



Operating instructions Service booklet

SPIKE Adaptive bike



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Preface

Dear Customer,

Congratulations on purchasing your new PRO ACTIV product. You have bought a quality product which 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.

Throughout these operating instructions, the operation of standard components is explained. 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.

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 and safety instructions



Serial number



Additional information



Assembly instructions for the dealer (see table of contents)

CE Declaration of Conformity / other information

3.1 Classification

The SPIKE adaptive bike (referred to as a "product" below) is classified as a class I product.

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 which has not been agreed by PRO ACTIV Reha-Technik GmbH, this declaration becomes void.

Manufacturer

PRO ACTIV Reha-Technik GmbH

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Scope of delivery

The product may only be operated with an adapter supplied by PRO ACTIV which is suitable for the wheelchair.

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 e.g., lighting and clip-on fender.

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 shipping. If your product has been damaged during transit, please contact your dealer or PRO ACTIV immediately.



Introduction 5

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

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.

Mhen operating the product, the wheelchair operating instructions must also be observed. Information on limit values must not be exceeded. If the values contained in the two operating instructions differ, the lower limit is the one which applies.

Never leave the product unattended.

Product description / purpose 6

The product is attached to a manual wheelchair as a mechanically propelled drive unit which supports the wheelchair user in being mobile. It is easier to cover longer distances with ergonomic movement processes using one's own wheelchair. This expands the activity radius. Through the product's larger drive wheel (compared with the caster wheels of the wheelchair) and the wheelchair's steering wheels which are raised from the ground uneven routes and barriers can overcome more easily and without danger. The downhill speed can be regulated via the product's braking systems, so that downhill slopes can be travelled on safely.

For safety reasons, the product may only be operated by persons who

- have been trained in its use by the dealer or PRO ACTIV.
- can move and control their hands and arms so that they are able to operate the controls and perform the full steering movement without restrictions while driving.

are physically and mentally capable of safely operating the device in all operating situations and can meet the legal requirements for use on public roads.

7 Acceptable usage and operating conditions / places of use

Observe the instructions on permitted operating conditions in the operating instructions for your wheelchair which the product has been adapted to.

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 wheelchair with the adapted product must be equipped in accordance with road traffic regulations when operated on public roads and spaces.

The maximum permitted load of the product in its standard design is 75 kg towed capacity and 5 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 when transporting objects.

We recommend: The wheelchair can be equipped with a anti-roll back device and that this is activated before driving on slopes. The anti-roll back device can also be used if a wheelbase extension is used on the wheelchair.





Figure 1: Anti-roll back device

We recommend: The wheelchair should be equipped with a wheelbase extension. Before driving with the traction system, the wheelchair wheels should then be positioned in the wheelbase extension. This allows a more optimised distribution of the weight between the drive wheel of the product and the wheelchair wheels to be achieved. This minimises the risk of the product wheel slipping on slopes.



Figure 2: Removable wheelbase extension

8 Technical specifications

8.1 Product weight

The total weight starts from 7.3 kg with the basic equipment.

8.2 Load weight

Maximum load weight:

75 kg towing capacity and 5 kg payload

8.3 Obstacle height and turning circle

Maximum drive-over / negotiable obstacle height: 10 cm (must be ensured through an appropriate adapter assembly / setting, steering wheels must be removed (→ recommended equipment of the wheelchair: steering forks with quick-release axle))

Turning circle:

- approx. 3.5 m without manoeuvring back and forth
- approx. 2.3 m with manoeuvring back and forth (much dependent on the number of manoeuvres)

8.4 Basic equipment & dimensions

In its basic equipment, the product comprises one drive unit with docking plate, handles with brake fittings, chain guard and rim brake.

