



Discovery

EN Instructions for use (qualified personnel) 3

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1 Foreword

INFORMATION

Last update: 2018-01-26

- ▶ Please read this document carefully before using the product.
- ▶ Follow the safety instructions to avoid injuries and damage to the product.
- ▶ Instruct the user in the proper and safe use of the product.
- ▶ Please keep this document in a safe place.

INFORMATION

- ▶ New information regarding product safety and product recalls can be obtained from the Customer Care Center (CCC) at oa@ottobock.com or from the manufacturer's service department (see inside back cover or back page for addresses).
- ▶ You can request this document as a PDF file from the Customer Care Center (CCC) at oa@ottobock.com or from the manufacturer's service department (see inside back cover or back page for addresses). It is possible to increase the display size of the PDF document.

Initial adjustments to the product were made according to the order form. Nevertheless, fine adjustment may be required and settings may have to be made according to the medical conditions or the user's requirements.

These instructions for use provide the information necessary for adjusting the settings. This work should be closely coordinated with the user.

Please note the following:

- The instructions for use (qualified personnel) are intended only for qualified personnel and remain with them.
- The operation of the product and functionality of the options are described in the instructions for use (user). These instructions for use must be given to the user.
- All users must be instructed in the use of the product by you or an attendant using the instructions for use (user).
- The manufacturer recommends checking the product settings regularly in order to assure an optimum fit over the long term. A review is required every six months for children and youths in particular.
- The installation and retrofitting of all optional components are generally described in the service manual.

2 Intended use

2.1 Indications for use

The Discovery mobility base for seating shells is intended exclusively for the adaptation of orthopaedic seating systems (e.g. seating shells) for people who are unable to walk or have walking impediments. It can be operated either by the user or by an attendant. The product can be used indoors and outdoors.

The Discovery mobility base for seating shells was developed especially for the adaptation of modular seating systems. It is fully adjustable to provide for individual adaptation to the needs of the user.

The product may only be used with the options which are listed in the product order form.

Ottobock assumes no liability for combinations with medical devices and/or accessories from other manufacturers not included in the modular system.

2.2 Indications

The product can be used for a disability or walking impairment, for example due to:

- Paralysis (paraplegia, tetraplegia)
- Loss of limbs (leg amputation)
- Defects or deformation of the limbs
- Joint contractures or damage
- Neurological and muscular diseases

2.3 Contraindications

Not known.

2.4 Qualification

The adjustment tasks described below are necessary for optimum adaptation to the respective seating system, and may only be completed by qualified, authorised personnel.

3 Safety

3.1 Explanation of warning symbols

⚠ WARNING	Warning regarding possible serious risks of accident or injury.
⚠ CAUTION	Warning regarding possible risks of accident or injury.
NOTICE	Warning regarding possible technical damage.

3.2 General safety instructions

⚠ WARNING

Lack of instruction
Tipping over, falling of the user due to lack of knowledge

- ▶ Instruct the user or the attendant in the proper use of the product when handing it over.

⚠ WARNING

Incorrect settings
Tipping over, falling or malposition of the user due to incorrect settings

- ▶ Adjustment and installation work may only be completed by instructed, qualified personnel.
- ▶ Only the settings described in these instructions for use may be carried out.
- ▶ Settings may only be changed within the allowable adjustment ranges; otherwise, the stability of the product may be impaired (see this section and the "Technical data" section). If you have questions, contact the manufacturer's service (see back cover for addresses).
- ▶ Only conduct tests in the presence of an assistant.
- ▶ Unless expressly described, you may not change any settings with a person sitting in the product.
- ▶ Secure the user against falling out during all tests.
- ▶ Before testing setting changes with the user seated, firmly tighten all screw connections.
- ▶ Check for safe function before delivering the product.

⚠ CAUTION

Use of unsuitable tools
Pinching, crushing or damaging the product due to use of unsuitable tools

- ▶ When completing the tasks, only use tools that are suitable for the conditions at the place of work and for which safety and the protection of health are assured with proper use.
- ▶ Observe the specifications in the section "Required Tools".

NOTICE

Tipping or falling of the product
Damage to product due to lack of attachment

- ▶ When you work on the product, secure it so that it cannot tip over or fall over.
- ▶ Use a clamping fixture to secure the product whenever you work on it at a workbench.

NOTICE

Use of unsuitable packaging
Damage to the product caused by transportation using incorrect packaging

- ▶ Use only the original packaging for delivery of the product.

INFORMATION

While installing add-on drives on the product is generally not permitted, it can be reviewed by our Custom Fabrication department on request.

3.3 Safety Instructions for Assembly

⚠ WARNING

Use of alternative seating systems

Serious injuries to the user due to missing anti-tipper

- ▶ If the product is fitted with an alternative seating system or seating shells from other manufacturers, special attention must be paid to static stability.
- ▶ The qualified personnel is obligated to ensure the static stability of such a combination.
- ▶ Using an anti-tipper may be required depending on the centre of gravity.
- ▶ Verify that the anti-tipper has been installed and adjusted properly.

⚠ CAUTION

Unsecured screw connections

Pinching, crushing, tipping over, falling of user due to assembly errors

- ▶ After all adjusting/readjusting work, retighten the mounting screws/nuts firmly. Observe any torque settings which may be specified.
- ▶ Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite®241).

