



PROACTIV[®]








Usage instructions Assembly instructions

Adapter and adaptation

for the WHEEL-E traction device, FREEWAY steering attachment,
NJ1 e-assistant, NJ1, SPIKE and HUSK-E adaptive bike

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The following instructions are intended for and may only be carried out by the rehabilitation specialist dealer or PRO ACTIV.



This document is available in PDF format at www.proactiv-gmbh.com for visually impaired people. Using the zoom function, the font can be increased as desired.

1 Preface

Dear Customer,

Congratulations on purchasing your new PRO ACTIV product.

Please note that these usage instructions / assembly instructions are simply an addition to your usage instructions for the wheelchair and adapted product (hereinafter referred to as the product). Read the usage instructions for your wheelchair and product – in particular all of the safety advice – carefully before using the wheelchair product traction system.

You will find below some information on the correct and safe use of the adapter. Please read these instructions before using the wheelchair product traction device. There is also some assembly information in these instructions that is primarily aimed at rehabilitation specialist dealers in order to ensure that they assemble the products correctly.

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 usage instructions have the following meanings:



Manufacturer



Note

3 General

PRO ACTIV differentiates between the central adapter and the front adapter. The central adapter is mounted under the wheelchair seat on the folding mechanism or on the cross tubes. In contrast, the front adapter must be mounted on the front frame tubes of the wheelchair.

The adjustments on the adapter and product must be made by rehabilitation specialist dealers so that when the product is coupled, the wheelchair steering wheels are raised 30 mm to 50 mm above the ground.

For loading, transportation or in tight spaces, the adapter can be removed from the wheelchair in a few moves without tools and can then be stowed away.

As with all new devices, it takes time to get used to adapting the product on the wheelchair. If necessary, a trained assistant should observe the correct adaptation process initially so that they are able to provide assistance if required.



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



For NJ1 e-assistant: The drive may only be switched on after completing the adaptation process. The product may only be adapted when the drive signal transmitter is inactive in order to avoid unintended drive signals.



Assembly work, for example centring semi-shells and centring columns on the wheelchair or necessary adjustment work on the adapter and product, may only be conducted by your rehabilitation specialist dealer or PRO ACTIV.

Note: PRO ACTIV produces adapters, centring semi-shells, and centring columns in various designs, for example as a complete individual part or made from separate parts. Illustrations in these usage instructions may therefore vary from the holders mounted on your wheelchair.

4 Central adapter for folding mechanism (TRAVELER adapter)

The following instructions are intended for and may only be carried out by a rehabilitation specialist dealer or PROACTIV

The product is coupled using a central adapter on the wheelchair's folding mechanism.



Figure 1: Central adapter on folding mechanism

4.1 Assembly work on the wheelchair

In the first step, fix the **centring column** to the rear middle part of the folding mechanism. To do so, remove the M8 lens head screw (Metric size 5 mm) that connects the back central part of the folding mechanism with the central tube.

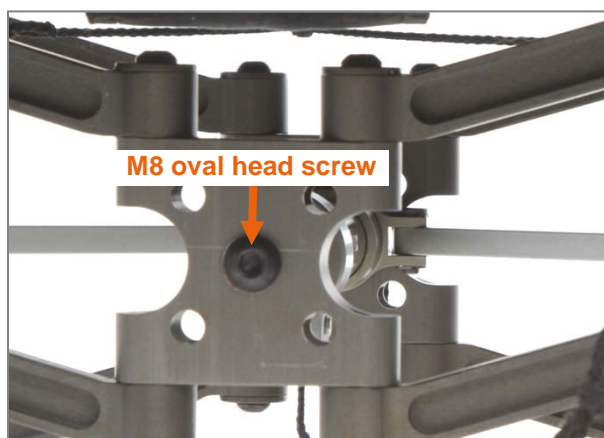


Figure 2: M8 oval head screw that connects the back central part of the folding mechanism with the central tube (wheelchair from behind)

Place the adaptation plate with the centring column from behind against the central part of the folding mechanism and screw it to the central piece and tube using the supplied cylinder head screw M8x20 (Metric size 6 mm). Ensure that the screw is tightened with a tightening torque of 17 Nm and is secured using thread locking fluid.



Figure 3: Folding mechanism with adaptation plate and centring column (wheelchair from behind)

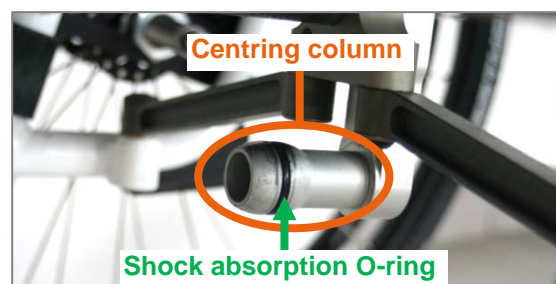


Figure 4: Folding mechanism with adaptation plate and centring column (wheelchair from side)

4.2 Assembly work on adapter

The adapter has adaptation elements that are pushed onto the fixing elements available or assembled on the wheelchair and locked in the adaptation position:

- At the end of the adapter is the centring column mount; its position is infinitely adjustable.
- In the centre of the adapter is the locking plate that can be positioned in a range of 105 mm in seven 15 mm steps and the gap between it and the adapter tube can be adjusted using spacers.

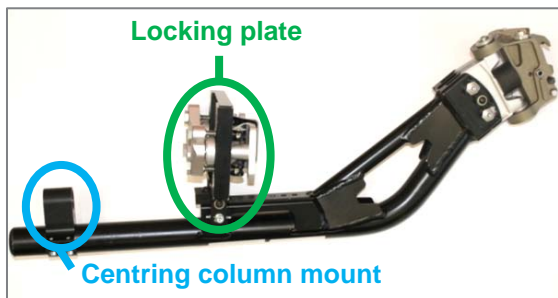


Figure 5: Adaptation elements on the adapter

The horizontal adjustment option of 105 mm in seven 15 mm steps and the potential angle adjustment of the locking plate as well as the infinite horizontal adjustment of the centring column mount enables the position of the adapter to be modified on the wheelchair and adjusts the adapter to the geometry of the wheelchair. Adapt the adapter to the wheelchair as described in Chapter 4.3 and check the necessary adjustment work.

To **position the locking plate horizontally**, the M8 fixing screw (Metric size 6 mm) must be released and tightened again in the right thread hole in the fixing rail at 17 Nm and protected with locking fluid.

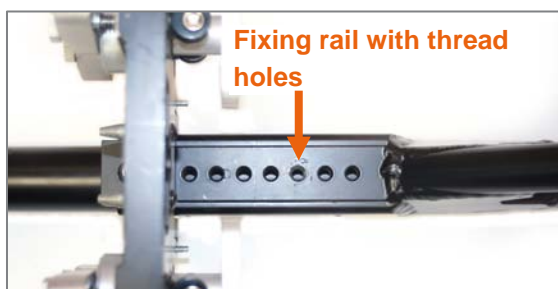


Figure 6: Positioning the locking plate in 15 mm steps

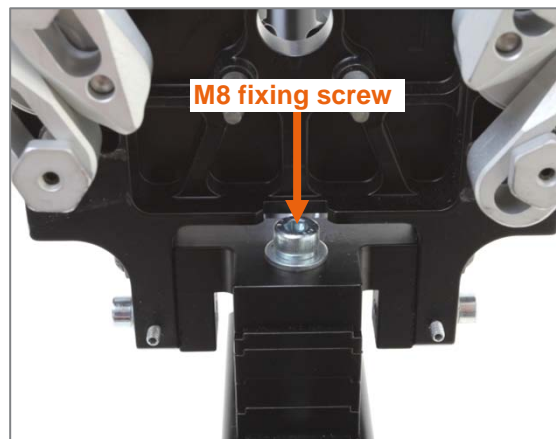


Figure 7: M8 fixing screw to horizontally position the locking plate

To **adjust the angle of the locking plate**, the four M4 adjustment screws (Metric size 2 mm) must first be released. The four M6 fixing screws are then loosened (Metric size 5 mm and 4 mm). The locking plate can now be moved into the correct angle. When the angle adjustment is completed, the four fixing screws can then be tightened with 7 Nm and the four adjustment screws with 2 Nm. Secure the adjustment screws with locking fluid.

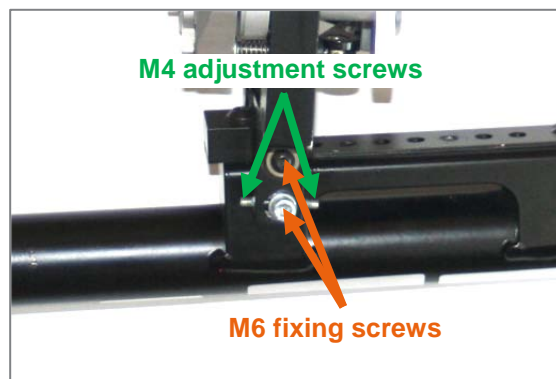


Figure 8: M6 fixing screws and M4 adjustment screws to adjust the angle of the locking plate

To **position the centring column mount horizontally**, loosen the two M6 fixing screws (Metric size 5 mm). You can now infinitely adjust the centring column mount along the adapter tube. At the desired position, tighten the fixing screws again with 7 Nm and secure these with screw locking fluid.



Figure 9: M6 positioning screws to horizontally position the centring column mount

Ensure that the locking plate and centring column mount align precisely.

The items delivered include **spacers** which can be assembled as required between the locking plate and fixing rail as well as in the correct number between the central column holder and terminal clamp. The distance that the wheelchair steering wheels are lifted off the floor on the adapted product can be modified by the assembly / removal of several spacers. When fitting spacers, it may be necessary to use a longer M8 fixing screw (Metric size 6 mm). Make sure that the screw-in depth is at least 12 mm and the fixing screw is not resting on the adapter tube.

Before you now adapt the adapter to the wheelchair, check (this is usually pre-installed by the factory) whether the two **centring pins on the locking plate** are mounted correctly for the size of the central part of the folding mechanism on the wheelchair (two sizes possible). To do so, compare the perforation distance on the folding mechanism with the distance of the centring pins. If the positioning is incorrect, you can modify the centring pin position by loosening the M5 fixing screws (Metric size 3 mm). After repositioning the fixing screws tighten with 4 Nm.

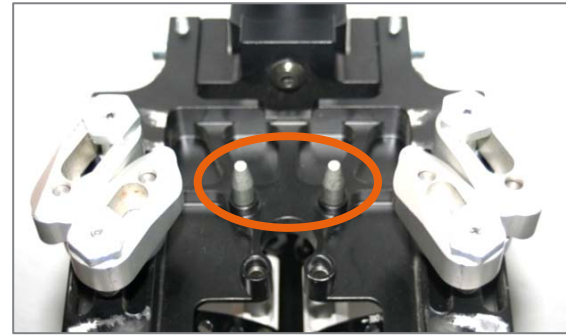


Figure 10: Centring pins assembled for wide centre part

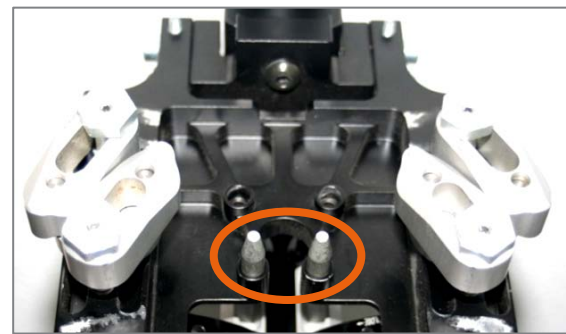


Figure 11: Centring pins assembled for narrow centre part

4.3 Adaptation of the adapter on the wheelchair

Before adapting the wheelchair, the clamp levers must be released inwards and the locking heads must be placed in the vertical position.

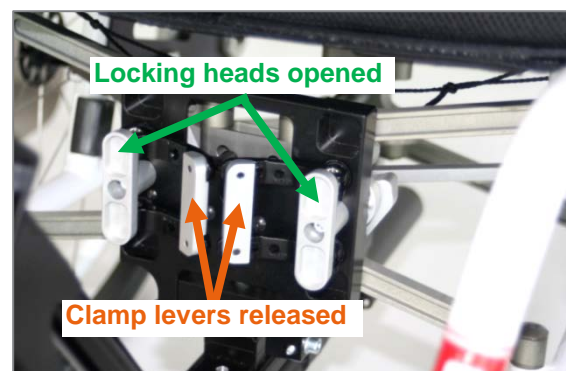


Figure 12: Locking heads in open (vertical) position and clamp levers released



Figure 13: Back view of folding mechanism with open locking sliders

Now the adapters can be attached to the wheelchair. To do so, slide the adapter from the front under the folding mechanism and insert the centring column holder on the centring column.



Figure 14: Centring column with inserted holder

The centring pins on the locking plate must reach the drill holes on the front centre piece of the folding mechanism.

To fix the adapter, the two locking heads on the locking plate must first be turned by 90° – lever in horizontal position. Then the two clamp levers must be firmly tightened externally so that they generate the necessary force to firmly adapt the adapter. Only in this position may the adapter be operated with the adapted product.