Dimensions, SPIKE adaptive bike:

Product height: approx. 70-90 cm (depending on the length of the pedal bearing support)

Product width: approx. 41-50 cm (depending on the grip width, parking stand in passive position)

Grip width: 36-45 cm

Crank length: 135-175 cm

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 pedal bearing. 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:



Manufacturer

(€

CE marking



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. They will fit, if not already done, the required fastening elements to your wheelchair to hold the adapter and, if required, any other accessories. The height of the parking stand is also adjusted correctly.

Finally, 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 28 and 29.

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, the external circumstances and the legal regulations. 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 28) and the hand-over certificate including the associated check list (chapter 29) 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 www.proactiv-gmbh.com under the link "more documents >>".



12 Safety instructions – prior to driving / use

The operating instructions of the connected wheelchair must be strictly observed when using the product.

If your wheelchair is operated in combination with the product, any existing antitipping supports must be put into their passive position or removed (see the wheelchair's operating instructions). If the wheelchair is then used without the product, the anti-tipping supports must be brought back into their operating position again to ensure tipping stability.

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, the wheelchair-product combination must not be operated any further. In this case, contact your dealer or PRO ACTIV.

Check tyre pressures at regular intervals. Ensure that you comply with the manufacturer's specifications which can be found on the tyres. Tyre pressure which is too low affects handling and has a negative effect on the braking action for wheelchairs).

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

Before every trip, check that the product is firmly attached to the adapter and that the adapter is firmly attached to the wheelchair. The product may not be operated on the wheelchair if any of the connections are not tight and secure. In this case, contact your dealer or PRO ACTIV.

Always ensure that your feet cannot slip off the feet plate of the wheelchair when using the product, if necessary by using a special fixation device.

If present, check the function of the front and rear lights as well as the effectiveness of the side and rear reflectors before every trip. Lights and reflectors must be clearly visible during the journey and must not be covered by other objects. Especially trips that take place in the dark or in the twilight, the lighting must be functional and visible. For longer trips in the dark, we recommend that you also take along extra batteries.

To minimise the risk of suffering serious head injuries in the event of a fall, a helmet should always be worn when driving with the product.

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

Always hold onto the crank handles with both hands while driving. If the driving situation requires you to take one hand off the crank handles, this is only permitted when the speed has been reduced to the minimum possible beforehand.

Increase the speed slowly up to the desired speed.

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

When waiting at potential hazard areas (e.g. while waiting at a pedestrian crossing, on hills or slopes or at ramps of any type), always hold down the service brakes.

Mhen driving round a bend, reduce your speed to a minimum.

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



You may only drive on slopes where the wheelchair-product combination can be safely controlled by steering and braking of the product.

Due to the increased turning circle, it can be difficult to turn in buildings, in front of or in lifts or other buildings, as the standard in such buildings assumes a maximum turning circle of 1.5 m.

Do not attach objects (carrier bags, etc.) to the product. These could prevent safe operation of the product while driving.

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

Mhen driving on public roads and footpaths, the provisions of the road traffic regulations (German StVO) must be observed.

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.

If you encounter new driving situations which 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.

You must not make telephone calls while driving.

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

By performing regular checks, ensure that the safety bolts of the adapter are always in the correct position while driving (see operating instructions "Adapter & adaptation").

When driving, never jerk the handlebars to the left or the right, as this may cause the wheelchair-product combination to tip over sideways in certain circumstances.

While driving, never grab onto the wheelchair wheels, in the area of the product wheel, in the area of the chain / sprockets / chain wheels or into other rotating parts; if you do you may cause injuries.

Only brake the product using the service brakes.

During long trips the brakes of the product may heat up. Therefore, do not touch the brakes during or immediately after the trip (e.g. when detaching or loading the product).

If the situation allows it, the speed should be reduced by carefully applying the service brake. Abrupt braking can cause the upper body to fall forwards which can thereby result in injuries or loss of vehicle control.

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. by playing children or to transport goods.

If the weight load on the drive wheel falls (e.g. when driving on slopes) or when driving on loose / slippery surfaces, the braking action of the wheel may be considerably reduced. The driving style and speed should be adjusted so that the product can be safely stopped at all times using the brakes.