⚠ CAUTION

Improper use of self-locking nuts

Tipping, falling over of the user due to screw connections coming loose

- ▶ Always replace self-locking nuts with new self-locking nuts after disassembly.

⚠ CAUTION

Exposed pinch points

Crushing, pinching due to incorrect handling

- ▶ When folding the mobility base for seating shells out or together, only grip by the specified components.

⚠ CAUTION

Sudden extension of gas compression springs

Impacts, pinching, crushing due to incorrect handling

- ▶ The gas compression springs must be fully extended when carrying out any work (seat tilt released, seat in the neutral horizontal position).
- ▶ Never operate the release lever for the seat tilt when screw connections are loosened or when working on the product.
- ▶ Secure the release lever for the seat tilt during all work to avoid operating it unintentionally.

⚠ CAUTION

Incorrect air pressure

Uncontrolled driving characteristics, falling, tyre rupture due to incorrect inflation

- ▶ Maintain sufficient air pressure in pneumatic tyres. Do not exceed the permitted specifications when filling the tyres (see Page 31).
- ▶ Do not use the product with over/under-inflated or unequally inflated tyres.
- ▶ Note that a single tyre with low air pressure can lead to uncontrolled driving characteristics.
- ▶ Note that low pressure of the rear wheels / drive wheels can reduce the braking force of the knee lever wheel lock.

⚠ CAUTION

Defective tyres

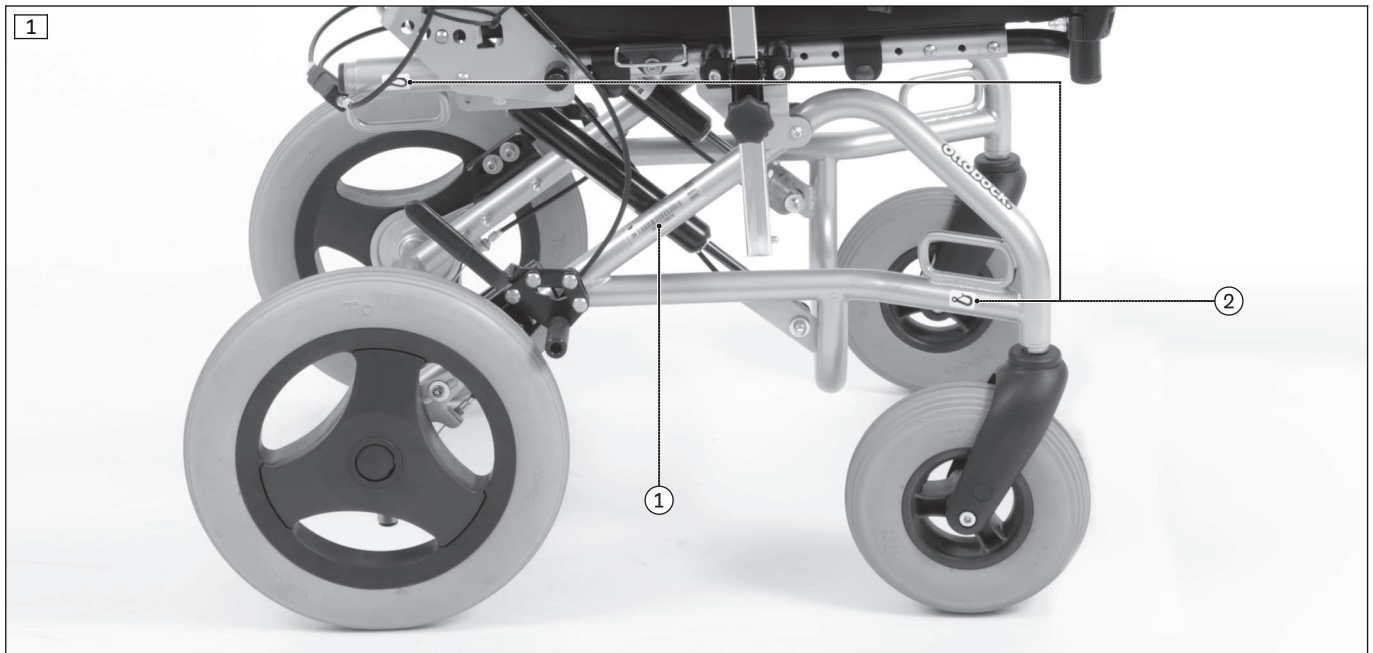
Accidents/falling due to poor traction, reduced braking force or lack of manoeuvrability

- ▶ Ensure that the tyres have sufficient tread depth.
- ▶ Ensure that the knee lever wheel lock is properly adjusted (approx. **5 mm** gap to the tyres, technical changes reserved).

