3. Release the tilt control lever again.
  - → The seating unit engages in the tilt plate.

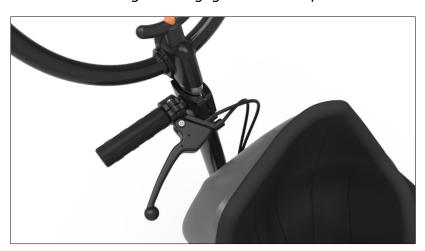


Figure 28: Tilt mechanism control lever

#### 10.5.2 Tilting the seating unit using the foot control pedal

- 1. Step on the lever with your foot (see Figure 29).
- 2. Now push or pull on the push bar with your hands and tilt the seating unit to the desired position.
- 3. Release the control pedal.
  - $\rightarrow$  The seating unit engages in the tilt plate.

The seating unit can be adjusted from 10° forward to 52° back (see Figure 30).

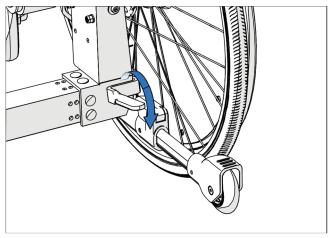


Figure 29: Tilt mechanism control pedal



Figure 30: Tilt range

# 11 Using the product

#### 11.1 Water, sand, scraps of food, litter, etc.

You may come into contact with the contaminants named above while using your mobility base for seating shells, which can impair the functionality of your product.

Avoid full or partial immersion in water. If your mobility base for seating shells gets wet or you clean it with water, dry it as well as possible.

To avoid corrosion of the product, do not use it in salt water.

Sand, scraps of food, road dirt, hair, etc. have an abrasive and therefore wearing effect on the moving parts (see section 14 Cleaning and care).

#### 11.2 Assistance by an attendant

# $\triangle$ Warning:

Failure to observe the following warnings may result in tipping over or falling, which may cause injury to the user or attendant.

#### 11.3 User:

Get to know your attendant and learn what they are capable of. Ensure that they are familiar with the warnings as well as the safety and technical instructions for using the mobility base for seating shells. As a user, make sure that the attendant knows your wishes and knows what you expect from them.

#### 11.4 Centre of gravity

# $\hat{\perp}$ Warning:

The moment at which the mobility base for seating shells tilts forward, backward or to the side depends on the centre of gravity and stability. The most important setting on your mobility base for seating shells is the position of the seating unit in relation to the drive wheels. The further back the seating unit is, the easier the mobility base for seating shells will be to manoeuvre, but the greater the risk will be of the mobility base for seating shells tilting back.

Changing the setting of the mobility base for seating shells increases or reduces the risk of falling or tipping over. Always have these adjustments made by competent persons.

In order to avoid falling or tipping over, you need to learn how to maintain the centre of gravity. You should not try to find this out on your own, do make sure you get help. The anti-tipper supports help to prevent the user from falling over.

The centre of gravity and stability of your mobility base for seating shells are also influenced by changes in body position and/or posture. Driving the mobility base for seating shells on an inclined surface or hanging a bag on the back also interferes with the centre of gravity.

As you enter and exit the ramp to a transport vehicle, this affects the centre of gravity and stability of your mobility base for seating shells. An attendant must ensure that any interference with the centre of gravity does not cause the mobility base for seating shells to tip over (see Figure 31).

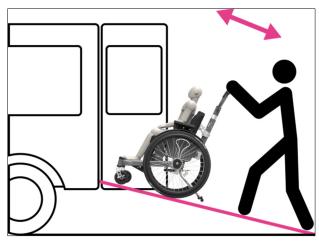


Figure 31: Ramp to a transport vehicle

#### 11.5 Getting dressed and changed

# $\triangle$ Warning:

When you get dressed or changed, your weight shifts on the mobility base for seating shells. This may make you fall or tip over, which may cause serious injury.

#### 11.6 Wheelies (balancing on the drive wheels)

A wheelie is when you balance on the drive wheels of your mobility base for seating shells without the caster wheels touching the ground. If you can handle this confidently, you will be able to overcome curbs and other obstacles easily.

# $\triangle$ Warning:

It is dangerous to perform a wheelie as you may fall or tip backward, which may cause serious injury. Always observe the following warnings:

Talk to your therapist or another competent consultant about whether and how you can learn to perform a wheelie responsibly.