Towing or using a trailer is not permitted.

Make sure that cables and lines are not kinked or caught up somewhere. This could cause them to be damaged which could lead to the brakes and gear shift not working correctly. In this case, the product must no longer be operated.



14 Safety instructions regarding obstacles

⚠ Driving on steps with the product is forbidden.

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

The maximum obstacle height which can be negotiated is 10 cm. This value can, however, be reduced due to the specifications of the type of wheelchair or its settings. Therefore, you should observe the values given in the wheelchair's operating instructions or the restrictions dependent on the settings.

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 drive at them on 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 and the wheelchair.

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 which 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 while driving parallel, otherwise the wheels could become caught which would result in the wheelchair and the product being unable to manoeuvre.

When driving on ramps and lifting equipment on vehicles, extreme caution is needed. During the lifting or lowering operation of a ramp or the lifting equipment, the service brake should be operated. This prevents rolling away.

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 Adapter & adaptation

Where necessary and ordered, a suitable adapter for your wheelchair is included with the delivery.

Please read the operating instructions and assembly instructions "Adapter & adaptation" before using the product.

The product may only be adapted and detached on dry, stable and flat surfaces.

17 Functional elements

17.1 Parking stand

17.1.1 Active and passive positions

By pressing down and turning the operating lever, the parking stand positions can be changed from the active to the passive position, or vice versa.



Figure 3: Press down and turn the operating lever

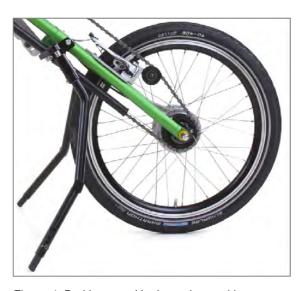


Figure 4: Parking stand in the active position



Figure 5: Parking stand in the passive position

17.1.2 Parking stand height adjustment

The height adjustment of the parking stand is important in order to bring the docking plate of the product into the correct (heigh) position to the adapter.

For setting the height of the parking stand, the following must be observed: the dimension from the floor to the lower edge of the front of the insertion maul (on the wheelchair side) should correspond with the dimension from the ground to the upper edge of the insertion bolt (on the product side). As soon as there is a deviation from these two dimensions due to the hole pattern, the dimension from the ground to the upper edge of the insertion bolt may be up



to max. 1 cm larger. In this case, the product can be inserted into the adapter by tipping slightly to the rear (via the parking stand).



Figure 6: Measurement from the ground to the lower edge of the front of the insertion maul

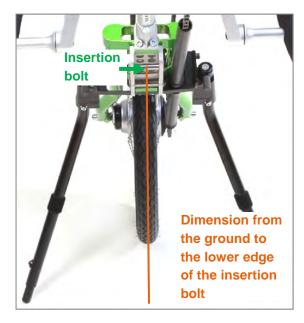


Figure 7: Dimension from the ground to the lower edge of the insertion bolt



Figure 8: Position of the product and wheelchair with the parking stand height adjustment set correctly

The height adjustment of the parking stand is carried out by undoing the M6 oval head screw (AF 4 mm) and adjusting the position of the adjustment inlet along the specified row of holes in the parking stand and inlet. Finally, tighten the oval head screw up to 7 Nm of torque.



Figure 9: M6 oval head screw and adjustment inlet to adjust the height of the parking stand

17.2 Pedal bearing support & crank

17.2.1 Seating position

The seating position and therefore the pedal position and the crank length depend on the upper-body stability or the core musculature. A suitable adjustment to the arm length will have been made during the consultation / measurement procedure.



With weak core musculature, the seating position should normally be chosen so that the upper body remains still in an upright position when operating the crank while driving. This is particularly important if you have low seating stability due to missing or weak core musculature. A rocking motion (forwards and backwards) of the upper body or the head should be avoided where possible. The height of the pedal bearing in this case is selected to be slightly higher (chest height or higher).