3.4 Nameplate and warning labels

3.4.1 Signage on the product

The warning signs and nameplates are attached to the product at the following mounting points:



1	Nameplate
2	Fixation point / anchor point to attach the product in vehicles for transporting persons with reduced mobility

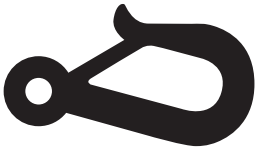
3.4.2 Nameplate

Label	Meaning	
	A	Type designation (including product reference number)
	B	Read the instructions for use before using the product.
	C	European article number (EAN)
	D	Product reference number
	E	Serial number*
	F	Maximum load capacity (see section "Technical data")
	G	Manufacturer information/address/country
	H	CE marking – product safety in accordance with EU directives
	I	Manufacturing date**
<p>The nameplate is located on the right connecting tube of the main frame.</p>	<p>If the adjacent symbol appears on the nameplate, this indicates the following: The mobility base for seating shells may not be used as a seat in vehicles for transporting persons with reduced mobility.</p>	

* JJJJ = year of manufacture; WW = week of manufacture; PP = production site; XXXX = sequential production number

** YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

3.4.3 Warning labels

Label	Meaning
	Fixation point/eyebolt to attach the product in vehicles for transporting persons with reduced mobility

4 Delivery

4.1 Scope of delivery

The product is generally delivered fully assembled.

Only for custom fabrication models with 22"/24" drive wheels: The product is generally delivered fully assembled and with the drive wheels removed.

The scope of delivery includes:

- Preassembled mobility base for seating shells
- 2 rear wheels / drive wheels (screwed or plug-on)
- Options according to the order
- Instructions for use (qualified personnel), instructions for use (user)

4.2 Options

The functionality and operation of the options are described in more detail in the instructions for use (user).

All of the available options/accessories are listed on the order form.

4.2.1 Discovery for Leckey KIT seat & Leckey Mygo Max (HR32040450)

The Discovery for Leckey KIT seat & Leckey Mygo Max (HR32040450) is a preconfigured version of the Discovery mobility base for seating shells and includes the following special features and options:

- Reinforced frame with 450 mm frame width
- Interface adapter for Leckey KIT seat & Mygo Max
- Push handles, long
- Knee lever wheel lock
- Anti-tipper

4.2.2 Discovery with Care Chair equipment version

The Discovery Care Chair is a configurable equipment version of the Discovery mobility base for seating shells.

Options and settings which apply only to this equipment version are specially marked in the following sections.

4.2.3 Custom fabrication version with 22"/24" drive wheels

This custom fabrication version is a customer-specific adaptation of the Discovery mobility base for seating shells for self-propelling users carried out by Ottobock's Custom Fabrication department.

The 22"/24" drive wheels are attached to the mobility base for seating shells with a wheel adapter and quick-release axles.

4.3 Storage

The product must be stored in a dry place. An ambient temperature between **-10 °C and +40 °C** must be maintained.

It is not necessary to disassemble or fold up the product.

During extended storage, the knee lever wheel lock on products with PU tyres (= tubeless tyres) must be released since tyre deformation may otherwise result.

Tyres contain chemical substances that can react with other chemical substances (such as cleaning agents, acids, etc.).

5 Preparation for use

5.1 Assembly

⚠ WARNING

Overloading

Severe injuries if the product tips over due to overloading, damage to the product

- ▶ Do not exceed the maximum load capacity (see the nameplate and section "Technical data").
- ▶ Please note that certain options and add-on components will reduce the remaining load capacity.

⚠ CAUTION

Failure to verify readiness for use before putting into operation

Tipping, falling due to incorrect adjustment or installation

- ▶ Check the existing settings prior to first use.
- ▶ After each assembly, verify the proper fit of the removable wheels. The quick-release axles must be firmly locked in the quick-release axle housings.
- ▶ In particular, verify tip resistance, easy operation of the wheels and correct brake functionality.

⚠ CAUTION

Loss of stability

Tipping, falling due to additional objects on the product

- ▶ Do not attach additional objects to the frame, cross tubes or seat.

⚠ CAUTION

Incorrect air pressure

Uncontrolled driving characteristics, falling, tyre rupture due to incorrect inflation

- ▶ Maintain sufficient air pressure in pneumatic tyres. Do not exceed the permitted specifications when filling the tyres (see Page 31).
- ▶ Do not use the product with over/under-inflated or unequally inflated tyres.
- ▶ Note that a single tyre with low air pressure can lead to uncontrolled driving characteristics.
- ▶ Note that low pressure of the rear wheels / drive wheels can reduce the braking force of the knee lever wheel lock.

INFORMATION

In general, only metric screws are used on the product.

Exception: axle mounting of the 12" rear wheels (1/2" hexagon head screw + hexagon nut)

INFORMATION

With the combination of Allen head screw/hexagon nut, a higher torque can be transmitted using the hexagon nut than the Allen head screw.

Please note that the Allen head screw is only intended to be held in place so it does not turn when tightening/loosening the hexagon nut.

- 1) For plug-on drive wheels: Attach drive wheels to the drive wheel attachment device. It must not be possible to remove the quick-release axles after releasing the push-button.
- 2) **Optional:** Slide the legrests into the holders on the front frame tube.
- 3) **Optional:** Fold down the foot supports. If necessary, insert the calf band and adjust it.
- 4) Prior to the adaptation of the seating shell / seating system, further settings on the mobility base for seating shells must be adjusted as required (see Page 11 ff.).
- 5) Adapt the seating shell / seating system to the mobility base for seating shells (see Page 12).
- 6) Verify the stability of the assembled product.