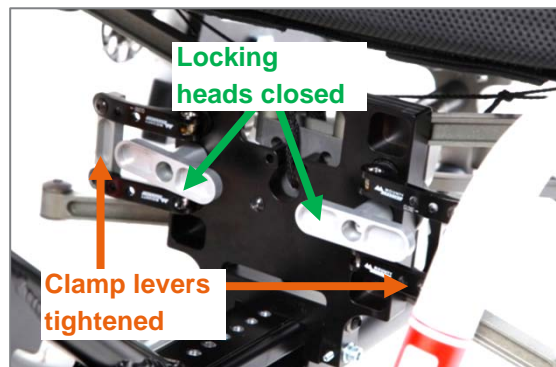


Figure 15: Locking heads and clamp levers in locked position, folding frame adapter assembled and ready for operation

⚠ The **tension of the clamp levers** in the new position must always be ensured, i.e. when the clamp levers are tightened, there must be no play between the locking sliders and folding arms and there must always be a noticeable resistance when tightening the clamp levers. If necessary, the tension may be adjusted via the nuts on the locking slider (Metric size 17 mm), after loosening the M5 threaded pins (Metric size 2.5 mm), so that the tension is the same as it was when new. Even tension must be ensured on all 4 locking sliders. Once the tension has been set, tighten the nuts by hand at 20 Nm and the threaded pins at 4 Nm and secure the threaded pins with screw locking fluid.

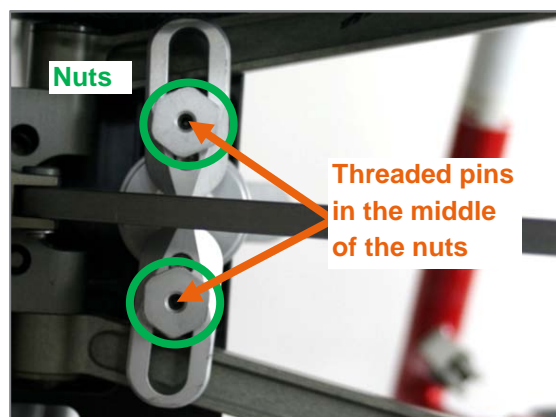


Figure 16: Rear view of folding mechanism with closed locking sliders, nuts to adjust the tension of the clamp levers

If the **locking heads cannot be turned**, this is usually because the release cord of the folding mechanism is incorrectly positioned (release cord in front of the drill holes for the centring pins) and therefore the locking plate cannot rest completely on the folding mechanism.

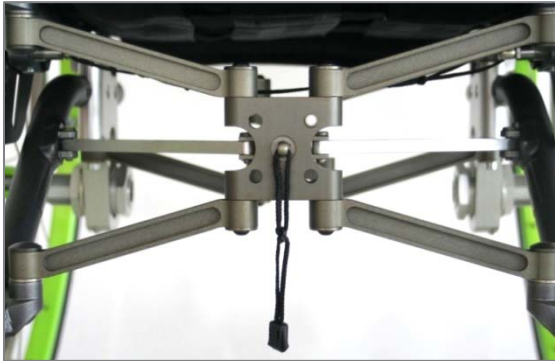


Figure 17: Release cord positioned correctly, drill holes for centring pins free



Figure 18: Release cord positioned incorrectly, drill holes for centring pins hidden to the bottom left

If this is not the reason, then the distance of the locking sliders must be adjusted. To achieve this the distance measurement via the nuts on the locking sliders (Metric size 17 mm) after loosening the M5 threaded pins (Metric size 2.5 mm) must be adjusted (Fig. 16) so that the locking heads can be turned and the tension on the clamp levers is ideal (i.e. when the clamp levers are tight there can be no play between the locking sliders and folding arms and there must always be a noticeable resistance when tightening the clamp levers). Even tension must be ensured on all 4 locking sliders. Once the distance measurement and tension has been set, tighten the nuts by hand at 20 Nm and the threaded pins at 4 Nm and

secure the threaded pins with screw locking fluid.

Note: You can watch a video on attaching the adapter to the wheelchair on YouTube



4.4 Setting options on steering head

The angle-adjustable steering head can influence various parameters, such as the lifting distance of the wheelchair steering wheels on the adapted product, the distance between the product wheel and wheelchair foot bed, or the distance of the product's operating elements to the user's body.

To adjust the **angle of the steering head**, the four M6 adjustment screws (Metric size 3 mm) must first be released on the top and bottom on the steering head.

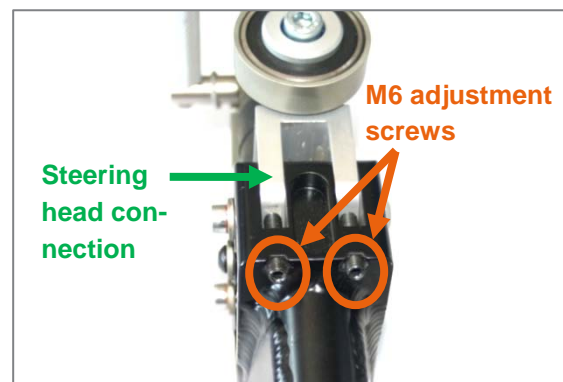


Figure 19: M6 adjustment screws at the top of the steering head connection

After finally loosening the two M6 clamp screws (Metric size 5 mm), the steering head can be tilted by 25°. When the right position has been found, the two clamp screws must be tightened up again with tightening torque of 7 Nm and secured with screw locking fluid. The associated nuts (Metric size 17 mm) must be tightened for this.



Figure 20: M6 clamp screws on steering head

⚠ Note for NJ1 e-assistant, NJ1 adaptive bike, SPIKE adaptive bike and Freeway:

When adjusting the angle of the steering head, you must ensure that the wheel can run freely (horizontal dimension between the extended steering axis) between 60 mm and 120 mm.

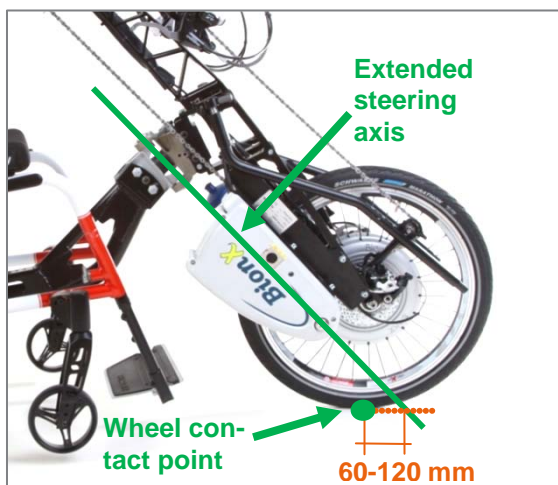



Figure 21: Free run depending on the angle adjustment of the steering head

When the angle adjustment of the steering head is completed, the M6 setting screws (Metric size 3 mm) must be turned again towards the steering head connection so that they rest on the steering head connection. The setting screws are used so that the steering head can no longer turn after the setting has been made.



Figure 22: M6 setting screws resting on the steering head connection

5 Central adapter for fixed frame wheelchairs

 The following instructions are intended for and may only be carried out by a rehabilitation specialist dealer or PROACTIV.

The product is coupled using a central adapter on the wheelchair frame's cross pipes.



Figure 23: Central adapter on the frame cross pipes

5.1 Assembly work on the wheelchair

In the first step, assemble the two supplied **centring semi-shells** (Fig. 24) at a distance of 87 mm (dimension between the two large diameters of the centring semi-shells) at the centre of the front frame cross tube. This ensures the central adaptation of the adapter on the wheelchair and prevents sideways shifting during use. The M5 fixing screws (Metric size 4 mm) of the centring semi-shells must be tightened with a tightening torque of 4 Nm; if the tightening torque is higher, there is a risk that the centring semi-shells could break.

Then insert the enclosed **cable ties** into the internal grooves on the centring semi-shells designed for this purpose. When tightening the cable ties, ensure that their closures are at the back so that they do not affect the adapter when it is being adapted. The cable ties ensure the proper position of the clamping bracket fixing hooks and thus prevent flapping.

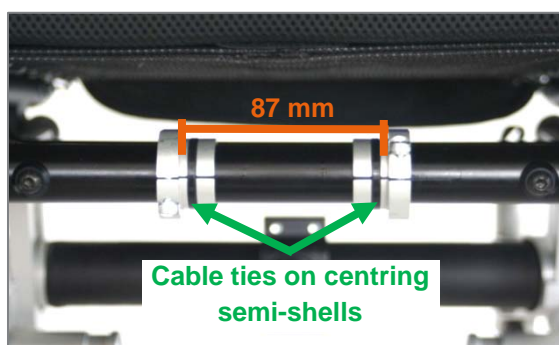


Figure 24: Fully assembled centring semi-shells

Now assemble the **centring column** with the terminal clamp on the back frame cross tube. Before you tighten the M6 fixing screws (Metric size 5 mm), you must adapt the adapter as described in Chapter 5.3 and turn the centring column by twisting the terminal clamp on the back frame cross tube to the correct angle. With the adapted adapter, you must then tighten the fixing screws with a tightening torque of 7 Nm. Ensure that the centring column remains located at the centre of the back frame cross tube.

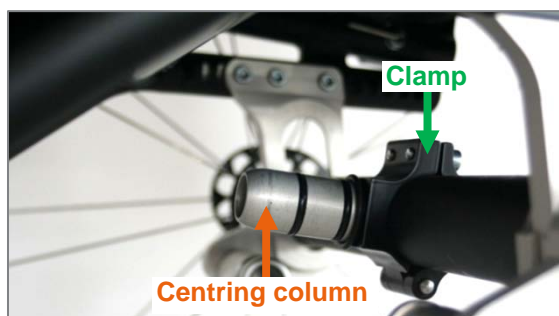


Figure 25: Centring column with terminal clamp

5.2 Assembly work on adapter

The adapter has adaptation elements that are pushed onto the fixing elements available or assembled on the wheelchair and locked in the adaptation position:

- At the end of the adapter is the centring column mount; its position is infinitely adjustable.
- In the centre of the adapter is the clamping bracket that can be positioned in a range of 105 mm in seven 15 mm steps and the gap between it and the adapter tube can be adjusted using spacers.

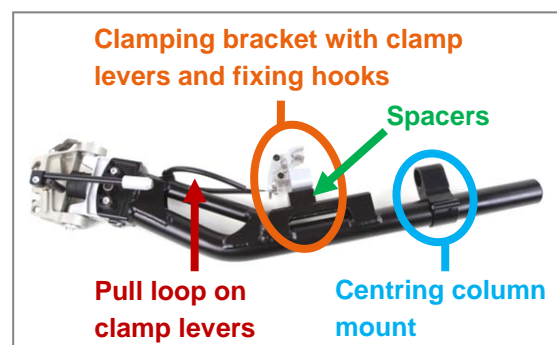


Figure 26: Adaptation elements on the adapter

The adjustment option on the clamping bracket of 105 mm in seven 15 mm steps as well as the infinite horizontal adjustment of the centring column mount enables the horizontal position of the adapter to be set on the wheelchair and adjusts the adapter to the geometry of the wheelchair. Adapt the adapter to the wheelchair as described in Chapter 5.3 and check the necessary adjustment work.

To **position the clamping bracket horizontally**, the M8 fixing screw (Metric size 5 mm) must be released and tightened again in the right thread hole in the fixing rail at 17 Nm and protected with locking fluid.

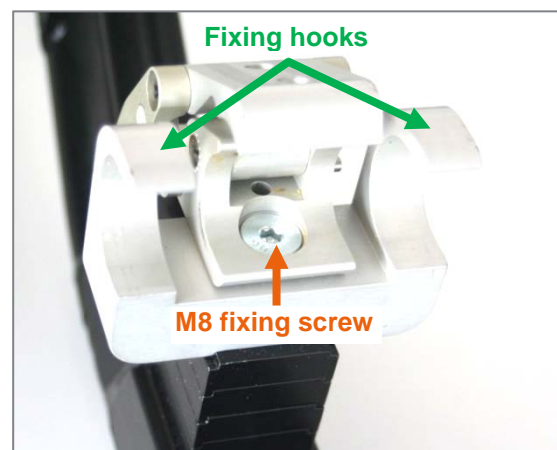


Figure 27: M8 fixing screw to horizontally position the clamping bracket

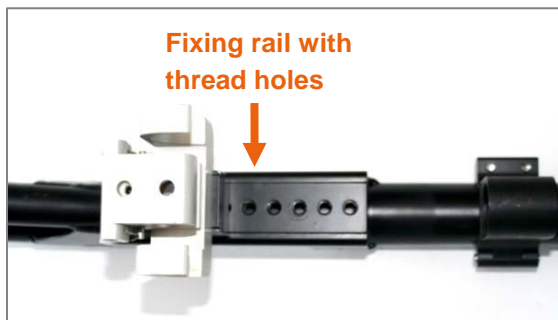


Figure 28: Positioning the clamping bracket in 15 mm steps

To position the centring column mount horizontally, loosen the two M6 fixing screws (Metric size 5 mm). You can now infinitely adjust the centring column mount along the adapter tube. At the desired position, tighten the fixing screws again with 7 Nm and secure these with screw locking fluid.