Sporty drivers with the appropriate trunk stability relieve their arm musculature by moving their trunk at the same time. The height of the pedal bearing in this case can be selected to be slightly lower (chest height or lower).



Figure 10: Elbows are not completely straight, upper body is in an upright position



Figure 11: Distance between the crank and the thigh

The cranks must not touch the knee or thigh when they are being turned.

The elbows should not be completely extended when the crank handles point completely forward away from the body.

A suitable restraint system must be used if you have poor seating stability due to a lack of or weak core musculature. The selection of the suitable system must be made in conjunction with your doctor or therapist and / or defined and implemented by your dealer. There are various systems available such as chest straps or four-point safety belts. Also, the dealer can frequently individually make a system or adapt one that has been purchased.

17.2.2 Pedal bearing position

A subsequent adjustment of the pedal bearing position can only be achieved by exchanging the pedal bearing support, the angle adjustment possible on the steering head as well as the length adjustment and the spacing of the adapter tube on the adaptation points on the wheelchair frame (see operating instructions "Adapter & adaptation").

To adjust the height, two M6 clamp screws (AF 5 mm) must be loosened on the pedal bearing housing. Then the pedal bearing housing can be moved along the pedal bearing support to the correct position. Then tighten up the four M6 clamp screws (AF 5 mm) to 7 Nm torque and secure them with thread lock fluid.





Figure 12: M6 clamp screws on the pedal bearing housing for the height adjustment of the pedal bearing position and the replacement of the pedal bearing support

The replacement of the pedal bearing support is carried out by undoing the two M6 clamp screws (AF 5 mm) on the pedal bearing housing and the two M6 clamp screws (AF 5 mm) on the upper fork bridge (figures 12 and 13). Then the new pedal bearing support is inserted into the fork bridge with another length and the two M6 clamp screws (AF 5 mm) are tightened to 7 Nm and secured with thread lock fluid. Finally, the pedal bearing housing is positioned on the pedal bearing support and retained at the desired height. In order to fix the pedal bearing housing, the two M6 clamp screws (AF 5 mm) on the pedal bearing support are tightened to 7 Nm and



Figure 13: M6 clamp screws on the top fork bridge for replacing the pedal bearing support

If you want to make a change to the pedal bearing position, please contact your dealer or PRO ACTIV.

Please note that, after a large adjustment to the chain pedal bearing position, the lines and the cable lengths must be adjusted.

17.2.3 Crank length and grip width

The **crank length** can be chosen from different lengths individually to suit the length of the arms and mobility of the user. Different widths of pedal bearing shafts and spacers between the crank handles and the rotary axles of the hand grips are available to adjust the **grip width**.

If you want to make a change to the crank length or grip width, please contact your dealer or PRO ACTIV.

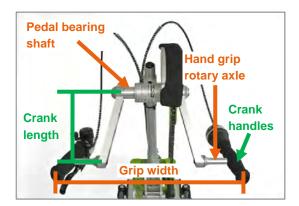


Figure 14: Crank length and grip width

17.3 Grips

The grips must be held firmly with both hands whilst driving and always held so that the cables and lines are oriented upwards.





Figure 15: Correct grip hold

17.4 Gear shift

17.4.1 **Hub gears**

The hub drive can be changed while driving and also when stationary. No crank movement is needed to change or only a small reduction in torque is needed while driving.

The **Shimano Nexus** hub drives are operated by **turning the grip shift**. The gear selected is shown in the display on the control panel.



Figure 16: Shifting using the grip shift for the Shimano Nexus Inter8 hub drive

With the **Shimano Nexus Inter8** hub drives there is another operation option via the **operating machine** that enables shifting using the chin (option). To change up move the gear lever 45° up and to change down move it 45° down. After completing the gear change, the gear lever moves back to its starting position. There is no display for the gear selected available.