INFORMATION: Inform the user and the attendants if the static stability is found to be less than 10°. In this case, determine additional safety measures together with the user and attendants to ensure the safety of the user.

6 Settings

6.1 Prerequisites

⚠ WARNING

Incorrect settings

Tipping over, falling or malposition of the user due to incorrect settings

- ▶ Adjustment and installation work may only be completed by instructed, qualified personnel.
- ▶ Only the settings described in these instructions for use may be carried out.
- ▶ Settings may only be changed within the allowable adjustment ranges; otherwise, the stability of the product may be impaired (see this section and the "Technical data" section). If you have questions, contact the manufacturer's service (see back cover for addresses).
- ▶ Only conduct tests in the presence of an assistant.
- ▶ Unless expressly described, you may not change any settings with a person sitting in the product.
- ▶ Secure the user against falling out during all tests.
- ▶ Before testing setting changes with the user seated, firmly tighten all screw connections.
- ▶ Check for safe function before delivering the product.

⚠ WARNING

Lack of stability against tipping

User may fall or tip over due to lack of inspection

- ▶ Changing the settings can lead to instability of the system as a whole. Verify tipping resistance after any changes to the settings.

⚠ CAUTION

Sudden extension of gas compression springs

Impacts, pinching, crushing due to incorrect handling

- ▶ The gas compression springs must be fully extended when carrying out any work (seat tilt released, seat in the neutral horizontal position).
- ▶ Never operate the release lever for the seat tilt when screw connections are loosened or when working on the product.
- ▶ Secure the release lever for the seat tilt during all work to avoid operating it unintentionally.

⚠ CAUTION

Unsecured screw connections

Pinching, crushing, tipping over, falling of user due to assembly errors

- ▶ After all adjusting/readjusting work, retighten the mounting screws/nuts firmly. Observe any torque settings which may be specified.
- ▶ Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite®241).

⚠ CAUTION

Improper use of self-locking nuts

Tipping, falling over of the user due to screw connections coming loose

- ▶ Always replace self-locking nuts with new self-locking nuts after disassembly.

Adjustments to match the concrete physical and mental condition of the user should always be made in the user's presence.

All parts of the product should be cleaned thoroughly before adjustments are made.

The tools required for adjustments and maintenance tasks as well as the torque values for screw connections are listed in the section "Appendices" (see Page 33).

6.1.1 Settings during preassembly

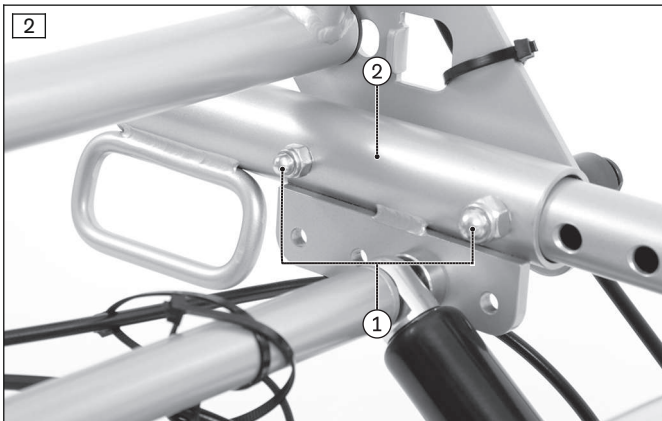
If the seating shell / seating system has already been preassembled, the following sections can be omitted:

- Section "Adjusting the seat depth" (see Page 12)
- Section "Adjusting the back angle" (see Page 12)
- Section "Adaptation of the seating shell / seating system" (see Page 12)

6.2 Adjusting the seat depth

The seat depth can be adjusted in 4 steps by sliding the back frame on the seat frame:

- 1) **When using a seat plate:** Remove the seat plate (see Page 14).
- 2) Loosen and remove the screw connections between the backrest attachment device and the seat bar on both sides (see fig. 2, item 1).
CAUTION! Risk of pinching between freely movable frame components. Actively secure the back frame and the seat frame against falling.
- 3) Loosen and remove the screw connection between the perforated plate and gas compression spring on both sides (see fig. 3, item 1).
CAUTION! Risk of pinching between freely movable gas compression springs. Actively secure the gas compression springs against falling.
- 4) Slide the backrest attachment devices and the back frame to the desired seat depth (see fig. 2, item 2).
INFORMATION: Slide the backrest attachment devices and the position of the gas compression springs equally. This maintains the angle setting of the seat frame.
- 5) Reinsert all screw connections in their original positions and firmly tighten them (see fig. 2, item 1; see fig. 3, item 1).
- 6) **When using a seat plate:** Reinstall the seat plate (see Page 14).



6.3 Adjusting the back angle

Adjusting the back angle is described in more detail in the included instructions for use (user).

6.4 Adaptation of the seating shell or the seating system

6.4.1 Installing an Ottobock Shape System (option)

This option may only be installed by Ottobock at this time.

