

# Operating instructions Service booklet

## TRAVELER 4all Ergo & 4you Ergo



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#### 1 Preface

Dear Customer,

Congratulations on purchasing your new PRO ACTIV product. You have bought a quality product that has been especially customised to meet your requirements. We have put together some instructions about its proper and safe use in the following document. Please read these instructions before using the product.

These operating instructions refer to standard components. If you have individual solutions or non-standard components on your product, your dealer or we at PRO ACTIV would be happy to deal with any questions you may have about handling it.

The TRAVELER 4all Ergo & 4you Ergo differ in the options for individual design of the frame geometry. The operating instructions are identical.

If you have any further questions about this or any of our other products, we would be glad to be at your disposal.

Enjoy your trips and the best possible mobility.

Your PRO ACTIV team

#### 2 Legend

The symbols used in these operating instructions have the following meanings:



Manufacturer



Warnings, tips and safety instructions



Additional information

Assembly instructions for the dealer (see table of contents)

### 3 CE Declaration of Conformity / other information

#### 3.1 Classification

TRAVELER 4all Ergo & 4you Ergo folding frame wheelchairs (referred to as a "product" below) are classified as a class I product.

**3.2** Declaration of Conformity

PRO ACTIV Reha-Technik GmbH declares in the context of an individual declaration of conformity that the respective product has been developed and manufactured according to the relevant provisions of EC Directive 93/42/EEC 2007.

If the product is adapted in a manner that has not been agreed by PRO ACTIV Reha-Technik GmbH, this declaration becomes void.

#### 3.3 Manufacturer

 PRO ACTIV Reha-Technik GmbH Im Hofstätt 11
D-72359 Dotternhausen
Tel. +49 7427 9480-0
Fax +49 7427 9480-7025
E-Mail: info@proactiv-gmbh.de
Web: www.proactiv-gmbh.com

#### 4 Scope of delivery

The delivery includes the product configured in accordance with the order, with operating instructions including record of training / handover certificate and inspection lists. You can view the basic equipment in chapter "Technical specifications". As per your order, the product is equipped with additional recommended accessories, such as push handles, anti-tippers and waist belt.

Please check that the delivery is complete after you have received your product.

The product is tested to ensure it is completely functional prior to delivery. If your product has been damaged during transit, please contact your dealer or PRO ACTIV immediately.



#### 5 Introduction

Before starting your journey, familiarise yourself with these operating instructions paying particular attention to the safety information and hazard warnings contained within them.

Let therapists and doctors advise you, your carers and assistants on how to use the product and what you are safe to do with the product based on your current ability. Clarify with them as well which wheelchair techniques you can learn on the basis of your ability. Under no circumstances should you do anything with or in the product that you have not learnt to and have not mastered.

You, your carers and assistants should also seek advice from your therapists and doctors as well as your specialist retailer on the use and settings on your product as well as available safety accessories (e.g. anti-tippers and waist belt). It is then important that you also follow this advice.

• Overestimating your own ability or underestimating a dangerous situation or action with the product can have serious consequences for you and other people.

If you are not sure how to handle the product or if technical faults occur, please contact your dealer or PRO ACTIV before using it.

Make sure that when combining your product with equipment made by other manufacturers (e.g. seat cushion, drive devices, etc.) that the serviceability of the individual components and the unit made up of them is ensured. You can get information on the suitability of a combination from the manufacturer of the external components or from your specialist retailer.

#### 6 Purpose

Using the product as intended is essentially based on replacing the walking ability of a person who has difficulty walking or cannot walk on a paved path by driving with the wheelchair as far as is technically feasible. In a figurative sense, "walking" means walking speed when using a wheelchair.

### 7 Acceptable usage and operating conditions / places of use

Only use the product on paved surfaces. Avoid driving on unpaved or loose surfaces (e.g. on loose gravel, in sand, mud, snow, ice or through deep puddles of water), as this may result in incalculable risks.

The maximum permitted load of the product in its standard design is a 120 kg payload. Individual customisation can be made to accommodate a higher load; this will be indicated on the ratings plate. Please ensure that the load limit indicated on the ratings plate is not exceeded, even when transporting objects and carrying out strength exercises in the product.

#### 8 Technical specifications

#### 8.1 **Product weight**

The total weight starts from 11 kg with the basic equipment.

#### 8.2 Load weight

Maximum load weight: Up to 120 kg payload

#### 8.3 Obstacle height and turning circle

Maximum drive-over / negotiable obstacle height: 10 cm

#### **Turning circle:**

 approx. 1.3 m without manoeuvring back and forth



 approx. 1.1 m with manoeuvring back and forth (much dependent on the number of manoeuvres)

#### 8.4 Basic equipment & dimensions

In the basic equipment, the product is equipped with seat and back system, side sections, caster wheels, drive wheels including tyres and handrims, knee lever brake and footrest.

#### Dimensions, TRAVELER 4all Ergo:

Seat width: 33-52 cm Seat depth: 36-48 cm Back height: 20-48 cm Wheel camber: 1°, 4°, 6° Back angle: Seat tube / back tube opening angle 70°-95°

#### Dimensions, TRAVELER 4you Ergo:

Seat width: 33-48 cm Seat depth: 36-48 cm Back height: 20-48 cm Wheel camber: 1°, 4°, 6° Back angle: Seat tube / back tube opening angle 70°-95°

#### 8.5 Service life

The service life of the product is 6 years in accordance with the medical products law.

#### 9 Rating plate

The rating plate is located on the frame of the product. The rating plate includes the precise model, the serial number and other technical specifications.

When contacting your dealer or PRO ACTIV with regard to your product, please always have the serial number and year of construction on the rating plate at hand. The rating plate includes the following data:

	Modell XX model		
PRO ACTIV Reha-Technik GmbH Im Hofstätt 11 72359 Dotternhausen Germany Tel. +49 (0) 7427 9480-0 www.proactiv-gmbh.de	SN XX senal number Baujahr		
(E 💷	max. Anhängelast XX. kg max towed capacity		



CE marking

- **i** Operating instruction present for the product
- Serial number

#### 10 Commissioning

The product will be handed over to you ready for use by a PRO ACTIV dealer or a field representative or by a product consultant from PRO ACTIV.

You will be fully instructed in the use of the product based on the operating instructions included in delivery. If you wish (recommended by PRO ACTIV), you will be presented with a record of training and a hand-over certificate as written evidence and in addition the operating instructions and any other accessories for your own use. The form for the record of training and the hand-over certificate can be found in chapters 39 and 40.

It is recommended that you take along an assistant to the training so that, if required, they can assist you later when handling the product.

During the initial commissioning of the product, drive at minimum speed and become accustomed to the driving characteristics of the product. Always adapt the speed and driving manoeuvres to match your own abilities and external circumstances. You will get a feel for how to use the product safely after a short time. Before driving up or down slopes or hills with the product, you should be proficient in the safe handling of the product on the flat.



#### 11 Hand-over

The hand-over must be done by your dealer or a field representative or by a product consultant from PRO ACTIV. During the hand-over, the record of training (chapter 39) and the hand-over certificate including the associated check list (chapter 40) must be filled in. The dealer should send a copy of the completed documents to PRO ACTIV for filing either as a scanned file via e-mail, by fax or in the post. These documents are available as pdf files which can be completed in the download area at <u>www.proactiv-gmbh.com</u> under the link "more documents >>".

### 12 Safety instructions – prior to driving / use

When getting into the wheelchair, do not tread on the footrests as this may tip the chair over.

Before every trip, check the condition of the wheels (e.g. visual inspection of the spokes and rims, check the tyres for damage, foreign bodies and crack formation). If you have any doubts about the serviceability of the product, stop using it.

Check tyre pressures at regular intervals. Ensure that you comply with the manufacturer's specifications which can be found on the tyres. Tyre pressure that is too low affects the driving behaviour of the product and has a negative effect on the braking efficiency.

Before starting out, check that the product's brake works. If all existing brakes are not fully functional, no trips may be taken.

Every time before you use the product, make sure that the folding mechanism is firmly attached.

A Check the stable condition of the seat and back upholstery at regular intervals and in case of doubt, have your dealer assess its condition. Always ensure that your feet cannot slip off the footrest when using the product, if necessary by using a special securing device.

Before using the product, ensure that the anti-tippers are in the operating position and in good working order. In this case, it must not be possible to swivel the anti-tippers to the side when in operating position without having to unlock them first.

The lower edge of the anti-tipper wheels may not be any more than 5 cm from the ground. If a larger gap is required or necessary, then you need to work with your therapists and doctors to practice and learn to handle the increased risk of tipping.

Due to environmental effects, it is possible that the properties and therefore secure attachment of the push handle covers may change detrimentally. For this reason, it is important to check the handles are tightly fitted and fixed in position prior to use. If this should no longer be the case, then the push handles may not be used until they have been fixed.

Every time before you use the product, make sure that the anti-tippers and push handles are firmly attached and the quick-release axles on the caster and drive wheels are also securely locked in place.

Depending on the optional extras, the product may have folding / closing mechanisms that pose a risk of crushing injuries (e.g. trapping your fingers). For this reason, please allow your specialist retailer to explain how to work these mechanisms and then have a go yourself under instruction.

If required, you can have a suitable waist belt fitted to your product. Please make sure that the waist belt is set up so that it does not have any negative impact on breathing, does not strangle you should you fall or tip out of the product and that you can easily remove yourself.



When travelling, always carry a repair kit and tyre pump for repairs in event of punctured / flat tyre. A alternative to this is a pump spray that fills your tyre with a foam that hardens in the tyre.

#### 13 Safety instructions – while driving / using

A Please note that some parts of your product can become extremely hot in at hot ambient temperatures (e.g. a sauna). This means that above 50°C, the product may be damaged and above 40°C there is already the risk of burns for the user, which should not be underestimated, particularly for people with impaired sensitivity. For this reason, the product should not be exposed to such extreme temperatures. PRO ACTIV cannot accept any liability or provide any warranty for personal injury and material damage caused by such stresses. There are also certain risks that exist at extremely low temperatures that must be minimised by wearing appropriately insulating clothes for example.

You may only drive on slopes where the product can be safely controlled with the handrims.

Use particular caution when approaching stairs, edges, drops or other hazard areas.

Due to the significantly high risk of tipping over and being injured, the product should only be driven on an escalator after participation in a respective safety training and with an accompanying person for safety reasons.

When driving around a bend, reduce your speed to a minimum.

Do not ride parallel to slopes due to the risk of tipping.

Please note that the knee lever wheel lock and the integrated brake that is fitted on your product are parking brakes that may only be applied when the product is at a standstill. These are not service brakes that are suitable for reducing speed.

Do not attach objects (carrier bags, etc.) to the product.

Make sure that the passive illumination (reflectors) are always on your product, are in perfect condition and are clearly visible.

When driving on areas that are used by pedestrians, observe the maximum permitted speed (walking speed 6 km/h) and keep a sufficient distance (if possible the width of a wheelchair) from the kerbs or other obstacles and other road users.

Avoid driving on unpaved or loose surfaces (e.g. on loose gravel, in sand, mud, snow, ice or through deep puddles of water).