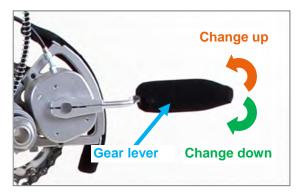


Figure 17: Shifting via the PRO ACTIV operating machine with the Shimano Nexus Inter8 hub drive

For more information on hub drives, please see the instructions provided by the gear manufacturer.

17.4.2 Pedal bearing gearshift

The pedal bearing gearshift ("Mountaindrive" gear reduction for hills) is switched on by pressing the control buttons on the left and right of the pedal bearing. Here, you can choose between a 1:1 gear ratio (the left control button in the direction of travel) or a 2.5:1 gear ratio (the right control button in the direction of travel).

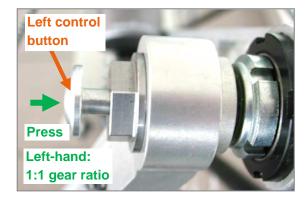


Figure 18: Left control button of the pedal bearing gearshift



The pedal bearing gearshift should be lubricated once or twice a year with the supplied original semi-fluid grease using the syringe. The semi-fluid grease is filled through the slotted screw.



Figure 19: Slotted screw to lubricate



Figure 20: Original semi-fluid grease in the syringe

For more information, please see the instructions provided by the manufacturer.

17.5 Brake

Generally, the product is braked via the backpedal brake of the hub drive and a rim brake. Where possible, driving in a manner that allows you to reduce your speed gradually if required.

17.5.1 Rim brake

The brakes are operated using the brake lever.



Figure 21: Brake lever

In the event of abrupt hard braking, there is a risk that you might fall forward with your upper body and thereby cause injuries to yourself.

Please make sure that the braking surfaces on the rim and the brake pads on the rim breaks do not come into contact with oils or greases which could otherwise impair the braking effect. If rims or brake pads do come into contact with oils or greases, the brake pads must be replaced and the rim must be professionally cleaned with brake cleaner (e.g. Weicon surface cleaner).

You can find further information in the brake manufacturer's instructions.

17.5.2 Back-pedal brake for hub drives

A back-pedal brake is already integrated into the Shimano Nexus Inter3, 7 and 8 speed hub drives.

This brake is operated by moving the cranks against the acceleration direction. The brake force applied is adjusted by the strength of the backwards movement of the cranks.

17.5.3 Parking brake

The parking brake is implemented via the mounted rim brake (option). The operation of the parking brake is carried out using an operating lever on the pedal bearing support. If the operating lever is pressed to the left, the rim brake is activated. When pressed further to the left, the brake force increases even more. If the operating lever is pressed to the right, the rim brake is opened again.





Figure 22: Parking brake can be operated from the operating lever (opened)

17.6 Components

You will be instructed about the functions and operation of the gears, brakes and other brand components during the hand-over / training. You can also get information later from the component manufacturers' operating instructions enclosed, or if needed, by asking your dealer or PRO ACTIV. The operating instructions from the component manufacturers can also be downloaded online.

In the download area of www.proactiv-gmbh.com under the links "more documents >>", we have put together the most important documents. More extensive information can be found on the manufacturers' websites:

Shimano components: http://si.shimano.com

Mountain Drive pedal bearing gear shift: http://www.haberstockmobility.com/de/produkte/schlumpfgetriebe/schlumpf-mountain-drive.html

Sigma:

http://www.sigmasport.com

Subject to changes to the links provided by the component manufacturers.

18 Storage

Store the product on an easy to clean surface in a dry environment, preferably at room temperature (+15°C to +25°C).

For storage please also comply with the notes in other sections of these operating instructions and the component manufacturers' operating instructions included with delivery.

If the product is not used or is stored over a longer period, if necessary, before using it again, we recommend having a dealer give it a general function and safety check.

19 Transport

When loading or transporting, the product can be held on the pedal bearing support.