6.4.2 Installing interface adapters for further seating systems (option)

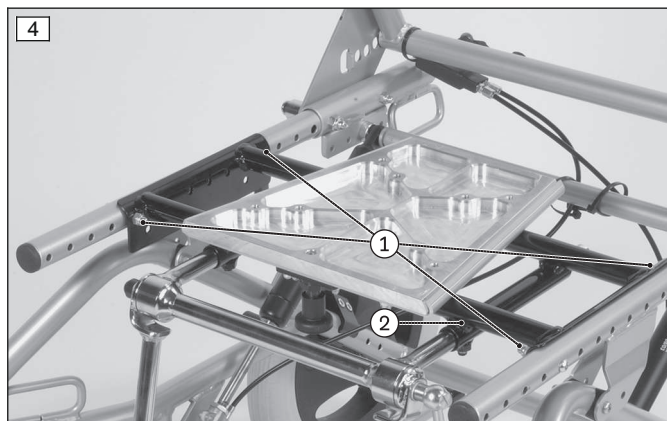
The following interface adapters can be installed:

- Trapezoid adapter
- Parallel adapter
- Universal adapter (crossbars)
- "Shape/Moss" type
- "Leckey Mygo" type (400 mm frame width required)
- "Leckey Squiggles" type (360 mm frame width required)
- "Leckey KIT seat" and "Leckey Mygo Max" types (Discovery HR32040450 required)
- "Dräger" type

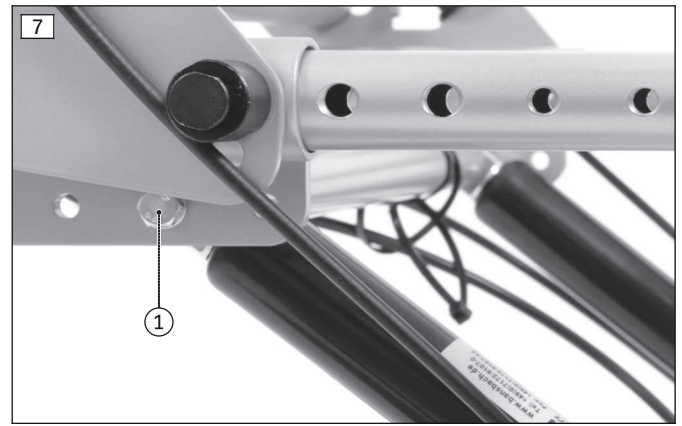
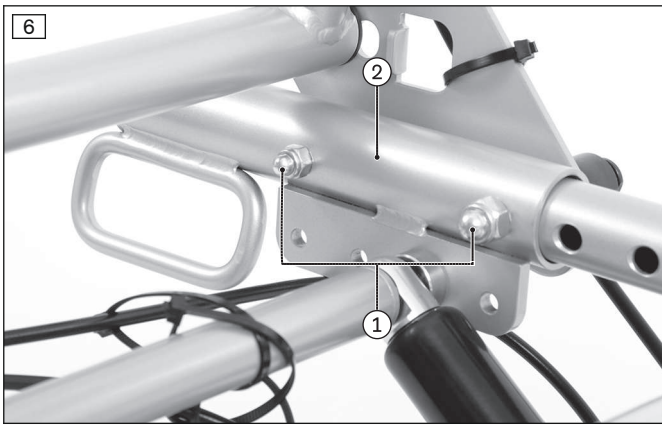
The removal and attachment of seating shells / seating systems on the interface adapters is described in more detail in the included instructions for use (user).

a) Removing/installing one of the following interface adapters:

- Trapezoid adapter
 - Parallel adapter
 - "Dräger" type
 - Leckey "Squiggles", "Mygo", "Mygo Max", "KIT seat" types
- 1) Remove the seating shell / seating system with the seating shell interface.
 - 2) Loosen and remove the screw connections between the interface adapter and seat bars (see fig. 4, item 1; see fig. 5, item 1).
 - 3) Remove/replace the interface adapter (see fig. 4, item 2; see fig. 5, item 2).
 - 4) Insert the screw connections into the appropriate slots between the interface adapter and seat bars and firmly tighten them to a torque of **10 Nm** (see fig. 4, item 1; see fig. 5, item 1).
 - 5) Remount the seating shell / seating system with the seating shell interface.