Figure 29: M6 fixing screws to horizontally position the centring column mount along the adapter tube

When adjusting settings, make sure that the clamping bracket and centring column mount are exactly aligned.

When the adapter is attached to the wheelchair, the centring column mount should have around 1 mm play to the terminal clamp on the centring column (Fig. 30).

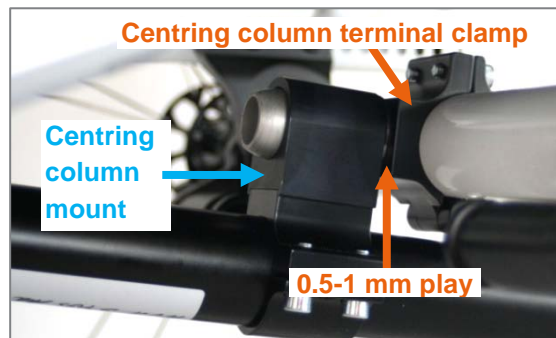


Figure 30: Centring column mount on the centring column

The items delivered include **spacers** which can be assembled as required between the clamping bracket and fixing rail as well as between the centring column mount and terminal clamp (fig. 26). The distance that the wheelchair steering wheels are lifted off the floor on the adapted product can be modified by the assembly / removal of several spacers. When fitting spacers, it may be necessary to use a longer M8 fixing screw (Metric size 5 mm). Make sure that the screw-in depth is at least 12 mm and the fixing screw is not resting on the adapter tube.

5.3 Adaptation of the adapter on the wheelchair



Figure 31: Adaptation elements on the adapter and pull loop on the clamping bracket

First open the adapter's clamp lever by pulling the pool loops forward in the direction of the adapter's steering head. Then guide the centring column mount onto the centring column on the back cross tube, and then past the fixing hook of the clamping bracket after pushing

back the adapter tube (Fig. 27) over the two centring semi-shells. The fixing hook must sit with no play on the centring semi-shells (Fig. 32) and may only move sideways by a minimum amount (< 0.5 mm).

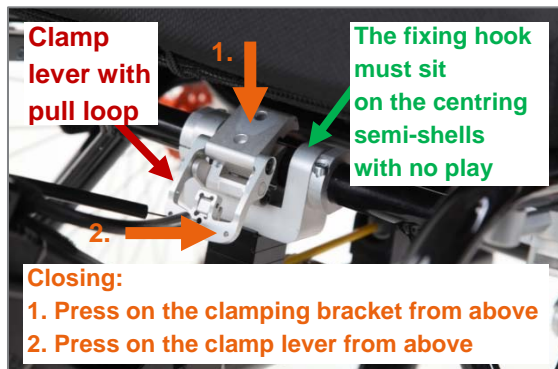


Figure 32: Clamp lever with pull loop in the open position and fixing hook must sit with no play on the centring semi-shells; for fixed positioning of the adapter on the wheelchair, the clamp lever must be pressed until the lock audibly clicks into place

If the distance between the clamping bracket and centring column mount is set correctly, the clamping bracket will rest gently on the front frame cross tube by itself. If this is not the case, the position must be modified accordingly by sliding the centring column mount (refer to Chapter 5.2).

Only by pressing the clamping bracket first from above and then the clamping lever from the front (Fig. 32) does the knee lever override and the lock firmly closes on the clamping bracket. The overriding of the knee lever and engagement of the lock must be clearly noticeable and audible. In addition, check the lock to see if the clamping lever can be opened (do not pull via the pull loop – this would release the lock again). If it can't be opened, then attach the pull loop to the front part of the adapter using a Velcro strap to secure it. This ensures that the adapter is securely locked onto the wheelchair and it can be used as intended.

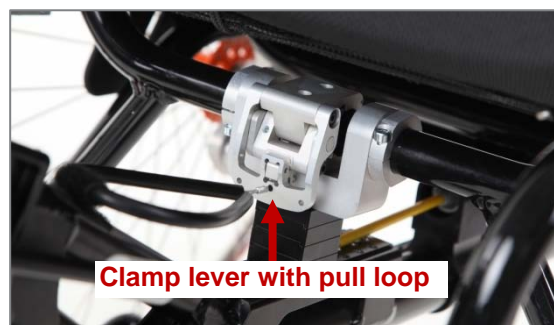


Figure 33: Clamp lever with pull loop in the closed position, fixed frame adapter mounted and ready for operation

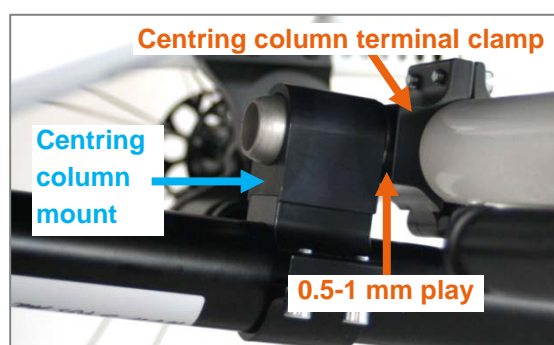


Figure 34: Centring column mount on the centring column, fixed frame adapter mounted and ready for operation

"Lever extension of the quick release clamp" option: With this option, you do not have to press the clamp lever under the seat to close the clamp lever, but you operate the clamp lever by pressing the lever extension in front of the wheelchair seat.



Figure 35: "Lever extension of the quick release clamp" option

Note: You can watch a video on attaching the adapter to the wheelchair on YouTube



5.4 Setting options for the clamping bracket

The closing width of the clamping bracket may need adjusting later if e.g. the clamp lever cannot be closed or the clamping bracket does not surround the tube firmly. The width of the clamping bracket can be adjusted for tube thicknesses of 24-26 mm.



Figure 36: Clamping bracket closed



Figure 37: Clamping bracket opened

The M5 protection screw (Metric size 2.5 mm) and the M4 clamp screw (Metric size 2 mm) must be released for adjustment. This enables the width of the clamping bracket to be adjusted (clockwise for a smaller diameter/anti-clockwise for a larger diameter) by turning the eccentric shaft.



Figure 38: M5 securing screw to fix the eccentric shaft

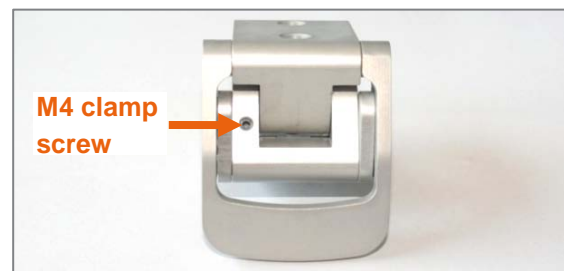


Figure 39: M4 clamp screw to set the activation force for opening and closing the clamping bracket

Attention must be paid here to ensure that the slit on the back of the eccentric shaft points precisely to one of the marking points attached to the clamp by turning the eccentric shaft (Fig. 40). This ensures that the securing screw points precisely to one of the areas attached to the eccentric shaft for this purpose during tightening. Only then is independent turning of the eccentric shaft excluded.



Figure 40: Turning the eccentric shaft along the marking points (clockwise for smaller Ø, anti-clockwise for larger Ø)



Figure 41: Eccentric shaft with areas for securing screw

After completing the width adjustment, first fix the eccentric shaft again using the M5 securing screw to 4 Nm and protect with screw locking fluid. Then adjust the activation force for opening and closing the clamping bracket again using the M4 clamping screw as per the customer's requirements and protected with screw locking fluid.

5.5 Setting options on steering head

The angle-adjustable steering head can influence various parameters, such as the lifting distance of the wheelchair steering wheels on the adapted product, the distance between the product wheel and wheelchair foot bed, or the distance of the product's operating elements to the user's body.

To adjust the **angle of the steering head**, the four M6 adjustment screws (Metric size 3 mm) must first be released on the top and bottom on the steering head.

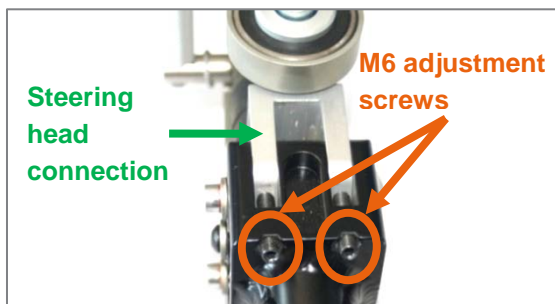


Figure 42: M6 adjustment screws at the top of the steering head connection

After then loosening the two M6 clamp screws (Metric size 5 mm) the steering head can be tilted by 25° on the side of the steering head connection. When adjusting the angle of the steering head, you must ensure that the wheel can run freely (horizontal dimension between

the extended steering axis) between 60 mm and 120 mm.

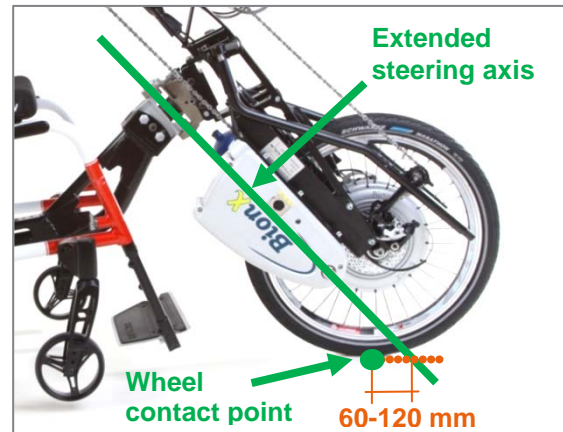


Figure 43: Free run depending on the angle adjustment of the steering head

When the right position has been found, the two clamp screws must be tightened up again with a tightening torque of 7 Nm and secured with screw locking fluid. The associated nuts (Metric size 17 mm) must be tightened for this.

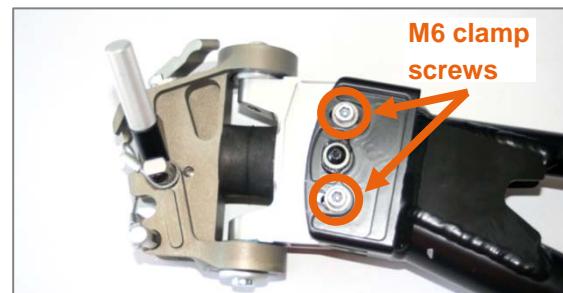


Figure 44: M6 clamp screws on steering head

Then, the M6 setting screws (Metric size 3 mm) must be turned again towards the steering head connection so that they rest on the steering head connection. The M6 setting screws are used so that the steering head can no longer turn after the setting has been made.

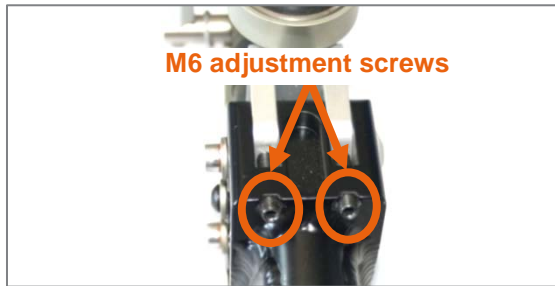



Figure 45: M6 setting screws resting on the steering head connection

6 Front adapter

 The following instructions are intended for and may only be carried out by a rehabilitation specialist dealer or PROACTIV.

The product is attached via one of the adapters adapted on the wheelchair's front frame tubes.



Figure 46: Front adapter on the front frame tubes

6.1 Assembly work on adapter

The adapter is supplied with standard settings from the factory depending on the product's wheel size. The default settings can be viewed in the table in Chapter 10. If the product is to be adapted to a third party product or a PROACTIV wheelchair with special dimensions, changes may still need to be made to the settings. Potential changes stating the dimensions can also be taken from the table in Chapter 10.

The width of the front adapter must then be modified to the width of the wheelchair. To achieve this four M6 tensioning screws on

each side (Metric size 5 mm) must be loosened. By then screwing in all four M4 threaded screws (Metric size 2 mm), the clamp is opened and the clamps on the steering head connection can be moved to the side.

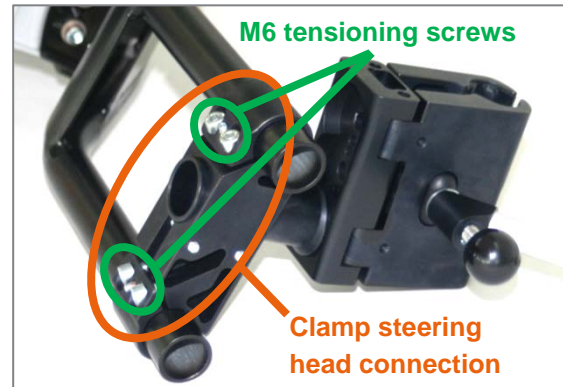


Figure 47: Clamp steering head connection and M6 tensioning screws

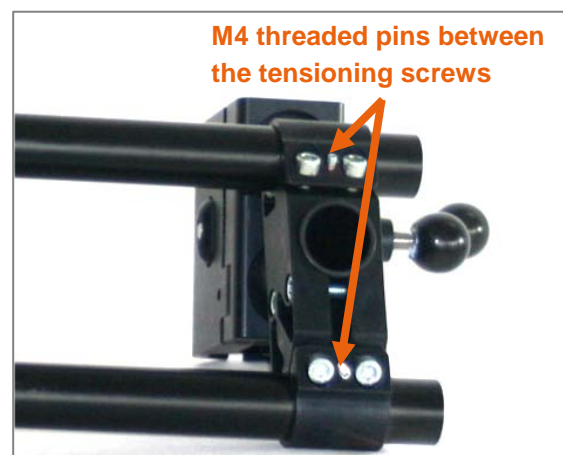


Figure 48: M4 threaded pins to open the clamp to move the clamp steering head connection to the side

The distance of the two frame clamps must now be adapted to the distance of the frame tubes on the wheelchair. The distance of the frame clamps must be centred so that the steering head is positioned in the middle.