When travelling on poorly maintained paths (e.g., large gravel, potholes) there is an increased risk of puncturing your tyres as well as tipping.

When travelling on poorly maintained paths with potholes and loose stones, drive carefully to try to prevent the caster wheels from becoming locked.

If you encounter new driving situations that are unknown to you approach them with great care. If you consider that the risk is too high, you must immediately abort the driving manoeuvre and, if required, call for help to assist you in extracting yourself from this situation.

The product can affect other devices, for example theft protection barriers in department stores.

The product is only designed to be used to transport persons with limited mobility and must not be used for any other purpose, e.g. to transport goods.



When reversing, the anti-tippers should always be used as there is an increased risk of tipping over. If this is not possible, then ask other people to help ensure that there is no risk of tipping over.

The product may only be propelled using the handrims. If you drive propelling the chair with the tyres (thumbs or fingers on the tread of the tyre), there is the risk of crushing or otherwise injuring fingers and thumbs.

Do not reach into the area of the spokes or other tight spaces in the vicinity of the wheels. There is an increased risk of being injured here, particularly while in motion. If you have limited coordination of your limbs, then you should protect the spokes with a spoke shield for example to minimise the risks.

Smoking when riding is forbidden as the seat and back system may be damaged from ash which falls down.

### 14 Safety instructions regarding obstacles

Obstacles like curbs, for example, should always be negotiated driving forwards and always using the minimum speed required.

The maximum obstacle height that can be negotiated is 10 cm.

When driving over or passing obstacles, it is important that you avoid any product or body parts catching on the obstacle as this may lead to falling causing serious injuries to the user and third parties as well as damage to the product.

Always drive over curbs or other obstacles so that you cross them to the front or at right angles. If you approach them at an angle, or only have one rear wheel on the obstacle, there is an increased risk of tipping over to the side which can result in serious injuries to the user and third-parties as well as damage to the product. If the product user needs to be transported over an obstacle, such as a step, and there are suitable facilities such as a ramp or a lift available, then these should be used. If such facilities are not available, then the obstacle is to be overcome by being carried by two helpers. When carrying the product, it may not be lifted by the side sections, the drive wheels or the footrests. We recommend holding the product on the frame and back cross bar.

Before overcoming an obstacle (steps, threshold, etc.) the anti-tippers need to be swivelled from operating to passive position so that they do not make contact with the step you are trying to get over. Otherwise this could lead to a serious fall. After overcoming the obstacle, the anti-tippers need to be put back in operating position (chapter 25.1).

For overcoming obstacles such as kerbs or steps, the product needs to be actively tipped. The castor wheel may otherwise jam at right angles to the obstacle and could block. This could damage the caster wheel or the caster fork and cause injury. If actively tipping it is not possible, then the obstacle should not be approached or you need to request assistance from an accompanying person. Particular attention needs to be paid to this when using an auxiliary drive.

#### 15 Safety instructions regarding dangerous locations and dangerous situations

The operator of the product determines the route to be driven taking the operating instructions, their driving knowledge and physical abilities into consideration.

The personal driving skills are particularly important in the following dangerous locations which are provided as examples; the product's user must use their judgement before driving in such locations:

 quay walls, landing and berthing locations, paths and locations close to water, unsecured bridges and dykes.



- narrow paths, slopes (e.g. ramps and driveways), narrow paths on a slope, mountainous routes.
- narrow and / or steeply sloping paths along main roads or near cliffs.
- routes that are covered in leaves, snow or ice.
- ramps and lifting equipment on vehicles.

When driving in a circle or turning on hills or downward slopes, there may be an increased tendency to tip over to the side due to the changes in the centre of gravity. Always perform these driving manoeuvres with increased caution and only at slow speed. If required, the driving manoeuvre must not be performed or only with the help of an assistant.

When crossing main roads, intersections and level crossings, extreme caution is needed. Crossing rails in the road or at level crossings must never be undertaken when travelling parallel to them, as otherwise the wheels could become caught which would result in the product being unable to manoeuvre.

When driving on ramps and lifting equipment on vehicles, extreme caution is needed. When lifting or lowering a ramp or lifting equipment, the parking brake of the product should be applied.

The grip of the tyres on the ground is reduced in the wet. There is an increased risk of slipping. Adjust your driving, braking and steering behaviour accordingly.

#### 16 Safety instructions – after driving / use

Apply the parking brake before getting out of the product.

When getting out of the wheelchair, do not tread on the footrest due to the risk of tipping over.

#### 17 Folding mechanism

#### 17.1 Folding and stowing dimensions

To **fold** the product, remove the seat cushion and then unlock the folding mechanism by pulling on the cord attached to the middle of the folding mechanism. Now unlock the back cross bar by pushing the back cross bar downwards in the middle.



Figure 1: Cord for the folding mechanism



Figure 2: Back cross bar unlocked

Now unlock the folding mechanism by pulling on the cord in the middle on the folding mechanism. Fold the product by pulling out the seat upholstery upwards and by pressing the product together on the sides.





Figure 3: Stowing dimensions after folding together and folding down the backrest

To **unfold the product**, press against the front of the middle section of the folding mechanism until you feel the folding mechanism engaging. Then pull the back cross bar upwards until it locks in its standard position.



Figure 4: Back cross bar in the standard position

To achieve **the smallest possible stowing dimension** of the product, proceed as follows:

- 1. Remove the seat cushion
- 2. Remove the clothing guard (chapter 21.2)
- 3. Fold down the backrest (chapter 19.1.3)
- 4. Unlock the back cross bar (as described at the beginning)
- 5. Unlock the folding mechanism (as described at the beginning)
- 6. Remove the footrest (chapter 24.2)
- 7. Fold the product together by pressing the sides together and pulling the seat and back padding upwards.

- 8. Remove the caster forks (for the quick-release axle, chapter 23.3.2)
- 9. Remove the drive wheels (chapter 22.1)



Figure 5: Smallest stowing dimension after removing the component groups that are removable without tools

To **make the product usable again**, proceed in the reverse order:

- 1. Install the drive wheels (chapter 22.1)
- 2. Install the caster forks (for the quick-release axle, chapter 23.3.2)
- 3. Fold the product open by pulling apart on the sides
- 4. Install the footrest (chapter 24.2)
- 5. Lock the folding mechanism
- 6. Pull the back cross bar upwards until it locks in its standard position
- Angle adjustment of the backrest (chapter 19.1.3)
- 8. Install the clothing guard (chapter 21.2)
- 9. Insert the seat cushion



### 17.2 Folding in or passing through narrow spaces

To pass through narrow spaces that are just a few centimetres too small for your product, you have the option of making your product smaller by approx. 5 to 10 cm while sitting in it. To do so, unlock the back cross bar and the folding mechanism (chapter 17.1). Due to the weight of your body acting on the seat upholstery, it pulls itself together a little. Moreover, by active shaking and shifting your weight alternately to the right and left and by pressing on the handrims at the same time, the product's size is reduced even more.

Lock the folding mechanism again after you have passed through narrow space (chapter 17.1). The seat upholstery must be relieved for this purpose.

#### 17.3 Safety instructions

After passing through narrow space (folding in) and before using the product after being folded together, the folding mechanism must be properly locked again (chapter 17.1), otherwise the backrest and the footrest will have lateral play.

A Sand, dirt and salt may make the folding mechanism sluggish or render it inoperable. For this reason, make sure that is cleaned regularly according to chapter 32.

If the folding mechanism has jammed or does not function correctly, you should contact your specialist retailer or PRO ACTIV before using it again.

#### 18 Individual setting options

### 18.1 Adapting the seating height at the back

The product is equipped with an axle plate that permits a seat height adjustment in steps of 1 cm.



Figure 6: Wheel plate for rear seat height adjustment

In order to adjust the seat height, first remove the drive wheels via the quick-release axles (see chapter 22.1) and turn the product around so that you have direct access to the wheel plates. Then proceed as follows:

 Open the aluminium locking nuts (AF 41 mm) on both sides and keep turning them out on the drive wheel bushings until the position gate positioned underneath it can be pushed out of the wheel plates onto the drive wheel bushings.



Figure 7: Aluminium locking nuts and drive wheel bushing



Figure 8: Position gate





Figure 9: Different position gates depending on the equipment of the product and user weight



Figure 10: Aluminium locking nuts and position gate pushed onto the drive wheel bushing

 Position the axle tube to the desired and equal height on both sides and fix the axle tube in this position using the position gates by pushing the position gates on the right and left sides to the corresponding height position of the wheel plates.



Figure 11: Axle tube fixed with position gate

3. Position the aluminium locking nuts back onto the drive wheel bushings in such a manner that these rest slightly against the position gate and then set the drive wheel track correctly (see chapter 22.2).

When changing the rear seat height each time:

- the wheel track of the drive wheels must be checked and readjusted if necessary (see chapter 22.2).
- the brakes must be readjusted (see chapter 26).
- the caster wheel axle must be readjusted (see chapter 23.4).
- the backrest angle may have to be repositioned (see chapter 19.1.3).
- make sure the clearance under the footrest is sufficient. Experience shows that this should not be less than 4 cm (see chapter 24).
- if necessary, the height of the anti-tipping support may have to be readjusted (see chapter 25.3).



### 18.2 Adjusting the seat height at the front / angle of seat

If the seat height has to be adjusted, the angle of the seat or the front seat height can be adjusted. This setting is carried out via the position of the caster wheels in the caster wheel fork and the caster fork size.

### 18.2.1 Adapting by positioning the caster wheels in the caster fork

Adaptations of the front seat height or angle of seat can be carried out via the positioning of the caster wheel in the caster fork. Generally, the caster wheel forks have three possible positions that can be used to change the front seat height in steps of 15 mm.

- If the angle of seat has to be increased or the front seat height increased, the caster wheel is mounted in the caster fork in a lower position.
- If the angle of seat has to be reduced or the front seat height decreased, the caster wheel is mounted in the caster fork in a higher position.



Figure 12: Three positions in the caster fork for positioning the caster wheel and its effect on the front seat height

The instructions for disassembly and assembly of the caster wheels can be found in chapter 23.1.

### 18.2.2 Adaptation by replacing the caster fork

If the adjustment range of the caster fork present is insufficient, you can use the next longer or shorter one.

In doing so, the bottom position of the fork size 1 is equivalent to the top position of fork size 2 and the bottom position of fork size 2 to the top position of fork size 3.



Figure 13: Caster fork sizes with marking of the same seat height settings with different caster fork sizes

The instructions for replacing the caster forks can be found in chapter 23.3.



#### 18.2.3 General instructions

When changing the angle of seat or front seat height each time:

- the wheel track of the drive wheels must be checked and readjusted if necessary (see chapter 22.2).
- the caster wheel axle must be readjusted (see chapter 23.4).
- the backrest angle may have to be repositioned (see chapter 19.1.3).
- make sure the clearance under the footrest is sufficient. Experience shows that this should not be less than 4 cm (see chapter 24).
- if necessary, the height of the anti-tipping support may have to be readjusted (see chapter 25.3).