**b) Removing/installing one of the following interface adapters:**

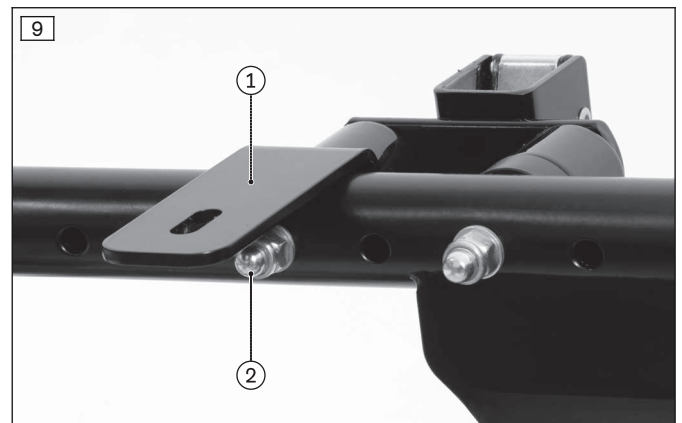
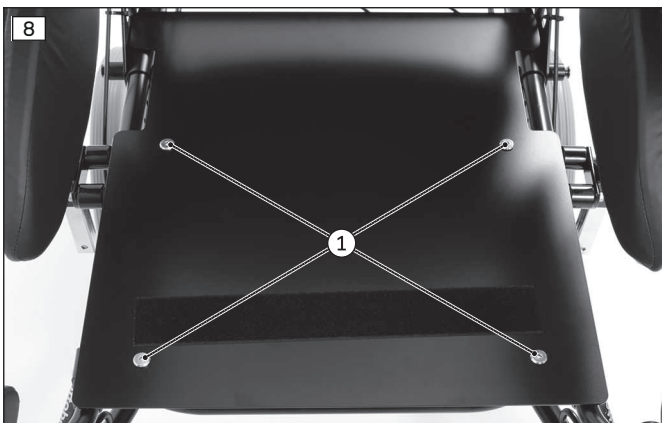
- Universal adapter (crossbars)
 - "Shape/Moss" type
- 1) Remove the seating shell / seating system with the seating shell interface.
 - 2) Loosen and remove the screw connections between the backrest attachment device and the seat bar on both sides (see fig. 6, item 1).
CAUTION! Risk of pinching between freely movable frame components. Actively secure the back frame and the seat frame against falling.
INFORMATION: Mark / take note of the original seat depth and position of the backrest attachment devices.
 - 3) Loosen and remove the screw connection between the perforated plate and gas compression spring on both sides (see fig. 7, item 1).
CAUTION! Risk of pinching between freely movable gas compression springs. Actively secure the gas compression springs against falling.
 - 4) Slide the backrest attachment devices down and off the seat bars and set them safely aside with the back frame (see fig. 6, item 2).
 - 5) Loosen and remove the screw connections between the interface adapter and seat bars.
 - 6) Slide the interface adapter down and off the seat bars / replace it.
 - 7) Insert the screw connections between the interface adapter and seat bars and firmly tighten them to a torque of **10 Nm**.
 - 8) Slide the back frame together with the backrest attachment devices onto the seat bars (see fig. 6, item 2).
INFORMATION: Return the backrest attachment devices and the gas compression springs to their original position.
 - 9) Reinsert all screw connections in their original positions and firmly tighten them to a torque of **10 Nm** (see fig. 6, item 1; see fig. 7, item 2).
 - 10) Remount the seating shell / seating system with the seating shell interface.



6.4.3 Removing/installing a seat plate (option)

For removal/installation within the scope of adjustments or retrofitting a new seat plate, complete the following steps:

- 1) Loosen and remove all screw connections between the seat plate and seat plate supports (see fig. 8, item 1).
- 2) Remove/replace the seat plate.
- 3) **If necessary:** Remove/replace the seat plate supports (see fig. 9, item 1). Do this by loosening and removing the screw connections on the seat plate supports (see fig. 9, item 2).
- 4) Install the seat plate supports on the seat bars (see fig. 9, item 1). Do this by inserting the screw connections into the seat plate supports and firmly tightening them to a torque of **10 Nm** (see fig. 9, item 2).
- 5) Position the seat plate on the seat plate supports.
- 6) Insert all screw connections between the seat plate and the seat plate supports and firmly tighten them to a torque of **10 Nm** (see fig. 8, item 1).



6.4.4 Installing other seating systems (option)

In principle, it is possible to install third-party seating systems on the product. In this case, liability rests with the qualified personnel that completed the installation.

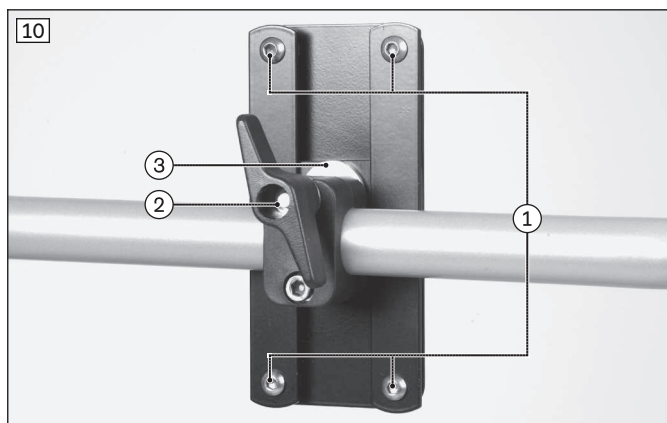
Installation by Ottobock Custom Fabrication is possible with a separate order.

The manufacturer assumes no liability for combinations with seating systems that have not been approved by the manufacturer.