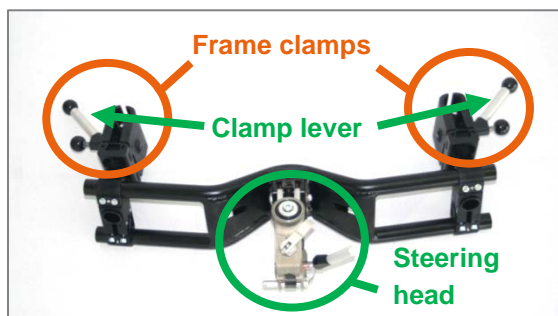


Figure 49: Adaptation elements on the adapter

The M4 threaded pins must then be loosened again by several turns and the M6 tensioning screws tightened again with a tightening torque of 7 Nm and secured with screw locking fluid. The threaded pins are then screwed in again gently, making contact with the clamp. The protruding pieces of tube can be shortened using a metal saw and the tubes blocked with the stoppers provided.



Figure 50: Fully assembled adapter with modified tube lengths and tube end stoppers

6.2 Assembly work on the wheelchair

For adapting to the wheelchair, one of the two clamp cover stoppers (Fig. 53) supplied must be mounted on the left as well as the right frame tube.

In the first step, clamp the front adapter temporarily on the two frame tubes of the wheelchair. To achieve this, the frame clamps are first opened fully (turn clamp lever anti-clockwise). Then the frame clamps must be attached to the frame tube. By turning the clamp levers clockwise, the frame clamps are then fixed gently to the frame tube.

Now the correct fixing height must be achieved by moving the adapter on the frame tubes. The fixing height of the adapter on the wheelchair's

frame tubes is determined by the measurements from the floor to the hook on the insertion shaft on the steering head. This dimension depends on the wheel size of the product to be adapted. The guide values are shown below:

20" wheel → 490 mm

24" wheel → 540 mm

26" wheel → 570 mm

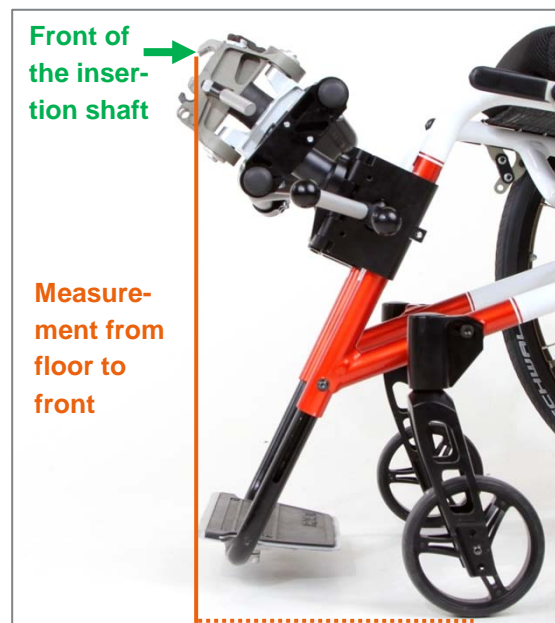


Figure 51: Measurement from floor to front of the insertion shaft

When the adapter sits temporarily in the relevant position on the wheelchair's frame tubes, the positions of the clamp cover stoppers can be marked on the back of the wheelchair's frame tube.



Figure 52: Drawing the position of the clamp frame stopper on the back of the wheelchair's frame tube

The adapter is then removed, the clamp cover stoppers are inserted on the markings, and the associated M5 fixing screws (Metric size 4 mm) are tightened with a tightening torque of 4 Nm.

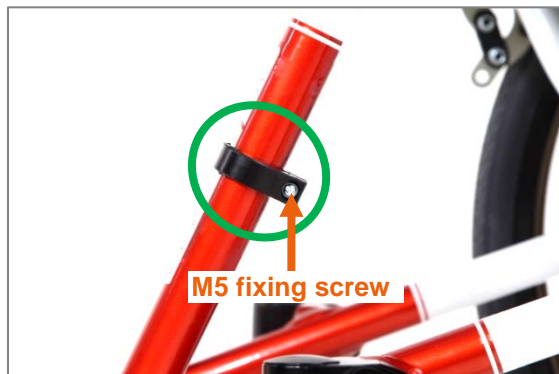


Figure 53: Fully assembled clamp cover stopper (wheelchair from the side)

6.3 Adaptation of the adapter on the wheelchair

You now only have to open the frame clamps fully to adapt the adapter on the wheelchair. To do so, turn the clamp levers fully anti-clockwise. Then the frame clamps must be attached to the frame tube. The height is shown by the already attached clamp cover stoppers. The frame clamps are then turned by hand clockwise using the clamp lever.



Figure 54: Fully assembled front adapter

⚠ Note on attaching third party products: PRO ACTIV supports third party attachments in terms of geometric and functional queries, but cannot indemnify the person creating the

product/wheelchair combination from the applicable regulations relating to the compulsory test regulations that always apply to those creating such aid combinations. PRO ACTIV does not undertake a compatibility check. All product tests on the combination must be undertaken by the rehabilitation specialist dealer. PRO ACTIV is to be indemnified for all defects or damage on the wheelchair in such a combination with regard to liability for product defects or accepting a warranty by the rehabilitation specialist dealer; this is to be requested from the relevant wheelchair manufacturer.

6.4 Setting options on steering head

The angle-adjustable steering head can influence various parameters, such as the lifting distance of the wheelchair steering wheels on the adapted product, the distance between the product wheel and wheelchair foot bed, or the distance of the product's operating elements to the user's body.

To adjust the **angle of the steering head**, the four M6 adjustment screws (Metric size 3 mm) must first be released on the top and bottom on the steering head connection.

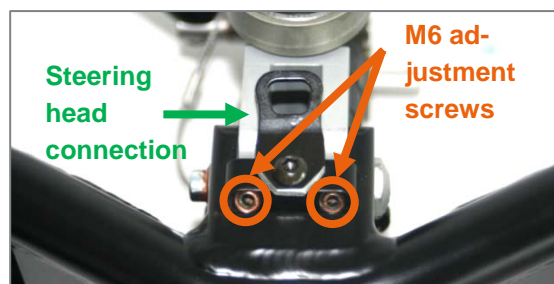


Figure 55: M6 adjustment screws at the top of the steering head connection

After then loosening the two M6 clamp screws (Metric size 5 mm) the steering head can be tilted by 25° on the side of the steering head connection (Fig. 44). When adjusting the angle of the steering head, you must ensure that the wheel can run freely (horizontal dimension between the extended steering axis) between 60 mm and 120 mm.

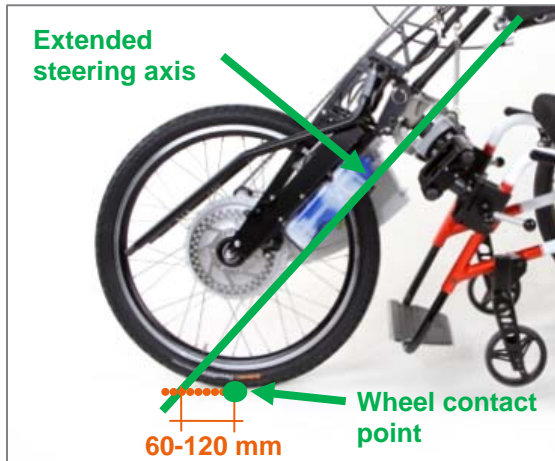


Figure 56: Free run depending on the angle adjustment of the steering head

When the right position has been found, the two clamp screws must be tightened up again with a tightening torque of 7 Nm and secured with screw locking fluid. The associated nuts (Metric size 17 mm) must be tightened for this.

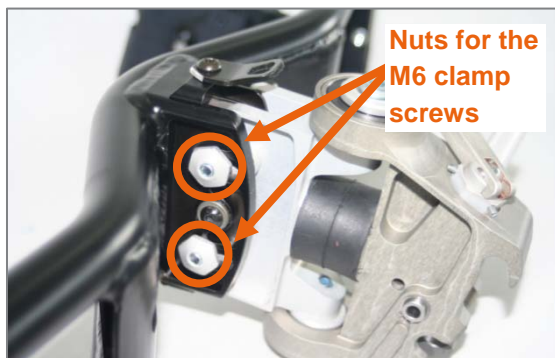


Figure 57: Nuts for the M6 clamp screws on the steering head

Then, the M6 setting screws (Metric size 3 mm) must be turned again towards the steering head connection so that they rest on the steering head connection. The M6 setting screws are used so that the steering head can no longer turn after the setting has been made.

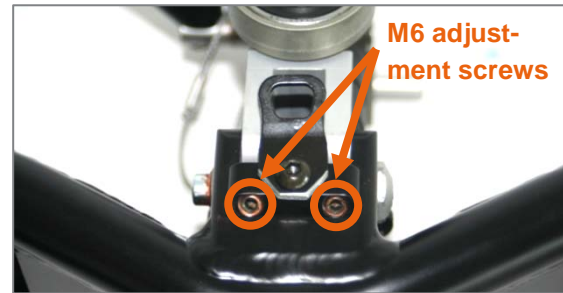


Figure 58: M6 setting screws resting on the steering head connection

6.5 Changing the distance of the front adapter to the wheelchair

In order to change the distance of the front adapter to the wheelchair, the M6 fixing screws (Metric size 5 mm) that are used to clamp the clamp covers are loosened and the clamp covers are pulled out towards the wheelchair (maximum until the cover is flush with the edge of the clamp for the steering head connection on the product side; refer to following image). The fixing screws are then tightened again at 7 Nm.

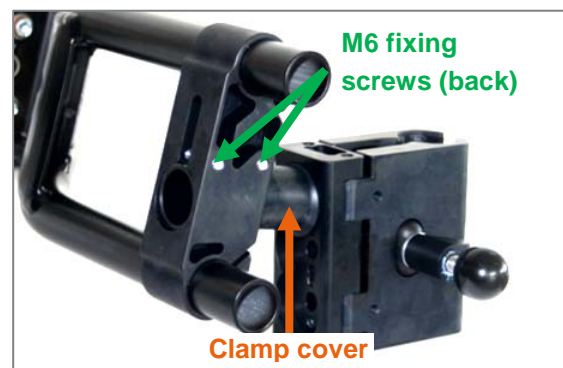


Figure 59: Clamp cover fully extended (if possible, with screw heads also visible)

The clamp covers are also available in various lengths if the setting range available is not adequate. Other setting options can be taken from the table in Chapter 10.

7 Adaptive bikes NJ1 e-assistant, NJ1, SPIKE & HUSK-E: Adaptation on the product and detachment from product

The adaptation of the adapter on the product is shown below using the central adapter and the NJ1 e-assistant. The approach is also applicable to the front adapter and the NJ1 adaptive bike, the SPIKE adaptive bike and the HUSK-E.

With the Adaptive Bike HUSK-E, ensure that the eccentric clamp lever and the safety bolts are on the right side. Not on the left side, as is the case with the other adaptive bikes.

7.1 Terminology

Here you will find an illustration of the terms used in the following to make it easier for you understand:

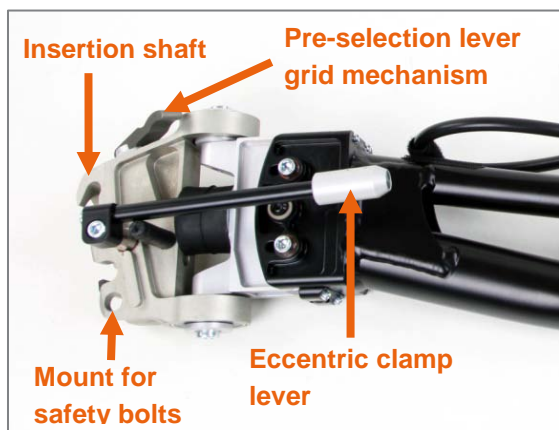


Figure 60: Steering head terms

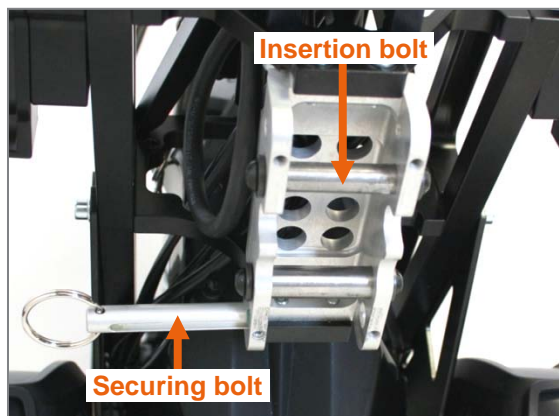


Figure 61: Docking plate terms

7.2 Adaptation on the product

⚠ For the NJ1 e-assistant & HUSK-E:
Please ensure that the drive system is switched off.