When transporting in vehicles it must be noted that the product is not approved for use as a seat in vehicles or disabled person's vehicles when combined with a manual wheelchair. All vehicle occupants must only sit on the seats installed in the vehicle during the journey with the associated restraint systems. Failing to observe this leads to increased risk of injury for the user as well as for third-parties.

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.

When loading make sure that the cables and lines are not caught up, become kinked or otherwise damaged. The product may not be used with damaged cables and / or lines.



20 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.

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

21 Cleaning and care

Regular cleaning of the product is prescribed to prevent the components becoming clogged up due to dirt. Moreover, regular cleaning prevents corrosion and increased wear. 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.

For all cleaning processes, only use commercially available, household 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.

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

The drive wheel should be regularly cleared of contamination. It is recommended that you use a soft sponge or a soft brush.

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

If you need care products for your product, please contact PRO ACTIV.

22 Maintenance

22.1 General instructions

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

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

When maintaining the brakes and the gear components, it is imperative that the operating instructions of the manufacturer which were included in delivery are followed.

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 27 must be observed.



22.2 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):

- The chain should be cleaned and lubricated with chain oil (observe the manufacturer's instructions).
- Check the tyres for damage, foreign bodies and any cracks that form.
- Check the cable housings are seated correctly and tightly in the gear cable holders.
- Cables and lines should be checked for kinks and crushing.
- Check the brake pads.
- Check the tyre pressure and correct if needed (the tyre pressure should always be as printed on the tyre covers).

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 after running 200 kilometres or 5 months after delivery (whichever comes first). The maintenance schedule can be found in the inspection lists in chapter 30.

Subsequent inspections are then always performed after 1,000 kilometres running or after a period of 1 year (whichever comes first). The maintenance schedule can be found in the inspection lists in chapter 30.

After extreme loads, e.g. during holidays where the product was used on sand, near sea water

or in snow, it is recommended that an additional deep clean and inspection is performed by your dealer or PRO ACTIV.

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.

22.3 Proof of maintenance

To provide proof of the maintenance, you can use the inspection lists in chapter 30. The inspection lists are also available as pdf files which can be filled in within the download area of www.proactiv-gmbh.com under the link "more documents >>". In any event, keep all documents / service reports as a means of proof, and get any service work which was not carried out by PRO ACTIV documented.

Please bring these operating instructions / service booklet to every service.

23 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, rim

Steel: fastening points, screws, nuts

Plastic: handles, tyres, bags for packing

Cardboard / paper: packaging

24 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 21 (Cleaning and care), a thorough cleaning of the grips and all controls must be carried out.

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 manufacturers instructions for use for the disinfection agent that you use.

This will also be done by PRO ACTIV as part of the safety check. The safety-related check must be initiated by the funding provider.

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

26 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 ACTIV's general terms and conditions at www.proactiv-gmbh.com.



27 Appendix: Tightening torques and securing details

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!):

Dimension	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 AN302-42), where there are no securing clamps on the screw connections present or there is a lubrication requirement with grease or copper paste.



28 Appendix: Medical product passport / record of training

Product specifications	s:
Serial number: SN	
Customer data:	
Surname, forename: Street: Postcode, city: Phone: Paying organisation:	
Training carried out b	y:
Medical supplies de PRO ACTIV field representative	Stamp / Date / Dealer's signature
Record of training	
I was / we were instructed of the product listed and in	I in accordance with the associated hand-over certificate about the operation of about possible operator errors. I was / we were also advised about stance of another person is required. The operating instructions were handed
Instructor Name, date, signature	
1. Person being trained Name, date, signature	
2. Person being trained Name, date, signature	
3. Person being trained 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).



29 Appendix: Hand-over certificate

29.1 Required compliance criteria to authorise use

Topics	Completed / fulfilled	Remarks
The product is suitable for the customer based on their own judgement and the customer information received regarding the disability-related restrictions.		
The use intended by the customer is fully consistent with the intended use as described in the operating instructions (see the Product description / 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 was informed about the current / applicable regulations in accordance with the road traffic regulations.		
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 following page).		
The user, according to their own statements, or those of the legal representative or guardian and the assessment of the person providing the training, is able to meet the requirements of public traffic in full and to act accordingly. This ability to act, which is the basis for reducing the risk for the user and other road users to an acceptable level, is also completely achievable taking current illnesses / disabilities into full account.		
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.		