6.4.5 Installing the back guide for seating shells (option)

The back guide for seating shells is attached to the cross tube of the back frame. The guide plate is attached to the back of the seating shell using 4 screws (see fig. 10, item 1) and connected to the back guide:

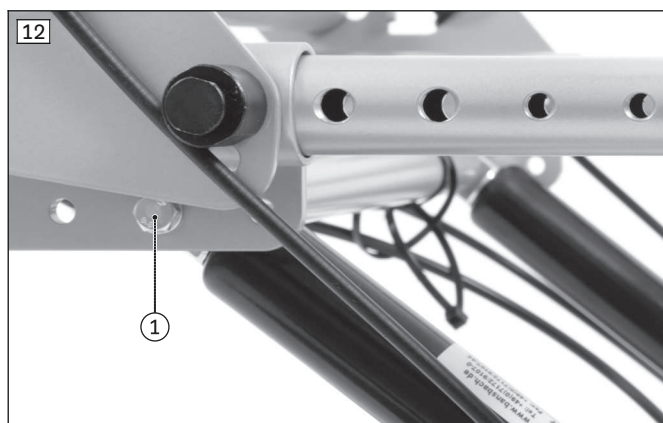
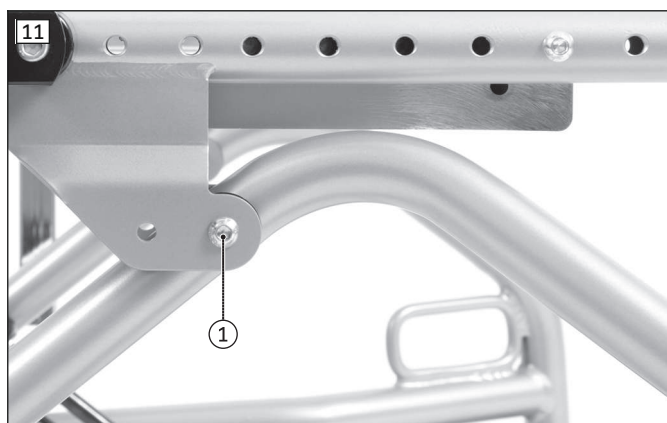
- 1) Loosen the clamping screw on the back guide (see fig. 10, item 2).
- 2) Insert the clamping plate into the guide plate, narrow side first (see fig. 10, item 3).
- 3) Turn the clamping plate **90°** so that it engages sideways in the guide plate. (see fig. 10, item 3).
- 4) Firmly tighten the clamping screw on the back guide (see fig. 10, item 2).



6.5 Adjusting the position of the seat bars

The seat bars can be moved to an anterior or posterior position, e.g. to shift the centre of gravity or to provide more space for the legrests:

- 1) Loosen and remove the screw connection on the pivot point of the seat tilt (see fig. 11, item 1).
CAUTION! Risk of pinching between freely movable frame components. Actively secure the seat frame against falling.
- 2) Move the seat bars to the desired position.
- 3) Reinsert the screw connections at the pivot point for the seat tilt on both sides and firmly tighten them to a torque of **10 Nm** (see fig. 11, item 1).
- 4) Loosen and remove the screw connection between the perforated plate and gas compression spring on both sides (see fig. 12, item 1).
CAUTION! Risk of pinching between freely movable gas compression springs. Actively secure the gas compression springs against falling.
- 5) Move the gas compression springs along the perforated plate according to the position of the seat bars.
INFORMATION: Slide the position of the seat bars and the position of the gas compression springs equally. This maintains the angle setting of the seat frame. If the raster provided by the perforated plate is insufficient, carry out the adjustment according to the seat depth (see Page 12).
- 6) Reinsert all screw connections and firmly tighten them to a torque of **10 Nm** (see fig. 12, item 1).



6.6 Checking/adjusting the seating centre of gravity

⚠ CAUTION

Improper adjustment of the seating centre of gravity

Tipping, falling from the seating shell / seating system due to incorrect adjustment

- ▶ Avoid extreme settings that could lead to tipping when adjusting the seat angle.
- ▶ For transfemoral amputees, shift the seating centre of gravity forward. This improves the stability of the mobility base for seating shells.

Checking the seating centre of gravity is required in order to ensure that the seat angle can be adjusted easily when the user is seated.

In principle, the centre of gravity adjustment has the following effects:

Seating centre of gravity	Effect
Too far in front of the pivot point	Seat tilts far forward when it is unlocked; high holding forces required during seat adjustment
Too far behind the pivot point	Seat tilts far backward when it is unlocked; high holding forces required during seat adjustment

Setting recommendations

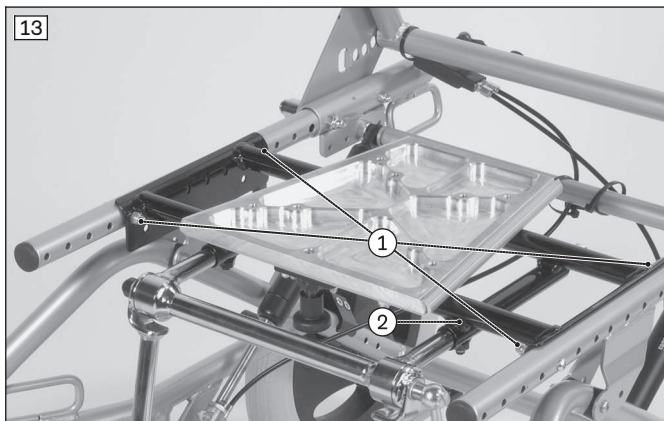
The seating centre of gravity should be individually adjusted according to the clinical picture.

The qualified personnel has to decide whether it is better that the seat swings forward or backward when no holding force is applied while the locking mechanism is released. If possible, the attendant who will be using the mobility base for seating shells should be consulted here.