For adaptation, the securing pin on the docking plate must be pulled out to the outer stop (Fig. 61). On the steering head, the pre-selection lever lock mechanism must be set to "lock" (lying flat) and the eccentric clamping lever to "loose" (Fig. 62).

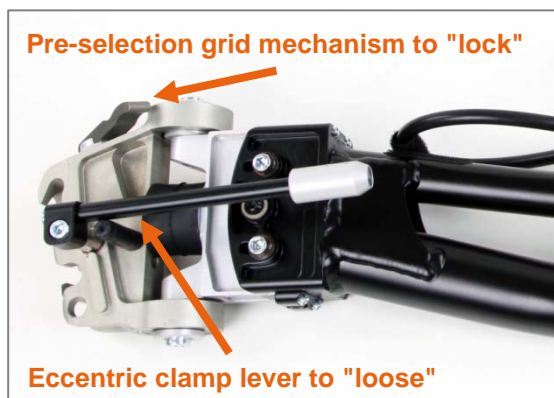


Figure 62: Adapter settings at the start of adaptation

The product must be fixed with the handbrake and – if possible – also parked against a wall (refer to the "Parking brake" chapter in the product usage instructions). Now move your wheelchair with the adapted adapter towards the product until the contact areas on the adapter and docking plate touch each other.

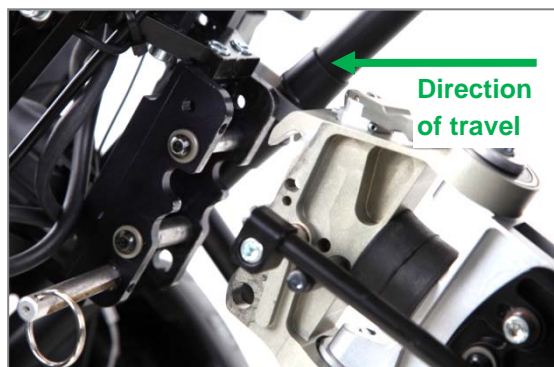


Figure 63: Moving forward to the product

For adaptation, the insertion bolt of the docking plate must be inserted into the insertion shaft on the steering head.



Figure 64: Inserting the insertion bolt of the docking plate in the insertion shaft on the steering head

Now use the grip rings to move your wheelchair towards the product that is being adapted. This lifts the front of the wheelchair and places the contact areas of the adapter and docking plate against each other. This process is only completed when the grid mechanism has clicked into place with an audible locking noise.



Figure 65: Move towards the product until the locking noise can be heard

Hint: If it is not possible to lock the product (e.g. no fixed barrier available) – after inserting the insertion bolt of the docking plate into the insertion shaft on the steering head – it is also possible to push upwards on the manoeuvring bar (option) or bottom bracket or chain blade protection diagonally away from the body until the locking noise is heard.



Figure 66: Manoeuvring bar

The eccentric clamp lever must then be pressed to clamp (upwards). This process is made easier if you press your grip ring towards the product during clamping.



Figure 67: Eccentric clamp lever is pushed to "clamp"

Finally the securing bolt must be inserted until the locking sphere of the securing bolt is locked in the drive direction to the right outside of the docking plate or the right outer side of the docking plate is visible. Only in this position may the product be operated on the wheelchair.

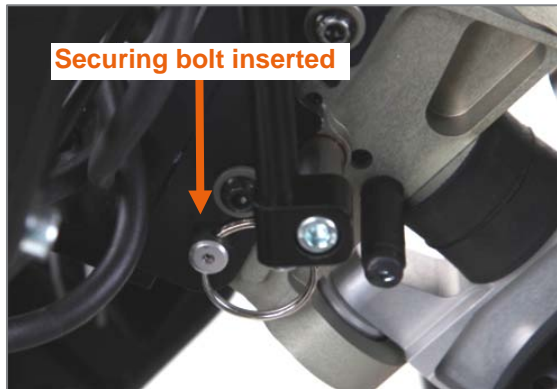


Figure 68: Adapter is adapted and ready for operation



Figure 69: Securing bolt with locking sphere, locking sphere locked on the right outer side of the docking plate

Before moving off, the parking stand must now be moved from the active to the passive position (on this refer to the "Stand" chapter in your product usage instructions).

Additional information for the front adapter:

With the front adapter, it is an advantage to couple the adapter onto the product using the coupling fittings first before adapting the adapter to the wheelchair. For this purpose, the insertion shaft of the front adapter is coupled to the insertion bolt of the docking plate. Then the carabiner hooks of the coupling fittings is coupled to the lifting eye of the bottom bracket support. Now the front adapter is at the optimum height for adaptation on the wheelchair.

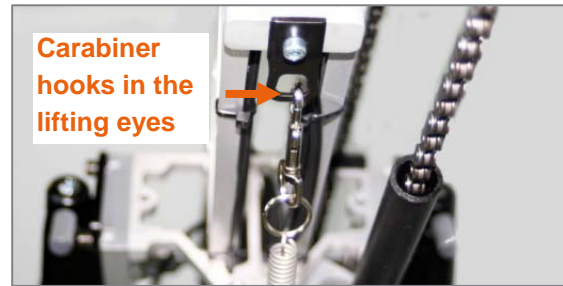


Figure 70: Coupling fittings on the front adapter, carabiner hooks in the lifting eyes

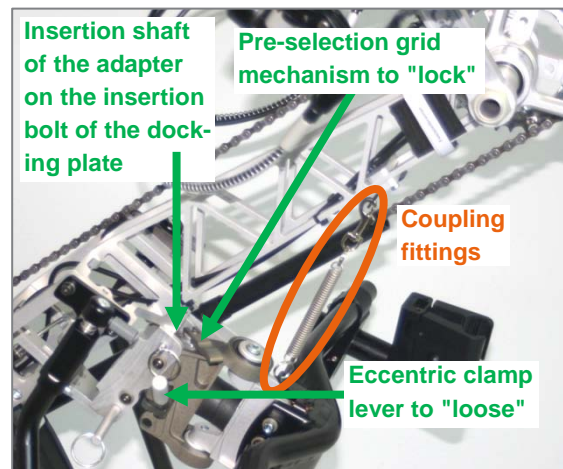


Figure 71: Setting the front adapter at the beginning of the adaptation (pre-selection level click mechanism and eccentric clamp lever)

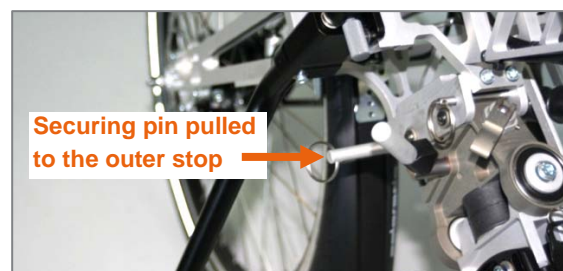


Figure 72: Setting the front adapter at the beginning of the adaptation

After the front adapter has been adapted to the wheelchair, proceed as previously described in order to connect the front adapter tight to the product.

7.3 Detaching the adapter from the product

For the NJ1 e-assistant & HUSK-E:

Please ensure that the drive system is switched off.

To detach the product, the stands are first moved to the active position, the handbrake on the product is activated and – if possible – the product is parked against a wall (refer to the "Parking stands" and "Parking brake" chapters in your product usage instructions).

The securing bolt is now pulled out completely again to the outer stop, the pre-selection lever grid mechanism is switched to "unlock" (upright position), and the eccentric clamp lever is turned to "loose".

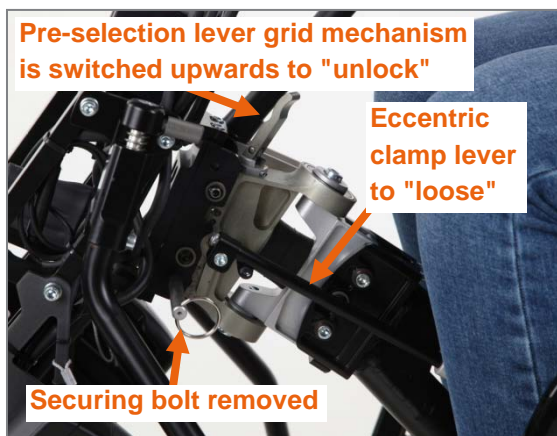


Figure 73: Preparation for detachment

Now use the grip rings to move your wheelchair towards the adapted product. The product and wheelchair lift slightly until the grid mechanism clicks out with an audible noise. Then your wheelchair is lowered onto the caster wheels again by taking the pressure off the grip rings and the lock is detached.



Figure 74: Move towards the product until the unlocking noise is heard

Note for decoupling with a central adapter:

If it is not possible to lock the product (e.g. no fixed barrier available) it is also possible to release the grid mechanism by pushing the product forwards and upwards on the manoeuvring bar (option), bottom bracket or chain blade protection until the unlocking noise is heard. By slowly lowering the product (movement direction of the chain protection or bottom bracket towards the body) the front caster wheels of the wheelchair are lowered to the ground.

The product can now be lowered on to the ground in front of the wheelchair and you can remove the wheelchair from the product.

Additional information for the front adapter:

After decoupling from the wheelchair, the front adapter can remain on the product. For this purpose, the carabiner hooks of the coupling fittings remain coupled to the lifting eye of the bottom bracket support. After your wheelchair is lowered down to the caster wheels again after relieving the handrims and the locking has been released, the insertion shaft of the adapter can be hung into the insertion bolt of the docking plate. Then decouple the adapter from the wheelchair and leave the adapter in the suspended position on the product with the quick-snap mechanism opened. This facilitates the coupling of the adapter on the wheelchair again, as the adapter is already at the right height.

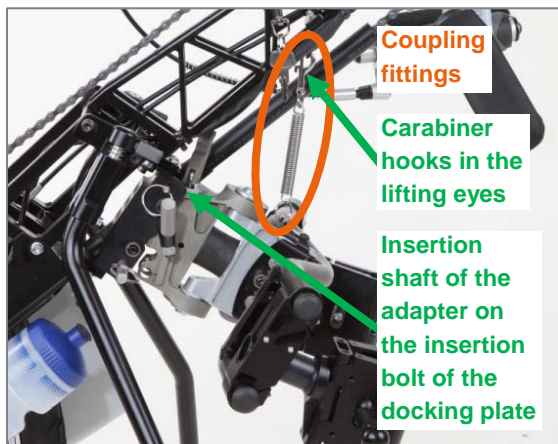


Figure 75: Front adapter remaining on the product with opened quick-snap mechanism

If the front adapter has to be removed from the product, undo the carabiner hooks from the lifting eyes and take the adapter off the product.

8 FREEWAY: Adaptation on the product and detachment from product

The adaptation of the adapter on the product is shown below using the central adapter. The approach also applies to the front adapter.

8.1 Terminology

Here you will find an illustration of the terms used in the following to make it easier for you understand:

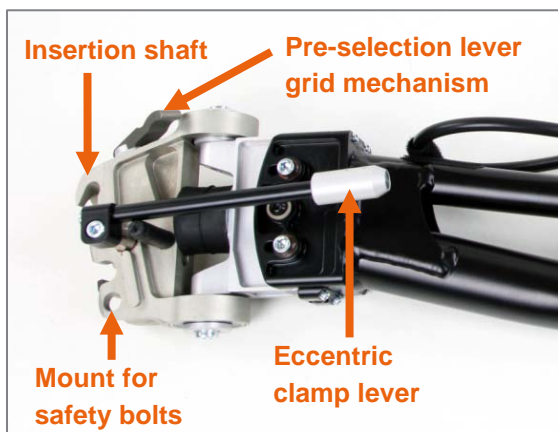


Figure 76: Steering head terms

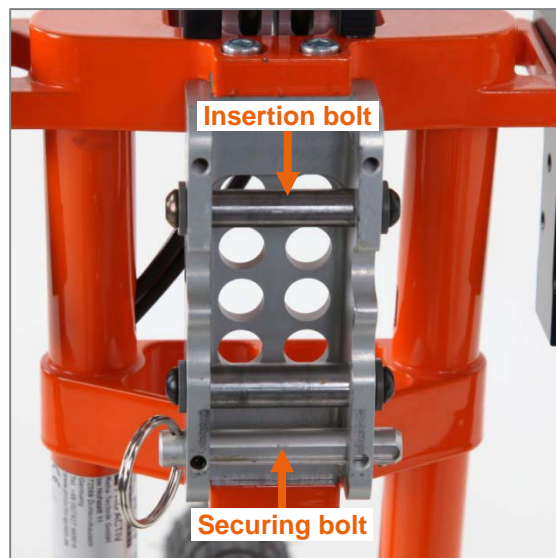


Figure 77: Docking plate terms

8.2 Adaptation on the product

For adaptation, the pre-selection level click mechanism on the steering head must be set to "lock" (flat) and the eccentric clamp lever to "loose" (upper neutral setting for grid). The securing bolt is not inserted or if there is a securing bolt with a nut this is pulled out to the fullest extent.