#### 18.3 Adjusting the tipping point

An optimum tipping property of the product is reached when the axle mount of the drive wheels is close to the body centre of gravity. A product adjusted like this can be driven with little effort and it also makes it possible to manage a slightly uneven surface or edges by tipping slightly. Driving on both drive wheels (doing a wheelie) is relatively easy to learn. Inexperienced wheelchair users are prevented from tipping over backwards by anti-tippers.

In any case, the setting should be made to suit the wheelchair user's individual requirements and abilities to ensure safe operation.

#### 18.3.1 Terms, inlets and folding mechanism middle section

The tipping point is set by changing the horizontal position of the wheel plate on the top and bottom frame tube. The wheel plate on the top and bottom frame tube is installed using four M6 fixing screws and two inlets in the frame tubes.



Figure 14: Inlets and wheel plate (view from the inner side of the product)



Figure 15: M6 fixing screws of the wheel plate (view from the inner side of the product)

A **long inlet** is always used in the **top frame tube**, which is fixed using the screws for the seat upholstery.

A short inlet is used in the bottom frame tube.





Figure 16: Long and short inlet with wheel plate

The short inlet has a M6 thread (AF 5 mm) in the end surface.



Figure 17: Short inlet with thread in the end surface

Because the folding mechanism is fixed to the wheel plate, the length of the **middle section of the folding mechanism** must also be adjusted when setting the tipping point.



Figure 18: Folding mechanism middle section (view from below)

#### 18.3.2 Adaptation via horizontal positioning of the wheel plate

In order to adjust the tipping position, first remove the drive wheels via the quick-release axles (see chapter 22.1) and turn the product around so that you have direct access to the wheel plates. Then proceed as follows:

1. This step affects the fixing of the inlets:

The <u>long inlet in the top frame tube</u> is screwed tight by the screws of the seat upholstery and therefore does not have to be fixed.

The short inlet in the bottom frame tube is not fixed. Therefore, remove the tube plugs on both sides and turn the long M6 screws into the thread of the inlet in the frame from the rear to fix the inlet and to be able to move it into position afterwards during the adjustment. These inlets must be moved into position during the adjustment as they must be positioned directly behind the wheel plates.

The tube plugs are inserted very tight and must be removed using a screwdriver or a knife.



Figure 19: Short inlet with M6 screw screwed in (outside the frame for better illustration)

 Remove the four M6 fixing screws (AF 5 mm) on both wheel plates.





Figure 20: M6 fixing screws of the wheel plate (view from the inner side of the product)

 To be able to reposition the wheel plates, the length of the folding mechanism middle section must be adapted. To adjust the length of the folding mechanism middle section, the M6 clamp screw is loosened.



Figure 21: M6 clamp screw of the folding mechanism middle section (the folding mechanism middle section is shown as a separate part for better illustration)

Now the clamp is pushed forwards (in the forward direction) so that the cylinder pin becomes visible.



Figure 22: Clamp pushed forwards and cylinder pin visible (the folding mechanism middle section is shown as a separate part for better illustration)

Now remove the cylinder pin. Then the length of the folding mechanism middle section can be adjusted by pulling or pushing.



Figure 23: Cylinder pin removed (the folding mechanism middle section is shown as a separate part for better illustration)

 Now set the wheel plates at the desired tipping position on both sides of the frame. Take care that the wheel plates on the right and left sides are installed at the same tipping point position.

Using the long M6 screws that you have previously screwed into the thread from the rear, you have to position the short inlet in the bottom frame tube accurately behind the wheel plates so that the tipping point positions in the frame and thread in the inlet rest accurately against one another.

- Then fix both wheel plates again, each with four M6 fixing screws and tighten these slightly (2 Nm).
- 6. Now the length of the folding mechanism middle section must be properly adjusted.



Figure 24: Adjusted length of the folding mechanism middle section (the folding mechanism middle section is shown as a separate part for better illustration)



The length is properly adjusted when the folding arms are precisely aligned:



Figure 25: Folding arms aligned with correct length adjustment of the folding mechanism middle section (bottom view)

Then the new length of the folding mechanism middle section is fixed. For this purpose, insert the cylinder pin in the new position and push the clamp over the cylinder pin so that this is located in the middle under the recess of the clamp. Then tighten the M6 clamp screws to 7 Nm torque again and secure them with thread lock fluid.

- With the shorter inlets in the bottom frame tube, now you can remove the long M6 screws from the threads of the inlets and reinsert the tube plugs at the ends of the frame.
- Then tighten each of the four M6 fixing screws on the wheel plates to 10 Nm and check the functioning of the folding mechanism.

After each change to the tipping point:

- the wheel track of the drive wheels must be checked and readjusted if necessary (see chapter 22.2).
- the caster wheel axle must be readjusted (see chapter 23.4).
- the brakes must be readjusted (see chapter 26).

Extreme settings, such as drive wheels mounted far to the front is only permitted for users with advanced wheelchair skills that are able to exercise an active weight shift to the front.

In order to minimise the risk of tipping to the rear, we recommend the use of anti-tipping supports, even with anti-tipping device settings.

#### 19 Back system

Avoid falling into the seating and back padding as the risk of an adjustment, falling or a defect is increased significantly.

#### 19.1 Backrest angle

#### 19.1.1 Notes on the sitting posture

For a good sitting posture, we recommend positioning the backrest vertical to the ground, where possible.

With low backrest with adaptable belt cover due to a disability, under certain circumstances, it may also be a benefit for a good sitting stability to slightly tilt the backrest to the front and to slacken the top belt of the back padding so that the slack in the upper area is greater (see chapter 19.2).

The adjustment possibility of the backrest angle supports active sitting and ensures for flexibility of the wheelchair user. An example in the following:

- if the angle of the seat has been changed (see chapter 18.2), the angle of the back-rest can be respectively readjusted.
- When driving on slopes and when transporting baggage (e.g., backpacks) on the backrest, the centre of gravity shifts more to the rear and the risk of tipping increases. Then this can be counteracted by a respective angle adjustment of the backrest to the front.



• For comfortable seating, the backrest can be locked in a position to the rear so that the backrest is tilted slightly back.

#### 19.1.2 Adjustment range

On equipment of the product with a backrest with angle adjustment, the inclination of the backrest can be locked in 7 positions.

For safety reasons, the adjustment range of the backrest is limited by a stop pin when supplied. The stop pin allows a maximum inclination of  $7^{\circ}$  to the rear from a vertical position.



Figure 26: Stop pin

Observe that the centre of gravity is shifted further to the rear by the enlargement of the angle between the backrest and the seat system and thus, the tipping point of the product is reached much sooner.

### 19.1.3 Adjusting the backrest angle or folding down the backrest

To **adjust the backrest angle**, relieve this (otherwise there is a risk of tipping) and then loosen the locking pin that engage in the locking holes of the side section on the left and right. For this purpose, grasp under the seat upholstery and in the middle, pull the cord to the front that is linked to the locking pin.



Figure 27: Locking pin connected to the cord (bottom view)



Figure 28: Locking pin engages in the locking hole in the side section (view from the outer side)



Figure 29: Cord for operating the locking pin and thus for adjusting the angle of the backrest

If you have released both locking pins by pulling on the cord, you can adjust the backrest as desired and re-engage it by letting go of the cord. In doing so, before applying load again, make sure that both locking pins have engaged safely into the desired locking holes (the same position on the right and left).



Depending on the adjustment of the backrest angle, check the tight engagement of the backrest via the locking pins.

To **fold down the backrest**, pull on the middle of the cord towards the front, and at the same time, fold the backrest downwards until it rests on the seating area. If you want to return the backrest back to the desired angle, proceed as described at the beginning.

### 19.2 Adjustable back padding & their adjustment options

The back system "Adjustable back padding" comprises one belt system and one back upholstery. The slack of the backrest can be adapted to the individual requirements via the belts with tensioning loops.

First remove the back upholstery that has been covered over which has been attached using hook-and-loop straps. The belt system located underneath has been set in the factory that the top and the bottom belts have a slack of approx. 2 cm. The middle belt has been pulled tight for a good lumbar support.



Figure 30: Belt system of the adaptable back padding with three belts

To **adjust the slack in the belt system**, the tensioning loops of the respective belt are held on their strap and pressed (strongly) to the right until the belt slackens.



Figure 31: Pull the tensioning loop to the right on its strap



Figure 32: Tensioning loop open completely

Now the belt can be pulled tight for setting a small slack or loosened for a large slack (Fig. 33 and 34). The belt does not have to be threaded out of the tensioning loops for this.



Figure 33: Reduce the slack





Figure 34: Increase the slack

In order to put the tensioning loops back onto the back system loosely again, pull the loop section at the back to the left. You should dose your pulling force with care in order not to adjust the set slack again.



Figure 35: Re-apply the tensioning loops back on the back system



Figure 36: Tensioning loops applied slightly to the back system

Then re-mount the back upholstery using the fleece hook-and-loop straps.

If the belt should have mistakenly been threaded out during the adjustment, see the following figures for **threading the belt in** correctly:



Figure 37: Step 1: Threading in the belt



Figure 38: Step 2: Threading in the belt



Figure 39: Step 3: Pulling the belt through





Figure 40: Step 4: Simple threading in of the belt through the tensioning loops

The belts must always be threaded through the tensioning loops twice, otherwise the belts will slacken when using the product, and with heavy loads, the middle web of the tensioning loops will sag strongly.



Figure 41: Step 5: Returning the belt through the tensioning loop to obtain the required "double passage"



Figure 42: Step 6: Pulling the belt through for the double passage



Figure 43: Step 7: Double passage



Figure 44: Step 8: Threading in the belt



Figure 45: Step 9: Threading in the belt

### 19.3 Ergonomic back shell & its setting options

The back system "Ergonomic back shell" comprises an aluminium shell, Velcro cross-straps and a back padding.

There is already a slack integrated in the back shell due to the shape of the back shell. Nothing can be adjusted here.

However, **lumbar support** can be achieved using three Velcro cross-straps. For this purpose, the back padding is removed over the Velcro straps. Now the cross-straps can be tensioned to the respective individual requirements by undoing and reapplying the Velcro strap system.





Figure 46: Ergonomic back shell (view from behind)



Then mount the back upholstery using the Velcro straps.

Figure 47: Ergonomic back shell without back padding with Velcro cross-straps

To fold the product, the back shell must be removed. To **remove the back shell**, pull the release lever of the locking clamp upwards and at the same time, press the back shell forwards.



Figure 48: Locking clamp for the back shell and release lever

To **install the back shell**, it is pushed onto the back tubes and guided into the plug-on mount on the back joint on both sides. During this procedure, pull the back shell towards the rear so that the locking clamp of the back shell engages on the back cross bar.



Figure 49: Back tubes and back cross bar



Figure 50: Plug-on mount clamp for the back shell

#### 20 Seat system

Avoid falling into the seating and back padding / back shell as it significantly increases the risk of misadjustment, falling down or defects.

The seat system generally consists of a belt system. This can be adjusted subsequently. Using the fleece hook-and-loop straps, the slack in the seating surface can be changed so that it suits your seat cushion system. In doing so, the seat tension should not have too much slack to avoid touching the folding mechanism.