Don't try to perform a wheelie if you are not an experienced user or if you don't have any help.

#### 11.7 Stretching out your arms or leaning out

# $\triangle$ Warning:

If you stretch out or lean forward, this affects the centre of gravity of the mobility base for seating shells. Failure to observe these warnings may make you fall or tip over, which may cause serious injury.

Avoid stretching out or leaning forward when you need to change your centre of gravity. If you lean forward, the mobility base for seating shells may tip over. Always keep the lower part of your back in contact with the back support. Ask for help or use a device to increase your reach.

Never stretch out with both hands. If you do, you may no longer be able to catch yourself if the wheelchair tilts forward.

Never lean back to reach for an object unless your mobility base for seating shells has anti-tipper supports.

#### 11.8 Hills and slopes

# riangle Warning:

When you drive up, down or across a slope, the centre of gravity of your mobility base for seating shells changes. Failure to observe these warnings can lead to serious injury because the mobility base for seating shells tips over or you lose control of it:

Avoid turning on a slope or driving sideways as this may cause the mobility base for seating shells to tip over. If possible, always drive straight up or down a slope.

Always be extremely careful when ascending or descending a slope of more than 10 % (1 in 10) (see Figure 32). Ask for help if you think you cannot manage when driving up or down a slope. Anti-tipper supports cannot prevent you from tipping backward on a steep slope. You may not be able to reach the top of a steep slope without stopping on the way. If you have to stop, you must do so with the mobility base for seating shells at right angles to the slope, otherwise you may lose control and tip backward. Normally, driving backward is the better option on a steep slope, as you can use more power. You should try to find out if this applies to you.

Always keep your speed under control when driving down a hill. If you drive too fast, you may lose control of your mobility base for seating shells. Ask for help if you are unable to drive up or down the hill yourself. You can control your speed by constantly exerting pressure on the tyres. However, wear gloves or other protection, as friction from the tyres may burn your hands. Never use the wheel locks to slow down or stop. If you do this, you may lose control of the mobility base for seating shells or it may tip over.

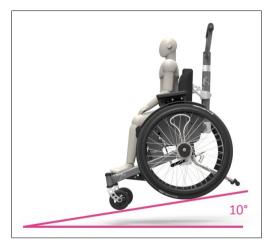


Figure 32: Uphill/downhill grade

# 11.9 Transferring (from the mobility base for seating shells to another seat or vice versa)

# riangle Warning:

Failure to observe these warnings may make you fall or tip over, which may cause serious injury.

Transferring from one seat to another requires good balance and dexterity and can be very dangerous. Remember that there is a moment when the mobility base for seating shells is not below you.

To prevent falls, you must:

- Learn how to position your body and how to support yourself during the transfer.
- Learn a method for safe transfers together with your therapist or an expert consultant.

• Have someone with you who can help you until you are sure you can transfer safely on your own.

#### 11.10 Curbs and steps

# riangle Warning:

Failure to observe these warnings may make you fall or tip over, which may cause serious injury to yourself or others.

Never drive up or down a curb or step on your own unless you are an experienced user who can confidently perform a wheelie, or you are sure you have the necessary upper body strength.

Do not attempt to drive up a high curb or step (more than 10 cm high) without assistance. Your mobility base for seating shells could exceed its centre of gravity and tip backward (see Figure 33).

Always drive straight (at a right angle) onto or over a curb. If you drive at a different angle, there is a high risk of falling because the mobility base for seating shells is inclined.



Figure 33: Curb/step down

#### 11.11 Using stairs

# riangle Warning:

Avoid this action if possible to prevent injury to yourself and/or attendants. Read and observe the warnings for attendants. Failure to observe this warning may result in falling or tipping over, which may cause serious injury to the user and/or attendant.

If a mobility base for seating shells needs to be taken up or down stairs with the user sitting in it, this must always be done by two or more attendants.

Ensure that the user is sitting securely in the wheelchair and their arms, legs or hands do not come into contact with obstacles.

Recommended methods of carrying the product and user:

- The attendants position themselves to the left and right of the mobility base for seating shells in which the user is sitting.
- The attendants take hold of the mobility base for seating shells on the bottom of the seat, at the front and rear.