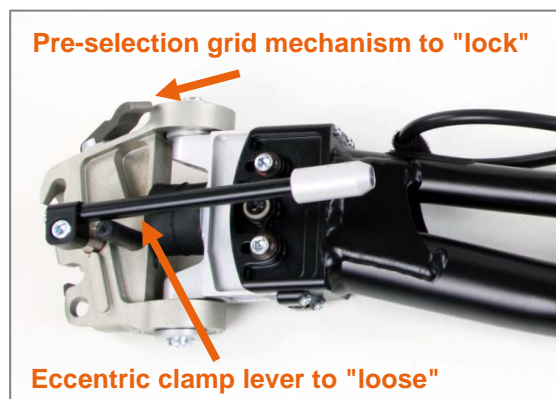


Figure 78: Adapter settings at the start of adaptation

For adaptation, the insertion bolt of the docking plate must be inserted into the insertion shaft on the steering head.



Figure 79: Inserting the insertion bolt of the docking plate in the insertion shaft on the steering head



Figure 80: Insertion bolt inserted into the insertion shaft on the steering head

Now hold down the product's brake and use the grip rings on your wheelchair to move in the direction of the product. This lifts the front of the wheelchair and places the contact areas of the adapter and docking plate against each other. This process is only completed when the grid mechanism has clicked into place with an audible locking noise.



Figure 81: Press the product's brake and move towards the product with the grip rings until it clicks into place

Hint: If the surface is very smooth, it is beneficial to hold the product against a wall or other fixed barrier until the grid mechanism is stopped via a clearly audible locking noise.

The eccentric clamp lever must then be pressed to clamp (downwards). Finally the securing bolt must be inserted into the planned drill hole until the locking sphere of the securing bolt is locked in the drive direction to the right outside of the docking plate or the right outer side of the docking plate is visible. Only in this position may the product be operated on the wheelchair.

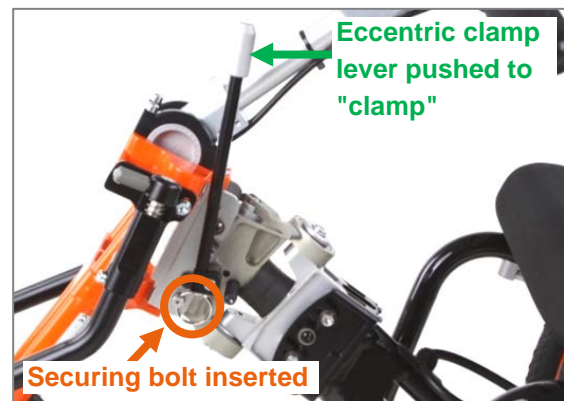


Figure 82: Adapter is adapted and ready for operation

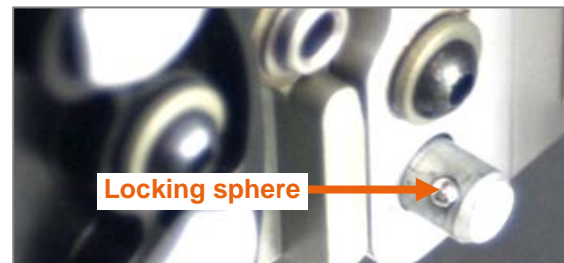


Figure 83: Securing bolt with locking sphere, locking sphere locked on the right outer side of the docking plate

Note: You can watch a video on how to adjust the adapter to the wheelchair on YouTube



8.3 Detaching the adapter from the product

The securing bolt is now pulled out completely again to the outer stop, the pre-selection lever grid mechanism is switched to "unlock" (upright position) and the eccentric clamp lever is turned to "loose".

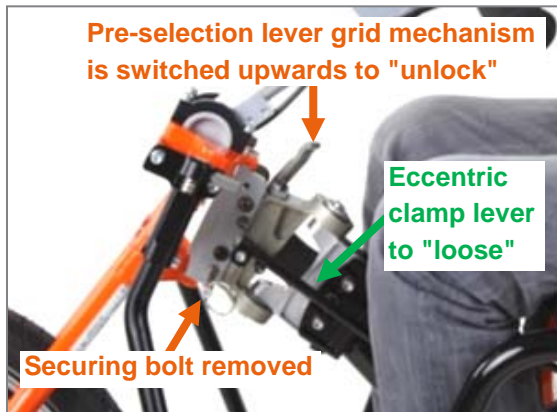


Figure 84: Preparation for detachment

Now hold down the product's brake and use the grip rings on your wheelchair to move in the direction of the product at the same time. The product and wheelchair lift slightly until the grid mechanism clicks out with an audible noise. Then your wheelchair is lowered onto the caster wheels again by taking the pressure off the grip rings and the lock is detached. The product can now be removed.



Figure 85: Press the product's brake and move towards the product with the grip rings until it unlocks

Hint: If the surface is very smooth, it is beneficial to hold the product against a wall or other fixed barrier until the grid mechanism is stopped using a clearly audible noise.

Note: You can watch a video on how to decouple the product on YouTube



9 WHEEL-E: Adaptation on the product and detachment from product

The adaptation of the adapter on the product is shown below using the central adapter. The approach also applies to the front adapter.

9.1 Terminology

Here you will find an illustration of the terms used in the following to make it easier for you understand:

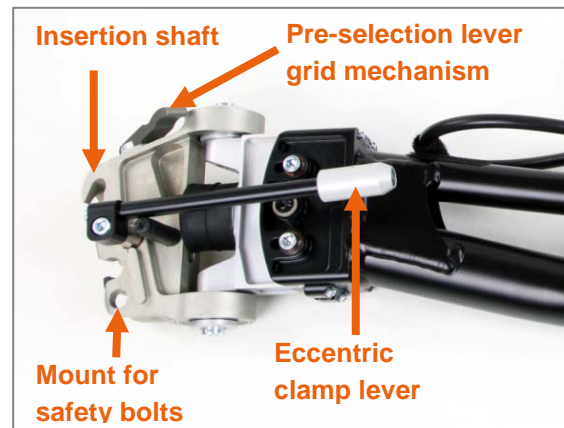


Figure 86: Adapter head terms

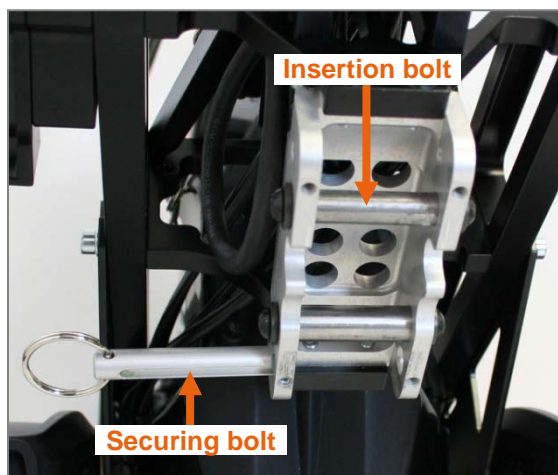


Figure 87: Docking plate terms

9.2 Adaptation on the product

For adaptation, the pre-selection level click mechanism on the adapter head must be set to "lock" (flat) and the eccentric clamp lever to "loose" (upper neutral setting for grid). The securing bolt is not inserted or if there is a securing bolt with a nut this is pulled out to the fullest extent.

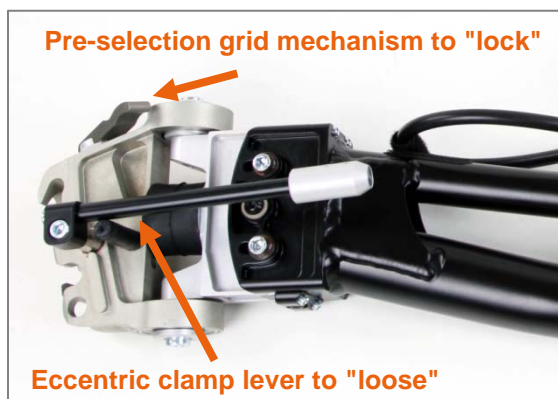


Figure 88: Adapter settings at the start of adaptation

In the next step you apply the parking brakes to your wheelchair. If you do not have the option to apply the parking brake, e.g. by using a wheelbase extension, move your wheelchair backwards against a wall.

For adaptation the insertion bolt of the docking plate must be inserted into the insertion shaft on the adapter head. You can pull the product towards you via the wheels on the parking stand.

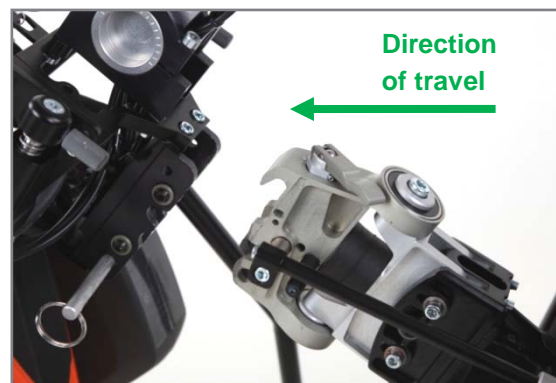


Figure 89: Inserting the insertion bolt of the docking plate in the insertion shaft on the adapter head



Figure 90: Insertion bolt inserted into the insertion shaft on the steering head

Then switch the product on (see Usage instructions "wheel-e traction device").

Insert reverse gear (see Usage instructions "wheel-e traction device") and ensure that the handlebars are straight in the direction of travel.

The coupling process is started by then gently pressing the driving signal transmitter. By moving backwards, the adapter head approaches the docking plate completely and the wheelchair moves upwards. This process is only completed when the grid mechanism has clicked into place with an audible locking noise.



Figure 91: Adapter head completely positioned on the docking plate

The eccentric clamp lever must then be pressed to clamp (upwards). Finally the securing bolt must be inserted until the locking sphere of the securing bolt is locked in the drive direction to the right outside of the docking plate or the right outer side of the docking plate is visible. Only in this position may the product be operated on the wheelchair.

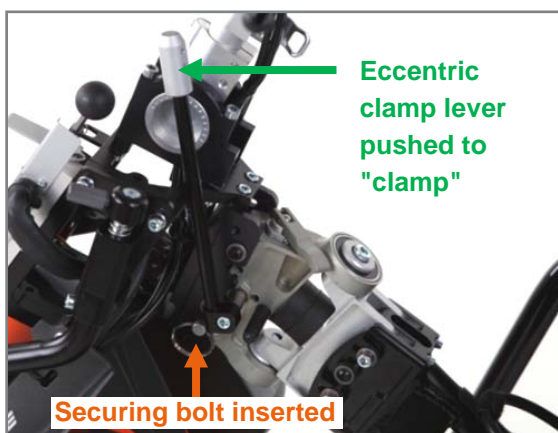


Figure 92: Adapter is adapted and ready for operation

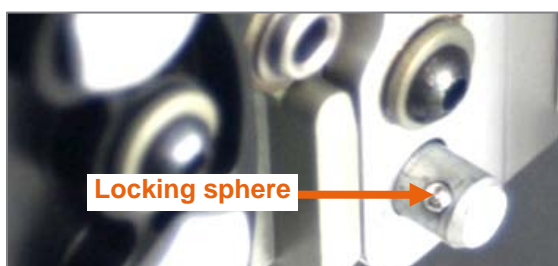


Figure 93: Securing bolt with locking sphere, locking sphere locked on the right outer side of the docking plate

Before setting off the parking stands must still be moved from the active to the passive position and the wheelchair's parking brake released.

Note: You can watch a video on how to adjust the adapter to the wheelchair on YouTube



9.3 Detaching the adapter from the product

First, apply the parking brakes on your wheelchair. If you do not have the option to apply the parking brake, e.g. by using a wheelbase extension, move your wheelchair backwards against a wall.

Then move the product's parking stands to the active position.

The securing bolt is now pulled out completely again to the outer stop, the pre-selection lever grid mechanism is switched to "unlock" (upright position) and the eccentric clamp lever is turned to "loose".

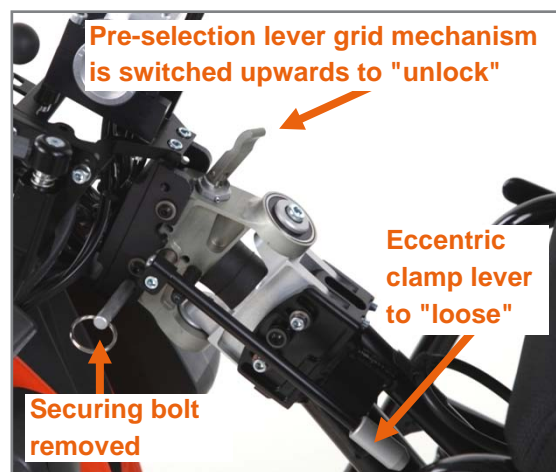


Figure 94: Preparation for detachment

Insert reverse gear (see Usage instructions “wheel-e traction device”) and ensure that the handlebars are straight in the direction of travel.