Figure 51: Open belt system with fleece hook-andloop straps for adjusting the slack

It is mandatory to use a seat cushion on the seating system. At cold temperatures, the seat cushion prevents lower abdomens from undercooling and protects against dirt and wetness. Moreover, the cushion ensures uniform pressure distribution for your bottom and absorbs impacts as well as vibrations.

#### 21 Clothing guard



Figure 52: Back jointed shaft



Figure 53: Clothing guard removed from the product



Figure 54: Clothing guard mounted on the product (without drive wheel)



Figure 55: Side section mount, bolted

### 21.2 Removal and attachment of the clothing guard

For **removing** the clothing guard, first this is "bolted side section mount" at the front and then pulled from the back joint shaft from behind.



Figure 56: Clothing guard pulled out of the "bolted side section mount" to the front



For **attaching** the clothing guard, first this is attached to the back joint shaft with the rear side section mount and then the front side section mount is inserted in the "bolted side section mount".



Figure 57: Rear side section mount attached to the back joint shaft

#### 21.3 Adjusting the clothing guard position

After adjusting the drive wheel position, an adaptation of the clothing guard position to the wheel arch is also necessary. The distance between the tyres and the clothing guard should be between 5 and 8 mm to avoid pinching your fingers, scraping the tyres on the clothing guard, and obstruction when grasping the handrim.

To adjust the clothing guard position, loosen the four M5 fixing screws (AF 3 mm) from the clothing guard mount on each of the clothing protection guards.



Figure 58: Clothing guard mount



Figure 59: M5 fixing screws and slots in the side section mounts

Now the front and back side section mounts can be positioned along the slots in the clothing protection guard and the side section mounts. In doing so, ensure that the side section mounts can be smoothly inserted back onto the back jointed shaft and into the side section mounts.

Then the clothing guard mounts are positioned accordingly and the M5 fixing screws are screwed back into the clothing guard mount with 4 Nm.



Figure 60: Slots of the clothing guard

### 21.4 Adjusting the force required for removing and installing

To make the removal and installation of the clothing guard easier or more difficult, adjustments can be made on the "bolted side section mount". In doing so, there are three options for adjusting the intensity of the pulling or pressing force required for removing and installing the clothing guard.





Figure 61: M6 pressure piece bolted into the basic body of the side section mount

If the front side section mount has too much or too little play in the bolted side section mount, it can be readjusted using the M6 pressure piece in the basic body of the side section mount. To reduce the play in the front side section mount, screw the M6 pressure piece (AF 3 mm) in a little more by turning to the right. To increase the play, proceed in the reverse order.



Figure 62: Back side of the spring suspended pressure piece with slot



Figure 63: Front side of the spring suspended pressure piece with ball

If the effort required for removing or installing the clothing guard is still too easy or difficult after carrying out the previous adjustment, another setting can be carried out via the spring suspended pressure pieces. Screw in the "M6 spring suspended pressure pieces" (AF 3 mm) using a slotted screwdriver (on the back side of the basic body of the side section mount) (Fig. 64) a little bit more (to the right) so that they are protrude further out of the basic body of the side section mount (Fig. 65) to achieve a stronger required effort when removing and installing.

To reduce the effort required when removing and installing, screw out the "M6 spring suspended pressure pieces" a little bit more (to the left) so that they protrude a little bit less out of the basic body of the side section mount.



Figure 64: M6 spring suspended pressure piece screwed into the basic body of the side section mount (view from the inner side of the product)



Figure 65: Front side of the spring suspended pressure piece visible (top view)



As a last option for adjusting the effort required when removing and installing the clothing guard, slightly unscrew the M5 fixing screws (AF 4 mm) and pull the "bolted side section mount" along their slots a little further away from the basic body of the side section mount or press them a little closer towards the basic body of the side section mount.



Figure 66: Side section mount bolted to the basic body of the side section mount with slots and M5 fixing screws (bottom view).

#### 21.5 Clothing guard size

The clothing guard is available in three different sizes. The dimensions of the wheel arches differentiate with the different sizes:

- Aluminium: 30 mm (Size 1), 36 mm (Size 2), 46 mm (Size 3)
- Carbon: 30 mm (Size 1), 36 mm (Size 2), 42 mm (Size 3)



Figure 67: Dimensions of the wheel arches

The size of the clothing guard can be read-off the notches on the bottom edge of the clothing guard. One notch means size 1, two notches mean size 2 and three notches mean size 3.



Figure 68: Size marking on the clothing guard

After changing to a wider tyre size or after changing the wheel camber, it may be necessary to change to another clothing guard size. Where required, such a change may be arranged by your dealer.

#### 22 Drive wheels

Recommendation: The spoke guard prevents hands and fingers entering and being trapped in the wheels when riding. The risk of injury is thus minimised.



Figure 69: Spoke guard for minimising the risk of hands and fingers getting trapped



### 22.1 Removing and attaching the drive wheels



Figure 70: Locking knob of the quick-release axle in the middle of the wheel axle

To **remove the drive wheels** grip through the spokes around the wheel hub with your fingers. By pressing the locking knob in the middle of the wheel axle with your thumb, the wheels can then be removed.

When **attaching the drive wheels**, the locking knobs must be pressed and the drive wheels with quick-release axle must be inserted in the drive wheel bushings. When doing this, special attention should be paid to ensure that the locking knob springs out again after attaching the wheel, as otherwise the wheels are not properly secured. You will know this if you can see the index groove.



Figure 71: Quick-release axle with index groove

A Before using the product, check if the wheels are secured and that the quick-release axles are locked.

### 22.2 Checking and adjusting the wheel tracking of the drive wheel

Well adjusted wheel tracking significantly improves the easy running characteristics of the product. To **check** the tracking, proceed as follows:

Position the product on a level surface and secure the product against rolling away.

Measure the axle heights (from the ground to the drive wheel axle) and write this dimension onto both tyres at front and back.



Figure 72: Drawing the axle height on the front and back of both tyres

Afterwards measure the distance between the drive wheels **front and back** at the height of the axles along the markers. Ideally, the distance between the two drive wheels should be the same size at the front and back. In general it can be said that the distance between the drive wheels at the front may not be larger than at the back. Apart from that, the distance at the back may not be more than 5 mm larger that at the front. If this is not the case, the wheel tracking needs to be corrected.





Figure 73: Distance between the markers on the tyres (at axle height), back

#### To adjust the track proceed as follows:

1. Loosen the aluminium locking nuts on both sides (AF 41 mm).



Figure 74: Drive wheel bushing and aluminium locking nut (bottom view)

- Correctly adjust the track by turning the drive wheel bushing (AF 22 mm). Here it can be said that: If you turn the drive wheel bushing in the direction of travel, the track at the front will become more narrow. If you turn against the direction of travel, the behaviour is exactly the opposite and the track opens.
- 3. Make sure that the distance at the front to the frame on the right and left is the same.



Figure 75: Distance at the front to the frame

4. Measure the distance between the drive wheels at the front and back again at the axle height (along the markers) so that the distance between the rive wheels is not any larger at the front than at the back. Apart from that, the distance at the back may not be more than 5 mm larger that at the front.



Figure 76: Distance between the markers on the tyres (at axle height), back

 If all the distances are correct, then use an open-ended spanner (AF 22 mm) to hold the running wheel bushing in position and tighten the aluminium locking nut (AF 41 mm) with a tightening torque of 70 Nm.

#### 22.3 Wheel camber

The wheel camber increases the lateral stability of the product but also increases the overall width of the product.

The wheel camber will be carried out according to the order and can be subsequently changed by replacing the drive wheel bushings (with integrated wheel camber). If you want to make



a change to the wheel camber, please contact your dealer or PRO ACTIV.

#### 22.4 Air pressure

Check the tyre inflation pressure at regular intervals as well as after extreme influence of temperature. The maximum and if applicable, minimum tyre pressure is printed on the side of the tyre.

If the tyre pressure is too low, then optimal functionality of the knee lever brake is not ensured. Apart from that, there is an increased risk of a flat tyre.

The tyre pressure increase with the temperature. If the pressure is too high, the tyre may burst. For this reason, product tyres may not be exposed to unusually high temperatures such as in a sauna or under glass in the summer.



Figure 77: Overview of terms



Figure 78: Actuating cable



Figure 79: Wheelchair axle (view from the inner side of the product)



Figure 80: Pin torque support mounted on the product (view from the side without drive wheel)

For **attaching** the wheelbase extension, pull the actuating cable and keep it in this position. Guide the front mouth underneath the wheelchair axle and insert this on both sides on the "Pin torque support". Now lift the wheelbase extension until the rear mouth surrounds both sides of the wheelchair axle. The actuating cable can then be released. Now the wheelbase extension is fixed tight.



Figure 81: Wheelbase extension attached (view from the side without drive wheel)



Figure 82: Wheelbase extension attached (view from the inner side of the product)

For **removing** the wheelbase extension, pull the actuating cable and keep it in this position. Release the rear mouth from the wheelchair axle on both sides by moving the wheelbase extension down slightly. Then pull the front mouth from the "Pin torque support" on both sides. The actuating cable can now be released.

For **changing the drive wheels** between the wheelchair axle and the axle of the wheelbase extension, see chapter 22.1.

#### 22.6 Other

If tyres, inner tubes or handrims need to be replaced, please contact your specialist retailer.

#### 23 Caster wheels

#### 23.1 Replacing the caster wheels

For the **disassembly** a caster wheel, unscrew the M6 axle fixing screw (AF 4 mm) on one side.



Figure 83: M6 axle fixing screw on caster wheel axle



Figure 84: Caster wheel with aluminium axle

Now you can see the aluminium axle with a hexagon socket (AF 4 mm) in the middle of the axle. This hexagon socket is used to fix the axle in place, while the second axle fitting screw (AF 4 mm) is unscrewed. To do this, insert an Allen key (AF 4 mm) into the hexagon socket on the aluminium axle and hold it still. At the same time, unscrew the remaining M6 axle fixing screw (AF 4 mm) on the other side.

Now the caster wheel can be removed from the fork. One spacer each is mounted to the right and left on the caster wheel that you are now able to remove in order for it to be reused later when reinstalling the new caster wheel. In case you want to install a different type of caster wheel, use the enclosed spacers as these generally differ from one caster wheel to another.





Figure 85: Spacer on the caster wheel

When **attaching** the caster wheel, proceed as described above in reverse order. Please make sure that the spacers on the right and left on the caster wheel are re-installed in the caster fork before assembly. The tightening torque of the axle fixing screws (AF 4 mm) is 7 Nm. We recommend that you only use screws with polymer dry locking coating. Screws without polymer dry locking coating must be secured with screw locking fluid.

#### 23.2 Caster wheels flapping

Uncontrolled swivelling backwards and forwards of the caster wheels around their axes on the caster fork (while moving) is called "fluttering".

If the caster wheels start fluttering, then immediately reduce the speed you are travelling at to avoid the caster wheels jamming sideways so as to avoid the risk of falling over.