• The attendants carefully lift the mobility base for seating shells and find the centre of gravity of the mobility base for seating shells with the user sitting in it.

#### 11.12 Safety locks

Even in the event of compliance with all applicable guidelines and standards, alarm systems (e.g. in department stores) may respond to your product. Should this happen, remove your product from the area where the alarm was triggered.

#### 11.13 Surfaces

The mobility base for seating shells works best on hard surfaces. Avoid soft surfaces such as sand, grass, trail paths, gravel roads, etc.

### 12 Transport

#### 12.1 Transport without the user

When transporting the product in a vehicle, remove the wheels if necessary.

Follow the IATA (International Air Transport Association) rules and those of the relevant airline when transporting the product in an aircraft. Inform the airline several days before your flight. Use the SSR (special service request) codes if needed to describe the type of limited mobility. The codes can be found on the internet, for example.

Visit www.iata.org for further information. The manufacturer recommends contacting the airline directly before every flight to obtain information regarding special transport regulations.

#### 12.2 Use in vehicles for transporting persons with reduced mobility

Always use the seats and personal restraint systems installed in the vehicle for transporting persons with reduced mobility first. This is the only way to ensure optimum protection of passengers in the event of an accident.

The product may be used as a seat in a vehicle for transporting persons with reduced mobility if the safety elements provided by the manufacturer and appropriate fastening and personal restraint systems are used.

- The kidevo adapt has been tested with a test dummy secured in the front position with a 3-point belt (facing forward). The product has not been tested for its suitability in collisions other than those mentioned in the above standard.
- When using the mobility base for seating shells as a seat in a vehicle for transporting persons with reduced mobility, Veldink4kids requires that it be equipped with a head support (or head support system) that has been approved in the ISO 7176-19 crash test. If head supports are installed in the vehicle for transporting persons with reduced mobility, they should be used in the first instance.
- The kidevo adapt must be attached to the floor of the transport vehicle by an approved 4-point restraint system.
- The positions of the four attachment points on the kidevo adapt are indicated by a hook symbol sticker (see Figure 34, Figure 35).



- The kidevo adapt can rotate about its own axis. Bear in mind you will need a turning circle with a diameter of  $\pm 1.00$  m for potential manoeuvring in the transport vehicle.
- The suitability of the combination of kidevo adapt and seat orthosis for use in vehicles for transporting persons with reduced mobility must be assessed by qualified personnel. The manufacturer has already crash-tested various seat orthoses with kidevo adapt. The list of combinations approved for use in vehicles for transporting persons with reduced mobility can be requested from the manufacturer. If combined with other seat orthoses, these should also be suitable for use in vehicles for transporting persons with reduced mobility. Information on the recommended assembly procedure (based on the assembly of a seat orthosis from RZ Groep) is provided in section 9.5.

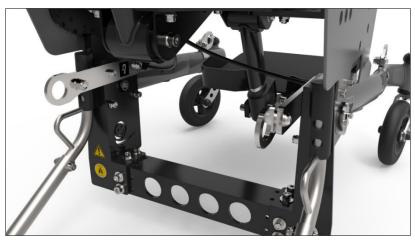




Figure 34: Rear attachment points





Figure 35: Front attachment points

- The kidevo adapt must be positioned so that the user faces forward. The mobility base for seating shells must be secured according to the instructions from the manufacturer of the wheelchair restraint system.
- The kidevo adapt must be secured by a restraint system suitable for the anchor points (see Figure 34, Figure 35).
- The user must be secured by an approved WTORS (wheelchair tie-down and occupant restraint system).

- The user must be secured in the transport vehicle by an approved 3-point safety belt. These safety belts must be attached to the transport vehicle.
- The lap belt must sit low on the user's waist. The angle between the belt and the floor surface must be in the range of 30° to 75° (see Figure 36).

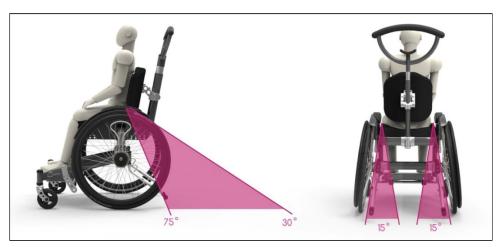


Figure 36: Attachment angle



Figure 37: Positioning of belts

The lap belt must sit where the hip meets the pelvis on the front of the body. The belt must sit close to the body. The upper belt must support the user fully (see Figure 37).