The decoupling process is started by then gently pressing the driving signal transmitter. This process is only completed when the grid mechanism has clicked out of place with an audible locking noise.

You can then move the product away forwards. Switch the product off by pressing down the ON/OFF button on the product display for a few seconds (see Usage instructions “wheel-e traction device”, chapter 20.4).

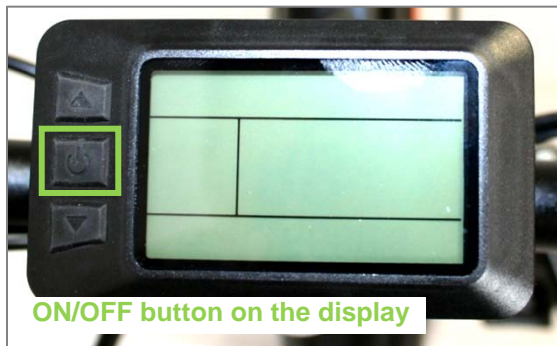



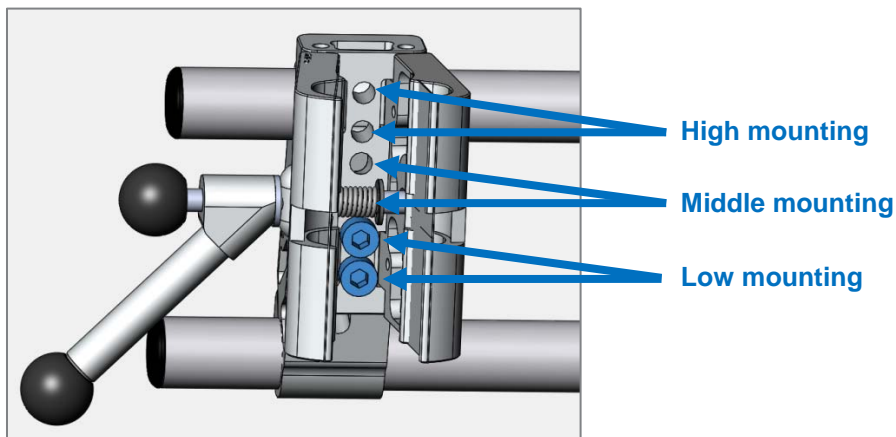
Figure 95: ON/OFF button on the display

10 Appendix: Front adapter settings

 The following instructions are intended for and may only be carried out by a rehabilitation specialist dealer or PROACTIV.

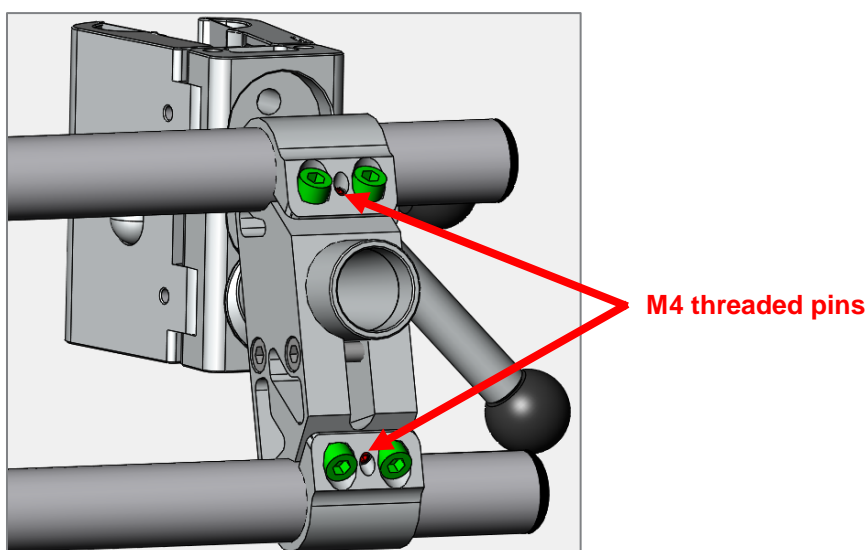
Mounting the clamp cover in the clamping plate holder

The clamping plate holder offers three positions for the clamp cover: low, middle and high. To change the position of the clamp cover in the clamping plate holder, unscrew the two M8 fixing screws from the clamping sleeve (Metric size 6 mm), coloured blue in the figure. After repositioning the clamp cover, the two fixing screws must be tightened again at 17 Nm and secured with screw locking fluid.

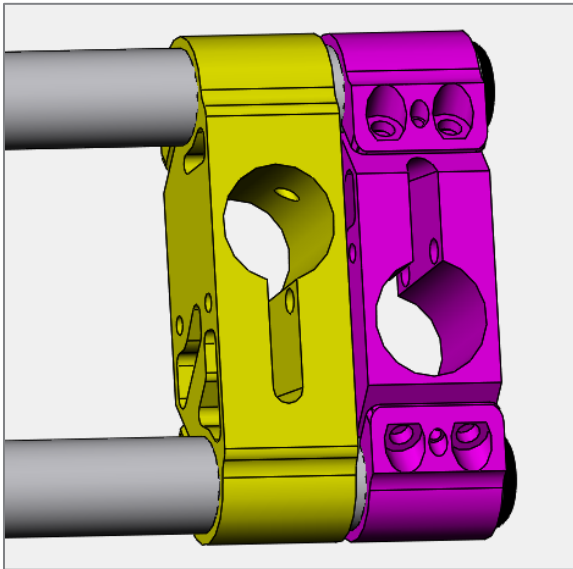


Angle adjustment and holder drill hole for the clamp cover

To change the angle adjustment of the clamp cover (7.5° up or down) or the position of the holder drill hole for the clamp cover (high or low), the clamps on the steering head connection must be removed on both sides of the adapter. To achieve this four M6 tensioning screws on each side (Metric size 5 mm) must be loosened, coloured green in the figure. By then screwing in each of the two M4 threaded pins (Metric size 2 mm), coloured red, the clamp is opened and the clamps on the steering head connection can be moved to the side from the adapter.

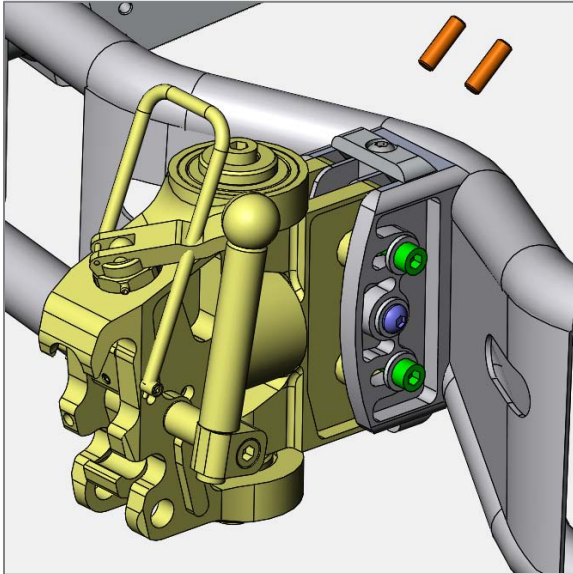


- To change the **angle adjustment of the clamp cover**, attach the clamps on the steering head connection so they vertically mirror the adapter. The screw heads of the M6 tensioning screws are then visible on the other side (wheelchair or product side) as before, coloured yellow in the figure. With this modification, the frame clamps must then be reattached to the wheelchair side. To do this, the clamp cover must be released from the steering head connection clamp and repositioned. To this end, see chapter 6.5.
- To change the **position of the holder drill hole of the clamp cover**, turn the steering head connection clamps by 180°. When this position is changed, the angle adjustment of the clamp cover also changes. To return the angle adjustment of the clamp cover to the initial position once more, proceed as described above. Shown in purple in the figure.



If the steering head connection clamps are now put in the new position on the adapter, the M4 threaded pins must be loosened again by several turns and the M6 tensioning screws must be tightened with a tightening torque of 7 Nm and secured with screw locking fluid. The threaded pins are then screwed in again gently making contact with the clamp. See chapter 6.1.

Steering head position on the adapter

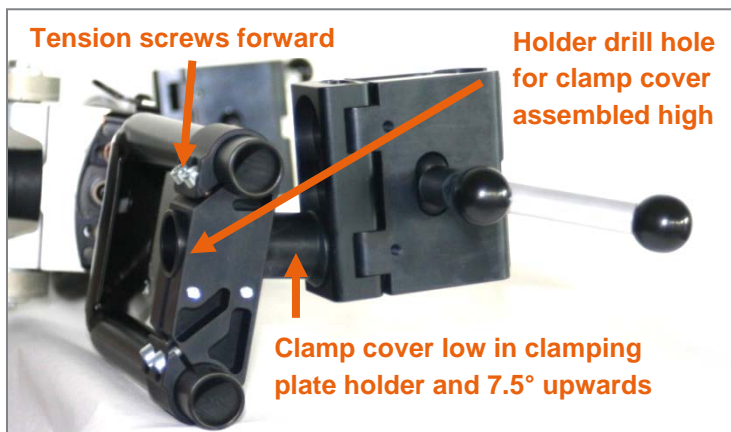
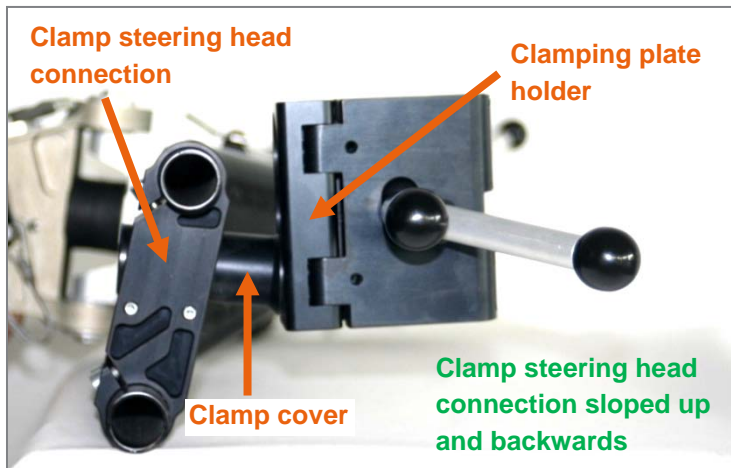


The steering head can be mounted in two positions: high and low. To change the position of the steering head, the entire steering head, coloured yellow, is attached to the adapter, rotated by 180°. To do so, you need to loosen the four M6 threaded pins (Metric size 3 mm), orange coloured, and the two M6 clamp screws (Metric size 5 mm), green coloured, with washers and corresponding nuts (Metric size 17 mm). In addition, two M6 fixing screws are to be positioned centrally between the M6 clamp screws (Metric size 4 mm) (one right and one left), in a threaded shaft (10 x 48.5), blue coloured. One of these fixing screws and the shaft must also be removed. While one of the fixing screws is being removed, the other fixing screw must be held.

The steering head can then be removed from the adapter and reinserted rotated. If the angle of the steering head is adjusted correctly (chapter 6.4), the two clamp screws (green) with washers and corresponding nuts as well as the fixing screw (blue) with shaft must be tightened again, with a tightening torque of 7 Nm and secured with screw locking fluid. Then, the M6 threaded pins (orange) must be turned again towards the steering head connection so that they rest on the steering head connection. Finally, the frame clamps and the lifting eye must be correctly repositioned.