The speed limit at which a caster wheel can start fluttering, reduces with:

- increasing size of the caster wheels
- increase weight of the caster wheels
- falling load on the caster wheels
- decreasing caster length of caster wheels

The following options are available to counteract caster fluttering:

 Fluttering can be reduced by reducing the caster wheel diameter. This means installing a small caster wheel in a different wheel position in the caster wheel fork (seat height thus remains the same) would be one way of reducing fluttering. However, please note that using a smaller caster wheel makes it more difficult to overcome obstacles and makes tipping necessary more often. The smaller the caster wheel is, the more driving skill is required.

 Another way to reduce fluttering would be e.g. to use a light caster wheel with the same diameter or, as described above, with a smaller diameter.



Figure 86: Caster length

 It would also be possible to increase the caster length. The caster length is the distance between the rotary axle of the caster wheel fork projected onto the floor and the wheel contact point. The wheel contact point of the caster wheel trails so to speak behind the rotary axle. The caster length has a stabilizing effect on moving in a straight line. Increasing the caster length can be attained by mounting the caster



wheel in a different wheel position on the caster wheel fork (in doing so, the front seat height or the angel of the seat changes, see chapter 18.2). Another option would be to tilt the caster wheel axle (see chapter 23.4) from the vertical position in the lower area in the direction of travel. The inclination of the caster wheel axle can be adjusted up to approx. 4 mm over the length of the caster wheel bearing block from the vertical position. This increases the castor length and the tendency to vibrate reduces.



Figure 87: Increased castor length via the inclination of the caster wheel for rotary axle

#### 23.3 Replacing the caster wheel forks

A distinction needs to be made between the caster wheel forks with a screwed axle and those with a quick-release axle.

#### 23.3.1 Caster fork with screwed axle

To **remove the caster fork with screwed axle**, first the aluminium cap on the caster wheel bearing block must be removed. In order to release the cap, you can run under the cap using a commercially available cutter knife and lift slightly at several points. Then the M12 nut (AF 19 mm) is loosened using, e.g., an AF 19 mm socket. Now the caster wheel for rotary axle can be pulled out from under the caster wheel bearing block.



Figure 88: Aluminium cap



Figure 89: Aluminium cap removed and M12 nut visible

To **assemble the caster fork with screwed axle**, this is inserted into the caster wheel bearing block with the caster wheel for rotary axle. Then the M12 nut (AF 19 mm) is tightened again to 3 Nm and secured with thread lock fluid. Then the aluminium cap is pressed back onto the caster wheel bearing block.



For the rotary axle to run smoothly, the M12 nut must not be tightened to more than 3 Nm. In case more sluggishness is desired, this can be achieved using a higher tightening torque.

#### 23.3.2 Caster forks with quick-release axle

The caster wheel fork with a quick-release axle is removed by pressing the locking knob between the caster wheel and the inside of the caster wheel fork. Grasp around the caster fork and press the locking knob with your thumb. The caster wheel fork can now be pulled out.



Figure 90: Caster wheel fork with quick-release axle and locking knob

During the **assembly of the caster forks with quick-release axle,** keep pressing the locking knob and insert the caster wheel for rotary axle back into the caster wheel bearing block. When doing this, special attention should be paid to ensure that the locking knob springs out again after attaching the wheel, as otherwise the wheels are not properly secured. You will know this if you can see the index groove (Fig. 71).

### 23.4 Setting the caster wheel for rotary axle

For good properties for steering and driving straight ahead of the product, the caster wheel for rotary axle should be adjusted vertically to the level ground. Settings on the caster wheel for rotary axles could be necessary for the following reasons:

- the tipping point and / or sitting heights have been changed.
- the caster wheel axle no longer stands vertically due to a fall or an impact.
- The flattering of the caster wheels should be reduced.

To adjust the caster wheels for rotary axles, the product should be standing on a level surface and the wheel track of the drive wheels must have already been set (chapter 22.2).

Now check if the caster wheels for rotary axles are standing vertically to the level ground. For this purpose, place an angle with height adjustable slider on the front edge of the caster wheel bearing blocks. The slider should be aligned at the middle of the caster wheel bearing block.

If the front edge of the caster wheel bearing block is standing vertically to the level ground then the caster wheels for rotary axles is also doing this.

Observe that the front edges of the caster wheel bearing blocks are slightly rounded. Thus, the distance above and below between the slider of the angle and the front edge of the caster wheel bearing blocks must be the same size.



Figure 91: Checking of the setting of the caster wheels for rotary axles



The angle with slider can be ordered from PRO ACTIV (order number: 8000 901 000).

If the front edges of the caster wheel bearing blocks are not standing vertical to the level ground, the settings must be adjusted. First adjust the right caster wheel bearing block, then the left one, and finally check the right side again. Then proceed as follows:

1. Loosen the M5 stud bolt (AF 2.5 mm).



Figure 92: M5 stud bolt

2. Undo the M6 fixing screws (AF 5 mm) slightly on the frame inner side.



Figure 93: M6 fixing screws on the frame inner side

3. Now undo the M6 fixing screws (AF 5 mm) slightly on the frame outer side.



Figure 94: M6 fixing screws on the frame outer side

- 4. Using the aid of the angle, move the caster wheel bearing block in a vertical position to the level ground.
- Tighten the M6 fixing screws (AF 5 mm) again on the frame outer and inner side to a tightening torque of 10 Nm and recheck the vertical setting.
- 6. Screw the M5 stub bolt (AF 2.5 mm) back in so that this rests on the M6 fixing screw.

#### 24 Foot rests

Measures need to be taken to ensure there is sufficient ground clearance under the footrest. Experience shows that this should not be less than 4 cm. This must be observed for the angle adjustment of the footplate and when setting the lower leg length.

#### 24.1 Angle adjustment of the footplate

The **angle** of the **footplate** can be set by undoing the M6 fastening clamp screws (AF 5 mm) on the bottom side of the footrest. When the angle adjustment is completed, tighten the M6 fastening clamp screws (AF 5 mm) again to maximum 5 Nm. This tightening torque should not be exceeded as higher tightening torques can damage the clamp.




Figure 95: Footrest from below

#### 24.2 Removing and attaching the footrest

To **remove the footrest**, unlock the folding mechanism (chapter 17.1), open the locking pin lever on both sides, and then pull the footrest with the support tubes from the frame tubes.



Figure 96: Locking pin lever closed



Figure 97: Locking pin lever opened

To **attach the footrest**, unlock the folding mechanism (chapter 17.1) and close the locking pin lever. Now the lever does not rest against it completely because it is not locked yet.



Figure 98: Locking pin lever closed, not locked yet

Then insert the footrest with the hollow tubes back into the frame tube until you can hear the footrest engaging. You can see that the lock is tight when the locking pin lever is resting firmly.



Figure 99: Locking pin lever closed and locked tight

It is recommended to grease the footrest support tubes slightly with multi-purpose grease at regular intervals.

#### 24.3 Footrest continuous



Figure 100: Footrest continuous



There are two M6 fixing screws on each tube for the **length adjustment of the footrest support tubes or for the adjustment of the lower leg length**. The top M6 fixing screw (AF 4 mm) can be adjusted in a hole grid (generally, three positions are possible). The bottom M6 fixing screw (AF 4 mm) can be moved infinitely in a slot. Depending on the extent of the length adjustment, only one of the fixing screws or both of them can be moved in their position.



Figure 101: Top M6 fixing screw can be positioned in the hole grid



Figure 102: Bottom M6 fixing screw can be positioned in the slot

To adjust the lower leg length, the respective M6 fixing screw (AF 4 mm) is now loosened on both sides. The support tubes are then pushed into the hole grid or along the slots into the correct position. Take care that the support tubes have the same length on both sides after the setting. Once the position has been set, fix the support tubes by tightening the M6 fixing screws (AF 4 mm) with washers to 7 Nm on both sides.

With a product frame that has a v shape, due to the resulting tensioning of the footrest support tubes in the footrest support plate from the longitudinal setting, it is necessary to open the M6 fastening clamp screws (AF 5 mm) again on the footrest support tubes. View the procedure in chapter 24.1.

#### 24.4 Footrest folding up to one side



Figure 103: Footrest folding up to one side, standard position

For **footrest folding up to one side**, lift the footplate up in the direction of travel on the left side.



Figure 104: For folding up to one side, lift the footplate up in the direction of travel on the left side (product view from the front)





Figure 105: Footrest raised from the bracket (product view from the front)



Figure 107: Cylinder pin and corresponding recesses



Figure 106: Footrest folded up on one side (product view from the front)

When you fold the footrest back down, take care that the recesses are resting accurately at the back and front on the cylinder pins of the bracket. There are two M6 fixing screws on each tube for the **length adjustment of the footrest support tubes or for the adjustment of the lower leg length**. The top M6 fixing screw (AF 4 mm) can be adjusted in a hole grid (generally, three positions are possible). The bottom M6 fixing screw (AF 5 mm) can be moved infinitely in a slotted hole. Depending on the extent of the length adjustment, only one of the fixing screws or both fixing screws can be moved in their position.



Figure 108: Top M6 fixing screw (AF 4 mm) can be positioned in the hole grid







Figure 109: Bottom M6 fixing screw (AF 5 mm) can be positioned in the slot

For adjusting the lower leg length, the respective M6 fixing screw (AF 4 mm at the top, or 5 mm at the bottom) is now loosened on both sides. The support tubes are then pushed into the hole grid or along the slots into the correct position. Take care that the support tubes have the same length on both sides after the setting.

Once the position has been set, fix the support tubes by tightening the M6 fixing screws (AF 4 mm at the top, or 5 mm at the bottom) with washers to 7 Nm on both sides.

With a product frame that has a v shape, due to the resulting tensioning of the footrest support tubes in the footrest support plate from the longitudinal setting, it is necessary to open the M6 fastening clamp screws (AF 5 mm) again on the footrest support tubes. View the procedure in chapter 24.1.

24.5 Divided footrest



Figure 110: Divided footrest, standard position

To **fold up** one of the two footrest parts, grasp it and fold it up to the side. Moreover, you can also turn or **pivot the footrest outwards**. No tools are required for folding up and pivoting.



Figure 111: One footrest folded up, option for pivoting outwards marked

There are two M6 fixing screws on each tube for the **length adjustment of the footrest support tubes or for the adjustment of the lower leg length**. The top M6 fixing screw (AF 4 mm) can be adjusted in a hole grid (generally, three positions are possible). The bottom M6 fixing screw (AF 5 mm) can be moved infinitely in a slotted hole. Depending on the extent of the length adjustment, only one of the fixing screws or both fixing screws can be moved in their position.



Figure 112: Top M6 fixing screw (AF 4 mm) can be positioned in the hole grid





Figure 113: Bottom M6 fixing screw (AF 5 mm) can be positioned in the slot

For adjusting the lower leg length, the respective M6 fixing screw (AF 4 mm at the top, or 5 mm at the bottom) is now loosened on both sides. The support tubes are then pushed into the hole grid or along the slots into the correct position. Take care that the support tubes have the same length on both sides after the setting.

Once the position has been set, fix the support tubes by tightening the M6 fixing screws (AF 4 mm at the top, or 5 mm at the bottom) with washers to 7 Nm on both sides.

With a product frame that has a v shape, due to the resulting tensioning of the footrest support tubes in the footrest support plate from the longitudinal setting, it is necessary to open the M6 fastening clamp screws (AF 5 mm) again on the footrest support tubes. View the procedure in chapter 24.1.