- The diagonal belt must run over the shoulder and chest.
- The belts have to be tight, but not so tight that they are uncomfortable for the user.
- The belt must not be put on twisted.

The belt must not be in contact with parts of the mobility base for seating shells (such as forearm supports or wheels) in such a way that the belt no longer fully supports the user's body (see Figure 38).

- The approved 3-point safety belt is designed to prevent injury to the head and chest.
- The aforementioned information regarding safety belts is based on the ISO 7176-19 crash test, to which the kidevo adapt has been subjected.
- To avoid injury to other passengers, the tray (if present) must be removed. This tray must be stored securely in the vehicle.
- Accessories must be secured or removed as far as possible.

- After each accident, the manufacturer's representative must assess whether the mobility base for seating shells can be used again.
- The attachment points or the structural and frame parts must not be changed and/or replaced without consulting the manufacturer.



Figure 38: Incorrect positioning

#### 12.2.1 Positioning belt

The positioning belt is used to bring the occupant into the correct position. As a rule, the belt is attached to the outside of the orthosis with a cam buckle. If this is not possible, the cam buckle can be mounted in the holes (M5) provided (see Figure 39).

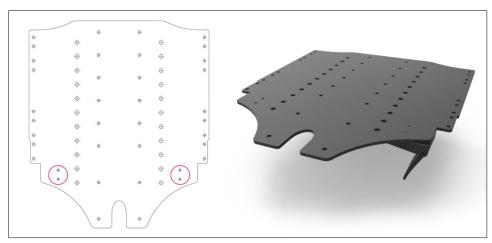


Figure 39: Hole pattern for attaching the belt

Marning: Under no circumstances may the belts and positioning aids that come with the product be used as part of a passenger restraint system in vehicles for transporting persons with reduced mobility. Note that the belts and positioning aids that come with the product are intended only as additional support for the user sitting in the product.

#### 12.2.2 Restrictions for use

Before using the product as a seat in a vehicle for transporting persons with reduced mobility, remove options that need to be taken off for safe transportation in such a vehicle. Please observe the table below.

Stow all dismantled options securely in the vehicle for transporting persons with reduced mobility.

The options/accessories listed below that are not relevant for positioning must be detached from the product and safely stowed in the vehicle for transporting persons with reduced mobility:

- One-arm drive
- Mud cruiser outdoor wheel attachment
- Tray
- Sun canopy

The options/accessories listed below that are relevant for positioning can be detached from the product or remain on the product during transportation in a vehicle for transporting persons with reduced mobility, depending on the evaluation made by the qualified personnel. The qualified personnel has to evaluate the risk of injury in case of an accident compared to the risk of medically inadequate positioning. This evaluation can be performed only by qualified personnel and individually for each user.

- Removable pommel
- Seat extension
- Lateral supports

# 13 Malfunctions and maintenance

All Veldink products leave the factory tested and adjusted for immediate use. They will require regular maintenance and adjustments when being used continually, especially when making changes to the original settings. The initial adjustments made by qualified personnel should be appropriate to your physique and personal preferences.

If you want to change a setting yourself, you can do so using the following tools: 3, 4, 5 and 6 mm Allen keys, 13 mm open-end spanner.

The following table indicates when routine maintenance should be performed.

Checklist	Weekly	Quarterly	Semi-an- nually	Annually
Tyre pressure for drive wheels, optimal use 450 kPa/4.5 bar (65 psi)	•			
Retighten the spokes (distributor or bicycle dealer)		•		
Check the wheel lock and readjust if required		•		
Check that the caster wheel and head tube turn correctly		•		
Check the track of the mobility base for seating shells and that the mobility base for seating shells drives straight ahead without additional pushing or braking		•		
Forearm supports (height-adjustable): check that all connections are tight and that they work correctly		•		
Check the covers on the seat and back support for wear and tear and any worn-through spots			•	
Have your authorised dealer or Veldink perform a full inspection, safety testing and maintenance				•

# 14 Cleaning and care

In addition to the aforementioned routine maintenance, both the frame and the cover on the product must be cleaned regularly. Light dirt can be removed with a solution of mild detergent and warm water. Rinse with clean water before letting the cover dry.