Standard setting for 20" wheel

	Clamping plate holder	Clamp cover	Clamp steering head connection	Steering head connection
Standard setting Wheel 20"	Clamp cover low assembly position	Angle adjustment directed 7.5° upwards	Holder drill hole for clamp cover assembled high; tensioning screws directed forwards	High position; steering head connection upwards
Additional setting options for third party products or special dimensions	Assembled in the middle or high, each +25 mm to default setting	Pointed downwards -45 mm to default setting; angle balance on frame 15° to front	Assembled low +50 mm to default setting; tensioning screws forward	Pointed downwards -35 mm to default setting

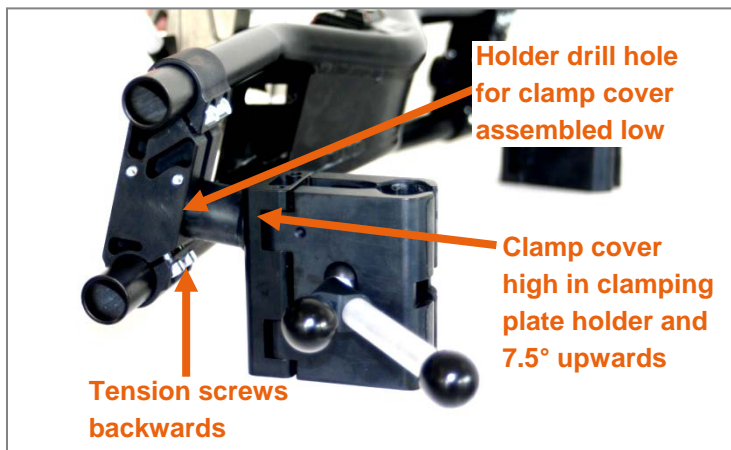
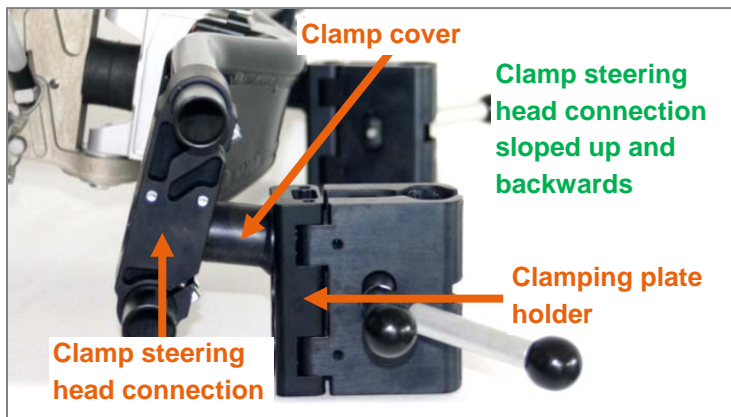


The clamp cover is available in different lengths:

- Standard: 80 mm
- Extended lengths: 110 mm, 170 mm

Standard setting for 24" and 26" wheel

	Clamping plate holder	Clamp cover	Clamp steering head connection	Steering head connection
Default setting Wheel 24" / 26"	Clamp cover high assembly position	Angle adjustment directed 7.5° upwards	Holder drill for clamp cover assembled low; tensioning screws directed backwards	High position; steering head connection upwards
Additional setting options for third party products or special dimensions	Assembled in the middle or down, each -25 mm to default setting	Pointed downwards +30 mm to default setting; angle balance on frame 15° to front	Assembled high -70 mm to default setting; tensioning screws backwards	Pointed downwards -35 mm to default setting



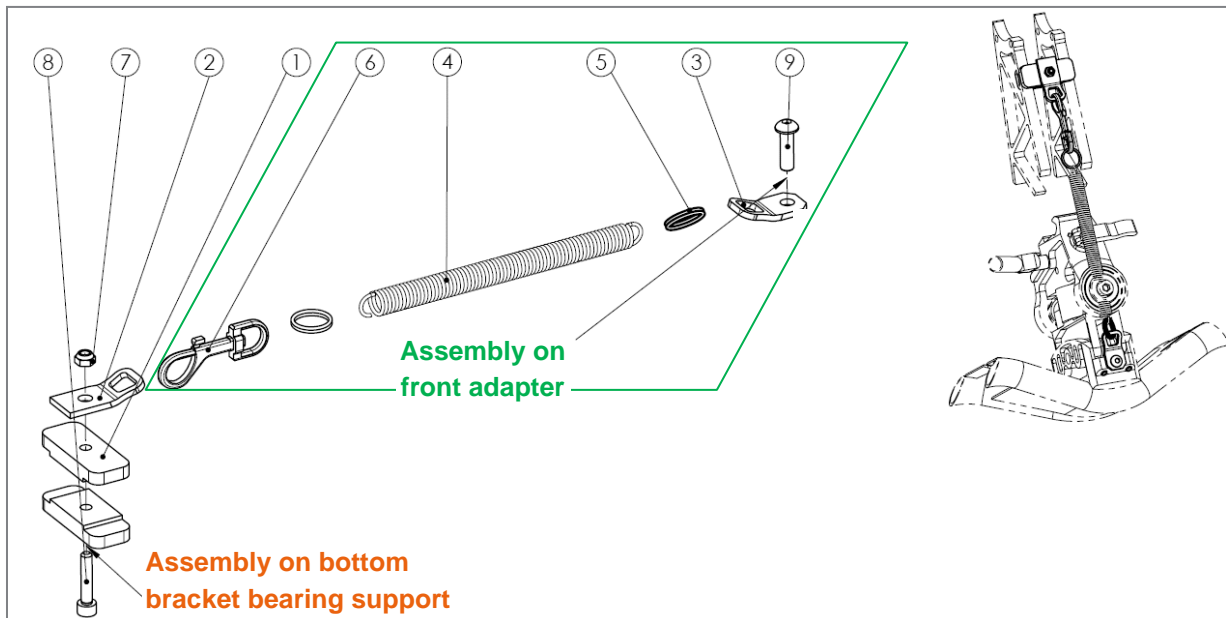
The clamp cover is available in different lengths:

- Standard: 80 mm
- Extended lengths: 110 mm, 170 mm

11 Appendix: Assembly of the coupling fittings for the front adapter

The following instructions are intended for and may only be carried out by a rehabilitation specialist dealer or PRO ACTIV

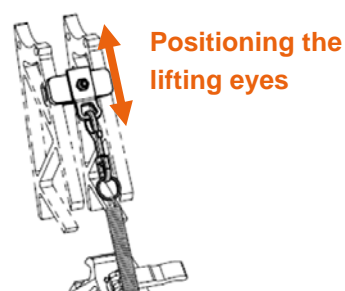
Assembly on the bottom bracket bearing support and front adapter:



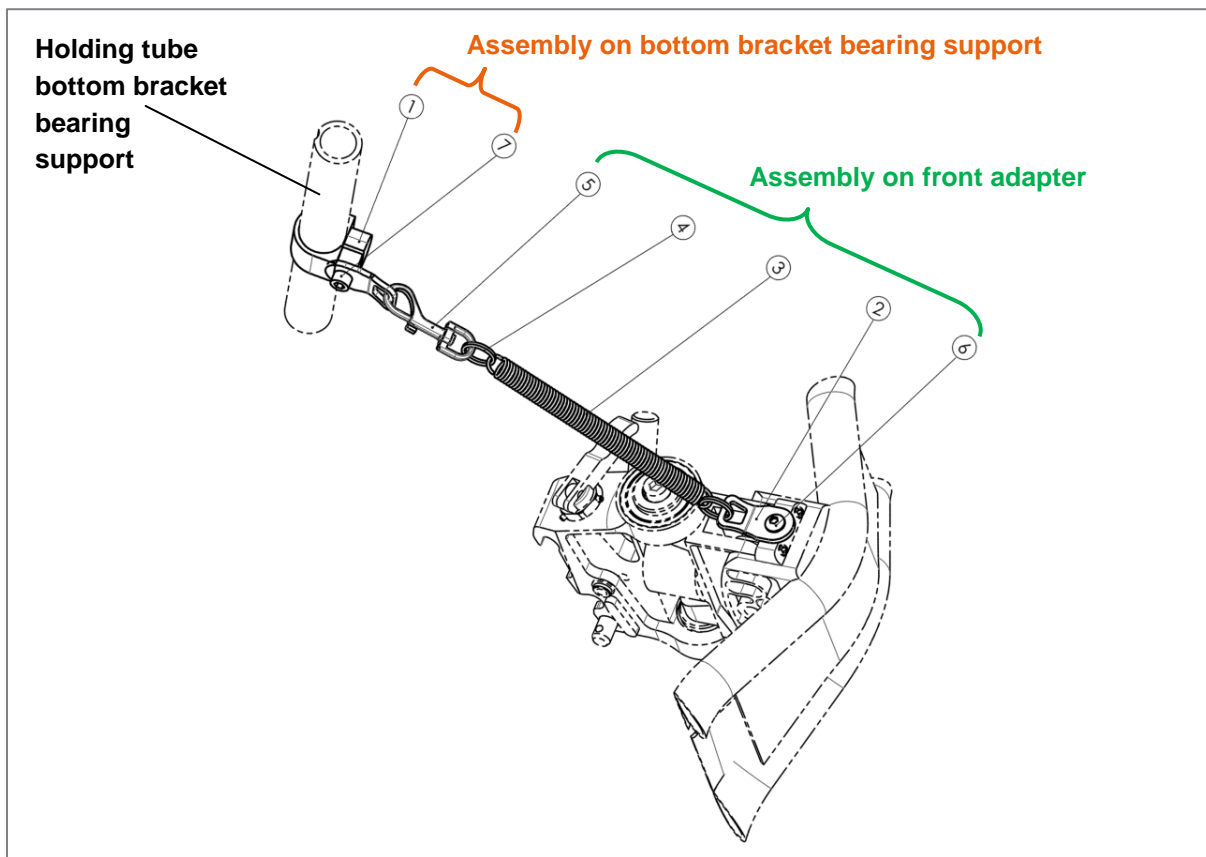
Item	Qty.	Description
1	2	Distance counter-holder
2	1	Lifting eye
3	1	Lifting eye processed
4	1	Tension spring RZ-127EI Niro
5	2	Nickel-plated key rings $\varnothing 20$ mm
6	1	Carabiner hook with round swivel
7	1	Hexagonal nut self-locking M5
8	1	Cylinder screw M5x25
9	1	Oval head screw M6x20 black galvanised



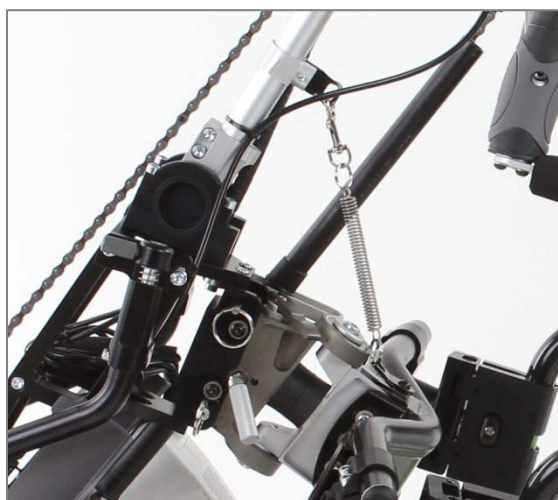
In order to move the front adapter to the correct height position to the wheelchair in the suspended position, the lifting eye on the bottom bracket support can be positioned by sliding the "Distance counter-holder".



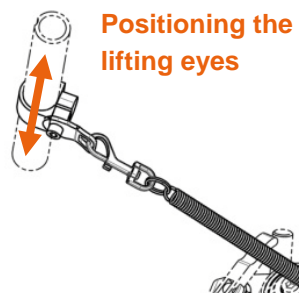
Assembly on the adjustable bottom bracket bearing support and front adapter:

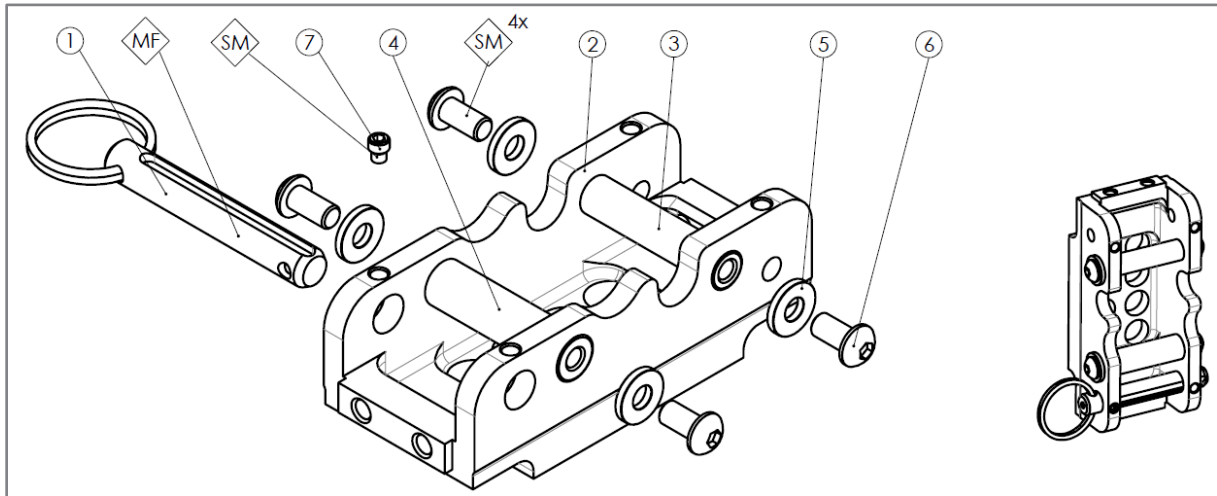


Item	Qty.	Description
1	1	Clamp \varnothing 25 mm
2	2	Lifting eye
3	1	Tension spring RZ-127EI Niro
4	2	Nickel-plated key rings \varnothing 20 mm
5	1	Carabiner hook with round swivel
6	1	Oval head screw M6x20 black galvanised
7	1	Cylinder screw M5x25 galvanised



In order to move the front adapter to the correct height position to the wheelchair in the suspended position, the lifting eyes on the bottom bracket support can be positioned over the adjustment of the clamp.



Assembly on the docking plate:


Item	Qty.	Description
1	1	Securing bolts key ring
2	1	Docking plate
3	1	Shaft 10x50
4	1	Shaft 12x50
5	4	Thrust washer 2 mm
6	4	Oval head screw M6x12 galvanised
7	1	Grub screw with slit and pin M5x6

12 Appendix: Tightening torques and securing details

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

Dimension	Tightening torque Ma in Nm depending on the screw strength	
	Strength 8.8	Strength 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
M12x1.25	64	93
M27x1.5	70	–

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.

Notes

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