Figure 114: Anti-tipping support

#### 25.1 Operating and passive position

To overcome an obstacle, the anti-tipping support must be swivelled from the operating to the passive position beforehand so that this does not knock against the obstacle.



Figure 115: Operating position of the anti-tipping support

# 25 Anti-tippers

To reduce the risk of tipping backwards unintentionally to a minimum, anti-tippers are available as accessories. The anti-tippers are adapted to the axle tube via anti-tipping supports and can be swivelled under the frame using a spring system.



Figure 116: Passive position of the anti-tipping support



To move the **anti-tipping support into the operating position**, press the anti-tipping bar downwards and swivel this to the rear. Make sure that the anti-tipping support is engaged correctly again. This is visible when the footrest pins have engaged in the corresponding recess of the anti-tipping supports from the one side and the M6 fixing screws from the other side.

An accompanying person can also press the anti-tipping support downwards by stepping on the footrest pins and then swivelling into the operating position.



Figure 117: Moving anti-tippers into the operating position



Figure 118: Anti-tipping support engaged correctly

To move the **anti-tipping support into the passive position**, press the anti-tipping bar downwards and swivel this to the inside underneath the seating area. Make sure that the anti-tipping support is engaged correctly again. This is visible when the footrest pins have engaged in the corresponding recess of the antitipping supports from the one side and the M6 fixing screws from the other side.



Figure 119: Moving anti-tippers into the passive position

25.2 Removing and attaching the



Figure 120: Overview of terms

To **remove** the anti-tippers, the M5 fixing screw (AF 3 mm) is screwed out of the spring retention cap and at the same time, the cord that is fixed to the tension spring is retained. Now the cord can be released and the antitipping bars can be removed from the antitipping support downwards. The spring retention cap must also be removed. In order to prevent loosing the M5 fixing screw, this is screwed back into the spring retention cap.



To **install** the anti-tippers, the anti-tipping bar is inserted into the anti-tipping support from underneath and pulled upwards using the cord. In doing so, the M6 fixing screw must engage on the side of the footrest pin and on the other side, in the recess of the anti-tipping support.



Figure 121: Anti-tipping bar inserted into the antitipping support

Now the anti-tippers are held at the bottom on the anti-tipping bar in this position and the spring retention cap is put onto the anti-tipping support (loosen the M5 fixing screw on the spring retention cap first in case this have been screwed in not to lose it) so that the cord protrudes from the top.



Figure 122: Spring retention cap placed on the antitipping support, cord pulled through upwards and M5 fixing screw inserted

Finally, the cord is strongly pulled upwards until the tension spring becomes visible at the top of the spring retention cap (this must be held tight in the process). At the same time, the M5 fixing screw (AF 3 mm) is screwed back into the spring retention cap and through the end eyelet of the tension spring. The M5 fixing screw (AF 3 mm) must be secured using screw locking fluid.



Figure 123: Tension springs with end eyelets



Figure 124: M5 fixing screw screwed through the end eyelets of the tension spring

#### 25.3 Height adjustment of the antitipping support

This must be removed first for the height adjustment of the anti-tipping support (see chapter 25.2). Then the footrest pin is removed on which the tension spring is secured using the M6 fixing screw (AF 4 mm). When loosening the M6 fixing screw, the footstep bolt must be retained using a pliers (the footstep pin must be protected if this is retained using a pliers). After removing the M6 fixing screw, the tension spring can be removed.





Figure 125: M6 fixing screw and tension spring removed from the anti-tipping bar



Figure 126: M6 fixing screw with radius discs and footstep pin

There is an inlet within the anti-tipping bar that must be adjusted to the new height position. Where possible, the inlet should be positioned in the anti-tipping bar as low as possible. A screwdriver could be used for the positioning of the inlets, for example.



Figure 127: Inlet of the anti-tipping bar and the screwdriver

Now the tension spring is positioned in the inlet so that the end eyes of the tension spring are positioned precisely over the borehole in which the M6 fixing screw shall then be screwed in to. Once the inlet and the tension spring have been positioned correctly, the M6 fixing screw (with both radius discs and the footrest pin) (AF 4 mm) is crewed into the new height position through the inlet and the end eyelet of the tension spring.

Finally, reattach the anti-tipping support to the product as described in chapter 25.2.

The anti-tipping support has been designed exclusively to minimize the risk of tipping over backwards. It is not suitable for reducing the risk of tipping forwards or to the side. There is no safety equipment on offer for minimizing these risks. For this reason, handling these risks need to be learnt in cooperation with your therapists and doctors.

Before using the product, after every load on the anti-tippers and after every adjustment to the product, make sure that the anti-tippers are fully functional. In this case, it must not be possible to swivel the anti-tippers to the side when in operating position without having to unlock them first. Moreover, the lower edge of the anti-tipper wheels may not be any more than 5 cm from the ground. If a larger gap is required or necessary, then you need to work with your therapists and doctors to practice and learn to handle the increased risk of tipping.

If the functionality of the anti-tippers should no longer be given or if you are in any doubt about the serviceability, then have it checked by your specialist retailer and have it repaired before any further use. Otherwise there is an increased risk or falling of getting injured.



#### 26 Brakes

#### 26.1 Knee lever brake

#### 26.1.1 Opening and closing the brake

The knee lever brake can be equipped with different brake levers, such as, e.g., standard brake lever, long brake lever and flip-down brake handle. The brake levers can be mounted in the standard position, or low. However, the operation is the same with all brake levers.



Figure 128: Knee lever brake with standard brake handle

**Closing the brake** is carried out by pressing the brake lever down. In the closed position, the braking bolt presses the tyre in by approx. 4 mm.



Figure 129: Brake open; closing is carried out by pressing the brake lever down

Please note that the knee lever brake is a parking brake which may only be applied when the product is at a standstill. This is not a service brake that is suitable for reducing speed.

To **open the brake** pull the brake lever back up. In the open position, the distance between the braking bolt and the tyre is approx. 3 to maximum of 4 mm.



Figure 130: Brake closed; open by pressing the brake lever up

#### 26.1.2 Setting the brake

Settings on the brake could be necessary for the following reasons:

- You have changed the tyre or the tyre pressure.
- You have changed the wheel track or position of the drive wheels.
- The brake is pulling unevenly or insufficiently after extended use.

To adjust the knee lever brake, proceed as follows on both sides:

- Initial situation: Drive wheels mounted on the product and the knee lever brakes open.
- 2. For the **correct positioning** of the knee lever brake, slightly loosen the M5 clamp screws (AF 4 mm) so that the knee lever brake can be moved on the hexagon rail.





Figure 131: M5 clamp screws on the hexagon rail (view from the inner side of the product)

3. Position the open brake on the hexagon rail so that there is a clearance of 3 mm to a maximum of approx. 4 mm between the brake bolt and tyre.



Figure 132: Distance between brake bolt and tyre of approx. 3 mm to maximum 4 mm, with opened brake

- 4. Retighten the M5 clamping screws (AF 4 mm) to 4 Nm.
- Then check the correct setting of the brakes: When the brake is closed, the braking bolt presses the tyre in by approx.
  4 mm. When the brake is open, the distance between the braking bolt and the tyre is approx. 3 to maximum 4 mm.

6. The actuating force of the brake lever can be adjusted using the M5 joint screws. For this purpose, you need a slotted screwdriver and an open-ended spanner (AF 8 mm). The screw is retained at the front with the slotted screwdriver and the openended spanner (AF 8 mm) is used to either screw tight or to loosen a little. An important point here is that both joint screws must be tightened equally as this leads to a long-lasting uniform actuating force of the brake lever.



Figure 133: M5 joint screws for setting the actuating force of the brake lever

O Generally, the braking bolt is mounted in the standard position (see following figure). The assembly of the braking bolt in the other possible position (see following figure) may be necessary after the adjustment of the drive wheels.



Figure 134: Positions of the braking bolt



#### 26.2 Integral brake

26.2.1 Opening and closing the brake



Figure 135: Overview of terms

**Closing the brake** is carried out by pressing the front part of the control element to the right or left outwards until the brake element rests against the tyre. Then press the control element (on the front part) towards the tyre until the control element rests against the brake element.



Figure 136: Integral brake open, closing is carried out by pressing the control element outwards

When the brake is closed, the brake element is positioned vertical to the brake mount.



Figure 137: Integral brake closed, brake element vertical to the brake mount

Please note that the integral brake is a parking brake which may only be applied when the product is at a standstill. This is not a service brake that is suitable for reducing speed.

To **open the brake**, press the front part of the control element towards the middle of the wheelchair (away from the wheel).



Figure 138: Integral brake closed, the brake is opened by pressing the brake element towards the middle of the wheelchair

When opening and closing the brakes, make sure that the control and brake element are never grasped. Press the brake only using one finger or with the ball of your hand on the front part of the control element.



#### 26.2.2 Setting the brake

Settings on the brake could be necessary for the following reasons:

- You have changed the tyre or the tyre pressure.
- You have changed the wheel track or position of the drive wheels.
- The brake is pulling unevenly or insufficiently after extended use.

When adjusting the integral brake, a distinction must be made between the standard installation of the integral brake and the installation with clamping bracket.

To adjust the **integral brake lever with standard installation**, proceed as follows on both sides:

- 1. Initial situation: Drive wheels mounted on the product and the integral brakes open.
- Slightly loosen the M5 clamp screws (AF 4 mm) so that the brake mount can be moved on the hexagon rail.



Figure 139: Hexagon rail and brake mount



Figure 140: M5 clamp screws for positioning the integral brakes (view from the inner side of the product)

3. Press the front part of the control element to the right or left outwards until the brake element rests against the tyre. Do not close the brake completely.



Figure 141: Brake element resting on the tyre

 Move the integral brake on the hexagon rail so that the brake element is positioned in such a manner as displayed in the following figure:



Figure 142: Brake element after correct positioning of the integral brake

- Retighten the M5 clamping screws (AF 4 mm) to 4 Nm.
- Then check the correct setting of the brakes: In the closed position, the brake element presses the tyre in by approx.
  4 mm.



#### To adjust the **integral brake lever with clamping bracket**, proceed as follows on both sides:

- 1. Initial situation: Drive wheels mounted on the product and the integral brakes open.
- Undo the M5 clamp screws (AF 4 mm) slightly so that the integral brake can be pushed in the clamping bracket with splined shaft.



Figure 143: M5 clamp screw for moving the integral brake with integral splined shaft in the clamping bracket (view from the inner side of the product)

If this adjustment range is insufficient, undo the M6 grub screw (AF 3 mm) and the M6 clamp screw (AF 5 mm) of the clamping bracket slightly so that the clamping bracket can be moved along the frame tube.



Figure 144: M6 grub screw and M6 clamp screws for moving the clamping bracket on the frame tube (view from the inner side of the product)

3. Press the front part of the control element to the right or left outwards until the brake

element rests against the tyre. Do not close the brake completely.