29.2 Check list for training the user

Topics	Completed / fulfilled
Advised of the applicable legal regulations when driving on public roads.	
All mechanical function controls were explained and their function demonstrated.	
Adaptation of the adapter to the wheelchair and removing the adapter from the wheelchair was demonstrated and then performed by the user themselves and / or their assistant.	
Adaptation and uncoupling the product to / from the wheelchair was demonstrated and then performed by the user themselves and / or their assistant.	
Adaptation of the wheelbase extension on the wheelchair – if fitted – was demonstrated and then performed by the user themselves and / or their assistant.	
Repositioning the wheelchair drive wheels from the standard position in the wheelbase extension sockets – if fitted – was demonstrated and then performed by the user themselves and / or their assistant.	
How the parking stand works was demonstrated and then performed by the user themselves and / or their assistant.	
The operation of the parking brake – if fitted – was demonstrated and then performed by the user themselves and / or their assistant.	
Use of the service brakes was demonstrated and then performed by the user themselves and / or their assistant.	
The operation and function of the gears was demonstrated and then performed by the user themselves and / or their assistant.	
The operation of the lights – if fitted – was demonstrated and then performed by the user themselves and / or their assistant.	
Test drive: Forwards and, if required, backwards travel through 4 cones spaced at 1.5 m or 2 m	
Test drive: Driving on the level, uphill and downhill in the direction of travel	
Test drive: Emergency stop from high driving speed	
Information for care, cleaning and maintenance of the product have been provided and understood by the user and / or assistant.	
Information on the wheel with regard to inflation pressure and tread depth have been provided and understood by the user and / or assistant.	
Information on regular checks of the brakes have been provided and understood by the user and / or assistant.	
Information on checking the gears including cables and lines and the maintenance of the chain 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".



30 Appendix: Inspection lists

Initial inspection:	: After 200	km or	5 months
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Initial inspection: After 200 km or 5 months					
Kilometre reading:	OK / carried out	not OK	resolved		
Check all screws / fastening elements are firmly seated					
Functional and safety check of all lights (if fitted), steering and adaptation to the product and the adapted wheelchair / wheelchairs					
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables and tyres on the product and wheelchair.					
Check, adjust / set, clean and oil the gear components					
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring					
resolved = the fault was corrected					
Comments:					

Stamp:		
Date / Signature		



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
	_		
Stamp:			
Date / Signature			



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
Stamp:			
Date / Signature			



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
Stamp:			
Date / Signature			



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
Stamp:	7		
Date / Signature			



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
	_		
Stamp:			
Date / Signature			



\neg	



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
Visual inspection of the frame and attachments for crack formation, deformation, etc.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
	_		
Stamp:			
Date / Signature			



\neg	



Kilometre reading:	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.			
Functional and safety check of the brakes and, where necessary, replacement of the brake fluid, brake pads, brake cables			
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Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
	_		
Stamp:			
Date / Signature			



Kilometre reading:	OK / carried out	not OK	resolved
Check all screws / fastening elements are firmly seated			
Clean and oil / grease all pivot points and bearings			
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Check, adjusting, cleaning and oiling the gear components including pedal bearing gearshift (if fitted)			
Check the spoke tension of the drive wheel and, if required, correct the tension / re-centring			
Functional and safety check of the drive wheel and, where necessary, replacement of the tyre on the product			
Functional and safety check of all lights (if fitted), steering and adaptation on the product and the adapted wheelchair / wheelchairs			
Test drive / functional test			
resolved = the fault was corrected			
Comments:			
	_		
Stamp:			
Date / Signature			

Your dealer:





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