Never put the cover in a tumble dryer!

Do not use bleaching agents or solvents. If dirt has penetrated the cover, you can scrub it carefully with a soft brush.

The frame must be cleaned regularly with a damp cloth and possibly a cleaning agent (do not use any corrosive or abrasive agents such as acetone or acid, or a steel scourer). Then wipe with a soft, dry cloth to avoid water marks. You can repair damaged areas with a touch-up applicator.

Regularly remove hair and dirt from the wheel axles and the outside of the bearings. The ball bearings are sealed. Do not exert pressure on them because the sealing rings are made of rubber and, if they are bent out of position, this could allow dirt to get inside the bearings.

#### Disinfection

- 1. Thoroughly clean the pads and handles before disinfecting.
- 2. Wipe all parts of the product with a disinfectant.

Important information on disinfecting

- If the product is used by more than one person, it must be disinfected with a conventional disinfectant.
- Only use colourless water-based disinfectants. Observe the instructions for use provided by the manufacturer.

# 15 Recycling and the environment

From an environmental point of view, Veldink4kids recommends disposing of the packaging and everything related to the product separately so that the materials used can be recycled efficiently.

In most cases, you can return your used product to your specialist dealer. If this is not possible, you can also return the product to Veldink4kids or your local collection point.

If you return your product to us, the complete product will be disposed of in an environmentally friendly manner.



Figure 40: Recycling

#### 16 Information on re-use

The product is generally suitable for re-use. Please note, however, that the product and its permanently welded dimensions have been tailored to a specific user.

Similar to second-hand machines or vehicles, products that are being re-used are subject to increased strain. Features and functions must not change in a way that could endanger users or third parties during re-use.

First of all, the relevant product must be thoroughly cleaned and disinfected before re-use. Then the product must be examined by an authorised specialist to check the condition and to look for wear and tear and possible damage. All worn and damaged parts as well as components which do not fit or are unsuitable for the new user must be replaced.

#### 17 Lifetime

Expected lifetime: 5 years

The design, manufacturing and requirements for the intended use of the product are based on the expected lifetime. These also include the requirements for servicing and for ensuring the effectiveness and safety of the product.

#### 18 Environmental conditions

#### Temperatures and relative humidity

Temperature during use [ $^{\circ}$ C ( $^{\circ}$ F)] -10 to +40 (14 to 104)

Transport and storage temperature [°C (°F)] -10 to +40 (14 to 104)

Relative humidity [%] 45 to 85; non-condensing

# 19 Appendices

#### 19.1 Threshold values for wheelchairs transportable by train

The products in this series fully satisfy the minimum technical requirements of Regulation (EU) No 1300/2014 regarding train accessibility for people with disabilities. However, not all versions can comply with all threshold values due to different settings.

With the help of the table that follows, you or the qualified personnel can take measurements and verify whether the specific product in question meets the threshold values.

Characteristic	Threshold value (according to Regulation (EU) No 1300/2014)
Length [mm]	1200 (plus 50 mm for the feet)
Width [mm]	700 (plus 50 mm on each side for the hands when moving)
Smallest wheels ["]	Approx. 3 or greater (according to the regulation, the smallest wheel must be able to accommodate a gap measuring 75 mm horizontally and 50 mm vertically)
Height [mm]	Max. 1375; including a 1.84 m tall male wheelchair user (95th percentile)
Turning radius [mm]	1500
Maximum weight [kg]	200 (for wheelchair and user, including any baggage)
Maximum obstacle height that can be overcome [mm]	50
Ground clearance [mm]	60 (at an upward slope angle of 10°, ground clearance must measure at least 60 mm under the leg support for driving forward at the end of the slope)
Maximum inclination angle on which the wheelchair will remain stable [°]	6 (dynamic stability in all directions) 9 (static stability in all directions, also when wheel lock engaged)

#### 19.2 Tightening torques of the screw connections

Unless specified otherwise, screw connections are tightened with the following tightening torques:

Thread diameter M4: 3 Nm
 Thread diameter M5: 5 Nm
 Thread diameter M6: 8 Nm
 Thread diameter M8: 20 Nm