Figure 145: Brake element resting on the tyre

4. Move the integral brake with splined shaft in the clamping bracket and on the frame so that the brake element is positioned in such a manner as displayed in the following figure:



Figure 146: Brake element after correct positioning of the integral brake

- Tighten the M5 clamp screw (AF 4 mm) to 4 Nm again and, where applicable, the M6 clamp screw (AF 5 mm) to 10 Nm. Then also, where applicable, screw the M6 grub screw (AF 3 mm) back in until it rests against the product frame.
- Then check the correct setting of the brakes: In the closed position, the brake element presses the tyre in by approx. 4 mm.



# 27 Push handles



Figure 147: Back tube with integrated handles

With these push handles, there is no option for adjustment and no possibility to remove the handle.

# 27.2 Aluminium push handles fixed in back tube



Figure 148: Aluminium push handles fixed in back tube

It is not possible to adjust these push handles.

To **remove** the push handles, undo the M6 fixing screws (AF 4 mm) with washer on both sides. Then the push handle can be removed from the back tube.

To **install** the push handles, place these in the back tube and insert the M6 fixing screws (AF 4 mm) (with washer) into the each of the holes of the back tube and push handle. Tighten the M6 fixing screws (AF 4 mm) to 7 Nm torque and secure them with thread lock fluid.

27.3 Push handles, horizontally



Figure 149: Push handles, horizontally screwed in back tube

It is not possible to adjust these push handles.

To **remove** the push handles, turn these counter-clockwise out of the back tube.



Figure 150: Screw the push handle horizontally out of the back tube

To **install** the push handle, turn it into the back tube clockwise and tighten it to a maximum hand tightness.



# 27.4 Safety push handles with continuous height adjustment



Figure 151: Safety push handles with continuous height adjustment

For **adjusting the height** of the push handles, open the clamp lever by turning counterclockwise (a half to a complete rotation). Then the height of the push handles can be adjusted. The height can be infinitely adjusted. We recommend adjusting both push handles to the same height. Once the desired height is set, hold the push handles in this position and then close the clamp lever again clockwise with a half to complete rotation.

If the clamp lever knocks against the frame when turning the push handle, you have the option of pulling the clamp lever out vertically to the rotating axis and to let go into another angled position via the integrated serration, and keep on turning. This also permits the position of the clamping lever to be aligned to the back tube after performing the height setting so that this does not protrude over the back tube to the side.



Figure 152: Put the clamp lever in another angled position by pulling out

#### 27.5 Safety instructions

After every adjustment or after reattachment following removal, check that the push handles are firmly attached in position.

Due to environmental effects, it is possible that the properties and therefore secure attachment of the push handle covers may change detrimentally. For this reason, it is important to check the handles are tightly fitted and fixed in position prior to use. If this should no longer be the case, then the push handles may not be used until they have been fixed.

# 28 Transport restraint system

#### 28.1 Standard specifications

In order to approve the product as seat for being transported in motor vehicles, a verification of the dynamic crash stability is required according to ISO 7176-19 (Wheelchairs for use in motor vehicle).

Furthermore, the additional retention system is required for the safe transport of the person sitting in the product in a motor vehicle, that complies with the requirements according to DIN 75078-2 (Motor vehicle for the transportation of handicapped persons – Part 2: Restraint systems; concepts, requirements, testing) and ISO 10542-2 (Technical systems and aids for disabled or handicapped persons. Wheelchair tiedown and occupant-restraint systems).



PRO ACTIV offers person and wheelchair restraint systems (so-called transport restraint systems) with new orders, but also for retrofitting. In the following, we shall inform you about the use and application of this retention system when using the product as a seat in a motor vehicle.

# 28.2 Wheelchair tiedown and occupant-restraint systems

With the wheelchair restraint system, elements are designated that are used to secure the wheelchair in the vehicle. Persons are secured using components of the person retention system. A comprehensive system for the optimum transportation of the wheelchair in the motor vehicle comprises both components. These are matched to one-another so that their forces are not transferred to another system.

Elements of the **wheelchair restraint system** include:

• Transport restraint connection on the rear frame: The frame inlet can be used for installing the mount for the hip belt as well as for fixing the buckle that joins the rear retractor with the vehicle.



Figure 153: Transport restraint connection on the rear frame with belt link for the rear retractor

• Bearing block intermediate plate for mounting the front reactor



Figure 154: Caster wheel bearing block intermediate plate with belt link for the front retractor

• Retractors for transport restraints comprise 2 retractors at the front without hand tensioning wheel and 2 retractors at the rear with hand tensioning wheel.



Figure 155: Front retractor "semi-automatic" with buckle and belt link



Figure 156: Rear retractor "semi-automatic" with hand wheel, buckle and belt link



#### The person restraint system comprises:

• Hip belt with lock



Figure 157: Hip belt with lock, the fittings for connecting the transport restraints and two belt links for the selective securing of the diagonal shoulder belt

• Diagonal shoulder belt with lock head



Figure 158: Automatic diagonal shoulder belt with deflection and buckle

 Headrest with segment padding including stable bracket



Figure 159: Headrest

#### 28.3 Safety and handling instructions

Basically, all passengers must be seated on a standard vehicle seat with three-point seat belt. This is the safest possibility of transportation. If this cannot be implemented, the wheelchair as well as the passenger must be secured. The use of this retention system must be observed in the following guidelines and safety instructions.

The wheelchair must only be transported in the direction of travel of the vehicle.



Figure 160: Incorrect positioning of the wheelchair in the vehicle



Figure 161: Correct positioning of the wheelchair in the vehicle

Both rear belts (retractors) must be arranged symmetrically and anchored horizontally to the vehicle floor at a maximum angle of 45°. Both front belts must also be arranged symmetrically and must not exceed a maximum angle of 60° to the horizontal position. The retractors for the front and rear must not be swapped.



Figure 162: Run of the retractors at the front and rear with maximum tensioning angle and connecting points (view from the side)



Figure 163: Run of the retractors at the front and rear with maximum tensioning angle and connecting points (view from the back)

The hip belt must rest tight against the body over the hip bone. The belt must not be twisted and not run over the person's stomach. The diagonal shoulder belt must run in the middle over the collarbone, have sufficient space to the neck and rest tightly against the person's body. The belts must not be kept away from the person's body by parts of the wheelchair (armrests, side sections, clothing guard, etc.).



Figure 164: Run of the hip and diagonal belt with the respective connecting points

With backrests that can be inclined, this must be set at 90° to the seating system to ensure the person sits upright. The height and distance of the head restraint to the head must be set so that the centre of gravity of the upright head is in the middle of the head restraint and the distance between the head and head restraint must be kept as little as possible (max. 2-3 cm).



Figure 165: Setting the head restraint with regard to the height and distance to the head

You must be able to hear all links engaging in the buckles. Belts must not be twisted and not run crossed-over.

For belt systems (hip, diagonal shoulder belt, retractors), the instructions for use of the respective manufacturer must be observed.

During transport, the parking brake of the product must be applied.

Loose parts of the wheelchair (Therapeutic table, crutches, etc.) must be removed before travelling.

Wheelchairs and restraint systems that have been exposed to an impact must be replaced. They are no longer allowed to be used as a seat in motor vehicles.

# 29 Storage

When being stored, the product should be kept in a dry environment and covered up where possible.

To avoid corrosion and therefore malfunctions or breakages of components, the product may not be exposed to any aggressive environmental influences (salt in particular).

# 30 Transport

When loading or transporting, the product can be held on the frame and on the back cross bar.

The transportation of persons in a wheelchair or other persons in the product in motor vehicles when using the specified equipment is only permitted when observing chapter 28. In this case, observe the versions in chapter 28.

To reduce the weight, individual components, such as the caster wheel forks with caster wheels and the drive wheels can be removed for loading and stored separately. The product and all associated components must be secured during transport so that they are not damaged (e.g. by falling over) and do not become a hazard to persons or other products.

If the product user needs to be transported over an obstacle, such as a step, and there are suitable facilities such as a ramp or a lift available, then these should be used. If such facilities are not available, then the obstacle is to be overcome by being carried by two helpers. When carrying the product, it may not be lifted by the side sections, the drive wheels or the footrests. We recommend holding the product on the frame and back cross bar.

# **31 Malfunctions**

In the event of any malfunctions which cannot be solved by yourself based on the operating instructions included in the scope of delivery, please contact your specialist retailer or PRO ACTIV directly.

A Malfunctions must be solved before any further use or, if they occur during the journey, this must be interrupted immediately.

# 32 Cleaning and care

Regular cleaning of the product is prescribed to prevent the components becoming clogged up due to dirt. In particular, the product should be carefully cleaned after every major use, e.g. summer or winter holidays.

To avoid corrosion and therefore malfunctions or breakages of components, the product may not be exposed to any aggressive environmental influences. If this cannot be avoided, the product should be cleaned immediately after such use and moving parts need to be greased. Regular cleaning prevents corrosion and increased wear.

In case the product becomes wet when using, dry it after use.

Clean the quick-release axles of the drive and caster wheels as well as the ball bearings and grease these with a little lubricating oil with high corrosion protection properties (e.g., Neoval MTO 300) approx. every 8 weeks in order to guarantee the reliable functioning properties.

Clean your product with water, solvent or neutral cleaning agents. Do not use any abrasive cleaning agents or aggressive, acidic cleaners, to prevent scratching or fading of the coating or the anodised parts. Use only water and soap to clean the seat and back padding.

The product must not be cleaned using steam or high pressure.



If you need care products for your product, please contact PRO ACTIV. You can also request our care set via the enclosed order card or by telephone.

# 33 Maintenance

#### 33.1 General instructions

The product is not a maintenance-free device. Therefore, please observe the following instructions about maintenance.

If repairs are required or there are any defects in your product, in the interests of your own safety, you should contact your specialist retailer or PRO ACTIV before using it again and have the defect remedied. Screws and other elements need to be secured properly again after repairs.

For tyres with tread: As soon as there is one or more points with less than 1 mm of tread on the tyres, the tyres must be changed as otherwise there is an increased risk of an accident.

For tyres without thread: As soon as there is one or more points where the tyre carcass or the puncture-proofing is visible, the tyres must be changed as otherwise there is an increased risk of an accident.

Only manufacturer's original parts may be used when ordering spare parts.

Repairs and conversions to the product may only be carried out by your dealer or PRO ACTIV.

Tightening torques and securing details for fastening elements as shown in the table in chapter 38 must be observed.

#### 33.2 Service schedules

There is some **maintenance work or checks which should be carried out by the user themselves** at regular intervals (approximately every 4 weeks depending on the frequency of use):

- Check the tyres for damage, foreign bodies and any cracks that form.
- Check the tyre pressure and correct if needed (the tyre pressure should always be as printed on the tyre covers).
- Check the brakes (function, wear on pivot bolts).
- Clean and oil the pivot points of the brakes and check the ease of movement or actuation force of the brake lever.
- Check the function of the anti-tipping device.
- Check the stable stand of the seat and back padding.
- Check the tight fit of the fixing screws on the seat and back system.
- Check the function and ease of running of the quick-release axles of the drive wheels and caster forks.

If you should discover any problems during these checks, please immediately contact your dealer or PRO ACTIV. Service and repair work on the product may only be carried out by your dealer or PRO ACTIV.

In addition to these maintenance tasks / checks by the user, PRO ACTIV has prescribed **maintenance tasks to be carried out by the dealer or PRO ACTIV** for safe operation of the product and to minimise the risk to the user or third-parties.

The initial inspection is performed six weeks after delivery. The maintenance schedule can be found in the inspection lists in chapter 41.

Subsequent inspections are then always performed after another year after the last inspection. The maintenance schedule can be found in the inspection lists in chapter 41.

After extreme stresses, such as during holidays where the product was exposed to sand, sea water or snow, an additional deep clean and inspection by your specialist retailer is recommended.



To maintain the operating licence and the warranty validity, the performance of the maintenance tasks must be documented. Any faults identified during maintenance work must be rectified and documented as such before further use of the product.

Even if your product does not show any signs of wear, damage or malfunctions, the regular safety-related checks on your product must be carried out in accordance with the maintenance schedule.

#### 33.3 Proof of maintenance

To provide proof of the maintenance, you can use the inspection lists in chapter 41. The inspection lists are also available as pdf files which can be filled in within the download area of <u>www.proactiv-gmbh.com</u> under the link "more documents >>". In any event, keep all receipts / service reports as a means of proof, and get any service work that has not been carried out by the manufacturer documented. **Please bring these operating instructions / service booklet to every service.** 

# 34 Disposal & Recycling

At the end of the service life, the product can be disposed of by PRO ACTIV or your dealer in a proper, environmentally-friendly manner.

The disposal or recycling must be carried out by a waste disposal company or a municipal waste disposal centre.

Special guidelines may apply on-location with regard to the disposal or recycling. These must be clarified and considered when disposing (this may also include the cleaning or disinfection of the product before the disposal).

In the following section, you will find a description of the materials for the disposal and recycling of the product and its packaging:

**Aluminium:** frame, rims, castor forks, brakes, back cross-bar, side sections, clothes guard, anti-tipping protection, armrest frame, footrest, footplate, push handles **Steel:** fixing points, quick-release / screwed axle, anti-tipping supports, brakes, screws, nuts

**Plastic:** handles, quick-release levers, tube plugs, caster wheels, armrest padding, tyres, footrest, side sections, brake lever, anti-tipping wheels, bags for packing

Synthetic fibres and foam: padding, covers

Cardboard / paper: packaging

#### 35 Re-use

If your product has been provided to you by your funding provider and you no longer require it, you should report this fact to your health insurance company or your dealer. Your product can then be simply and economically re-used.

Before any re-use, a safety check must be carried out on the product by PRO ACTIV. In addition to the instructions contained in chapter 32 (Cleaning and care), a thorough cleaning of all controls must be carried out before using it again.

Before the product can be reused, it must be prepared with care. A disinfection agent must be sprayed onto all surfaces that the user may make contact with. For this purpose, a liquid disinfection agent based on alcohol must be used for the quick residue-free disinfection (e.g., Exporit 4712). Please observe the manufacturer's instructions for use for the disinfection agent that you use. In general, a complete disinfection cannot be guaranteed on the seams. We therefore recommend that you dispose of the seat and rear padding.

This will be performed by PRO ACTIV as part of the safety inspection. This safety-related check must be initiated by the funding provider.

Moreover, in event of wear or due to adaptation to the new user, components such as the footrest, seat and back system can be adjusted or replaced using the modular system. Moreover, as standard the backrest is also 7-fold angle adjustable and can therefore be optimally adapted.



## 36 Warranty

PRO ACTIV guarantees that the product was free of any defects at the time it was handed over. This warranty expires 24 months after the product was delivered.

Further information can be found in PRO ACTIV's general terms and conditions at www.proactiv-gmbh.com.

Any modifications to the product that have not been expressly approved by PRO ACTIV will invalidate the warranty. Such modifications may cause unforeseeable safety risks and are therefore not permitted.

# 37 Liability

As the manufacturer of the product, PRO ACTIV is not responsible for its safety if:

- the product is handled improperly
- the product is not maintained in accordance with the maintenance schedule laid down by PRO ACTIV
- the product is commissioned and used contrary to the instructions in these operating instructions
- repairs or other work are carried out by non-authorised persons
- third-party parts are installed or connected to the product

Further information can be found in PRO AC-TIV's general terms and conditions at <u>www.proactiv-gmbh.com</u>.



#### 38 Appendix: Tightening torques, securing details and tools

The following table shows the torques for shaft screws with a metric control thread (valid if the drawing or assembly instructions do not state different values!):

Torque MA in Nm depending on how tight the screws are		
Dimension	Stability 8.8	Stability 10.9
M4	2.1	3.1
M5	4.2	6.1
M6	7.3	11
M8	17	26
M10	34	51
M12	59	87
M10 x 1	36	53

Securing details: All screws on PRO ACTIV products should be secured with thread lock fluid "medium strength" (e.g., Weicon AN302-43), where there are no securing clamps on the screw connections present or there is a lubrication requirement with grease or copper paste.

In the following table you will find tools and care products for your PRO ACTIV product:

ΤοοΙ	Order number
Adjustment bracket for the caster wheel bearing block	8000 901 000
Special tool for setting the wheel position Open-ended spanner AF 22/24 mm + 41 mm	8000 900 025
<b>Tool set for PRO ACTIV wheelchairs</b> Mini high-pressure pump, open-ended spanner AF 8/10 + 10/13 +30 mm, Allen key AF 2.5 + 6 mm, Screwdriver hexagon socket with han- dle AF 3 + 4 + 5 mm	8000 900 030
<b>Care kit for PRO ACTIV wheelchairs and handbikes</b> Assembly paste (dosing spray 10 g), Neoval oil (spray 100 ml), Thread lock fluid, medium strength (Pen-System 10 ml), Surface cleaner (spray 150 ml), terminal grease (tube 50 ml)	8000 900 026
Assembly stands	8000 902 000



# 39 Appendix: Medical product passport / record of training

Product specifications	:			
Serial number: SN				
Customer data:				
Surname, forename:				
Street:				
Postcode, city:				
Phone:				
Paying organisation:				
Training carried out by	/:			
Medical supplies dea				
		Stamp / Date / Dealer's signatur	e	
	L			
Record of training				
of the product listed and inf	formed about po	vith the associated hand-ov ossible operator errors. I wa person is required. The op	s / we were also ad	dvised about
Instructor Name, date, signature			_	
1 Person being trained Name, date, signature			_	
<b>2 Person being trained</b> Name, date, signature			_	
<b>3 Person being trained</b> Name, date, signature			-	

For minors, or persons who are not responsible for their actions, legal guardians / supervisors / responsible persons are to be trained in the use, this is confirmed by their signature. The data is recorded in the feedback system of PRO ACTIV Reha-Technik GmbH, as the manufacturer of the above named product. It will be managed in accordance with Section 16 BDSG (Federal Data Protection Law).



# 40 Appendix: Hand-over certificate

40.1 Required compliance criteria to authorise use				
Topics	Com- pleted / fulfilled	Remarks		
The product is suitable for the customer based on their own judgement and the customer informa- tion received regarding the disability-related re- strictions.				
The use intended by the customer is fully consis- tent with the intended use as described in the operating instructions (see the product descrip- tion / intended use chapter).				
The product's equipment is suitable to allow the customer safe use with maximum reduction of risks (see check list on the following page).				
The customer's driving ability was checked during a test drive in difficult driving situations and found to be appropriate (see the check list on the fol- lowing page).				
The operating instructions, and explicitly all of the warning and safety instructions contained therein, were discussed during the training in detail and understood by the user. The user was then handed these operating instructions.				



# 40.2 Check list for training the user

Topics	Com- pleted / fulfilled
All mechanical function controls were explained and their function demonstrated.	
Use of the brakes was demonstrated and then performed by the user themselves and / or their assistant.	
Attention was drawn to the fact that it is a parking brake and not a service brake.	
The functioning of the folding mechanism was demonstrated and then performed by the user himself and / or his assistant.	
Procedure for achieving the smallest stowing dimension was demonstrated and then tested by the user himself and / or his assistant.	
How the setting of the backrest angle works was demonstrated and then performed by the user themselves and / or their assistant.	
Removal and installation of the clothing guard was demonstrated and then tested by the user themselves and / or their assistant.	
How the push handles are used and adjusted was demonstrated and then tested by the user themselves and / or their assistant.	
How the footrests work was demonstrated and then tested by the user themselves and / or their assistant.	
Use of the anti-tipping supports was demonstrated and then performed by the user themselves and / or their assistant.	
Removal and installation of the drive wheels and the caster forks (for the quick-release axle) was demonstrated and then tested by the user himself and / or his assistant.	
Test drive: Overcoming obstacles with the product, e.g. a kerb	
Test drive: Driving on the level forwards and backwards and also uphill and downhill in the direction of travel	
Test: Operating the anti-tippers in front of an obstacle	
Information for care, cleaning and maintenance of the product (including quick-release axles) have been provided and understood by the user and / or assistant.	
Information on the wheels with regard to inflation pressure and tread depth and checking the quick-release axles have been provided and understood by the user and / or assistant.	
Information on regular checks of the brakes, anti-tipping supports and the seating and back system have been provided and understood by the user and / or assistant.	
The contents of the operating instructions from PRO ACTIV and the other component manufacturers were completely worked through based on the product training and were understood by the user and / or assistant.	

The use of the product is only permitted when all topics listed in "Required compliance criteria for those permitted to use" have been met by the user and all the points have been ticked off in the "Check list for training the user".



# 41 Appendix: Inspection lists

#### Initial inspection: after 6 weeks

	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Functional and safety check of the folding mechanism, brakes, push handles and anti-tipping supports as well as other function components (e.g., folding backrest, fold up footrest on one side)			

OK / carried out = OK  $\mid$  not OK = not OK  $\mid$  resolved = the fault was corrected

# Comments:

Stamp:	
Date / Signature	



	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points, quick-release axles and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional/safety check of push handles			
Functional/safety check of braking system			
Functional/safety check of anti-tippers			
Functional/safety check of the seat and back system			
Functional/safety check of drive wheels			
Check wheel tracking and drive wheel bushing are firmly seated (tightening torque 70 Nm)			
Functional/safety check of caster wheels			
Check the caster wheel axle is firmly seated (tightening torque 7 Nm) and the correct setting			
Functional/safety check of footrests			
Functional/safety check of folding mechanism			
Test drive / functional test			

OK / carried out = OK | not OK = not OK | resolved = the fault was corrected

#### Comments:

Stamp:

Date / Signature



	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
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Visual inspection of the frame and attachments for crack formation, deformation, etc.			
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Functional/safety check of footrests			
Functional/safety check of folding mechanism			
Test drive / functional test			

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Functional/safety check of folding mechanism			
Test drive / functional test			

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Test drive / functional test			

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Stamp:
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Your Dealer :		





Im Hofstätt 11 D-72359 Dotternhausen – Germany Tel. +49 7427 9480-0 Fax +49 7427 9480-7025 Email: info@proactiv-gmbh.de www.proactiv-gmbh.com No. 000 000 1621 © 08/2015 PRO ACTIV Reha-Technik GmbH. All rights reserved. cc in accordance with Directive 93/42/EEC for medical products