Setting the seating centre of gravity when using an interface adapter

The seating centre of gravity can be set by releasing the interface adapter and sliding it along the seat bars:

- 1) **If necessary:** Remove the seating shell interface with the seating shell / seating system if these make it difficult to release and slide the interface adapter (see Page 12).
- 2) Loosen and remove the screw connections between the interface adapter and seat bars (see fig. 13, item 1; see fig. 14, item 1).
- 3) Slide the interface adapter along the seat bars to the assumed seating centre of gravity (see fig. 13, item 2; see fig. 14, item 2).
- 4) Insert the screw connections into the appropriate slots between the interface adapter and seat bars and firmly tighten them to a torque of **10 Nm** (see fig. 13, item 1; see fig. 14, item 1).
- 5) Mount the seating shell interface with the seating shell / seating system on the interface adapter.
- 6) Conduct a functional test of the seat tilt and locking mechanism:
 - Tilt the seat and lock it at various positions along the entire adjustment range.
 - Ensure that the seat tilt can move freely and the locking mechanism functions securely. The seat angle must not be adjustable after letting go of the release lever.
- 7) Test the seating centre of gravity setting:
 - Sit the user in the seat with the help of an assistant.
 - Tilt the seat and hold it in position. Only low holding forces should be required for tilting.



Adjusting the seating centre of gravity

If the results are not satisfactory, the setting has to be readjusted without the user in the seat, as follows:

Problem	Solution
Seat tilts far forward when it is unlocked; high holding forces required during seat adjustment	Slide the seat and interface adapter back
Seat tilts far backward when it is unlocked; high holding forces required during seat adjustment	Slide the seat and interface adapter forward

INFORMATION

The adjustment range for the seating centre of gravity can be further expanded by adjusting the seat bar position (see Page 15).

6.7 Attaching/removing the back straps (option)

The back straps can be removed for cleaning or to replace them.

Adjusting the back straps when the user is seated is described in more detail in the included instructions for use (user).

Attaching the back straps

- 1) Guide both ends of the back straps through a plastic clamp (see fig. 15).
- 2) Place the free ends of the back straps around the back tubes and guide them through the plastic clamp again. Fix exposed Bowden cables as you do so if possible (see fig. 16).

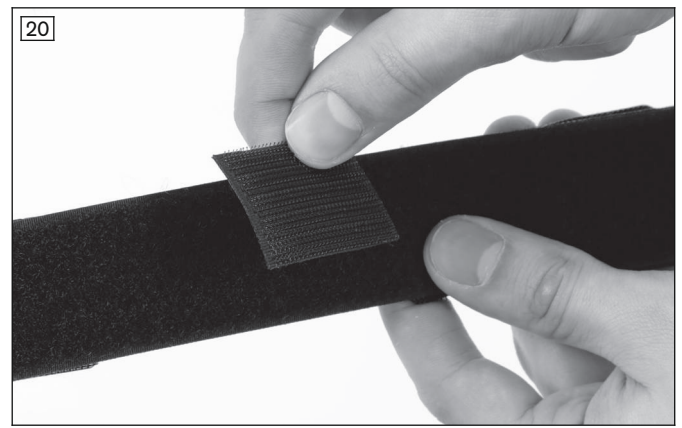
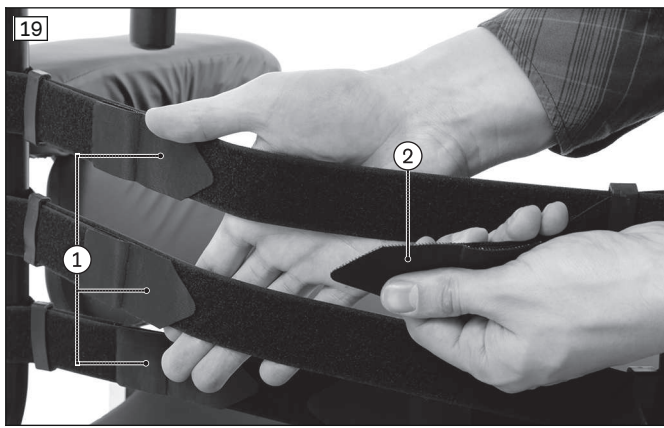
CAUTION! Loss of functionality of the drum brakes due to over-tightened Bowden cables. Release the Bowden cables at the upper back straps. Only fix Bowden cables if this does not tighten them further (see fig. 17).

- 3) Place the Y hook-and-loop buckles around both ends of the back straps and fasten them (see fig. 18).
- 4) Fasten one end of each of the back straps (see fig. 19, item 1).
- 5) Affix a double-side hook-and-loop strip in the same position on each of the back straps (see fig. 20).
- 6) Pre-tension the back straps according to the needs of the user and fasten the loosen end of the back straps (see fig. 19, item 2).

INFORMATION: The two ends of the back straps should not overlap. If necessary, shorten the back straps (without Y hook-and-loop buckles) until they can no longer overlap.

- 7) Slide the plastic clamps on the back straps as close as possible to the back tubes (see fig. 17, item 1).
- 8) Position the back padding on the back straps at the desired height. Secure the back padding against sliding by pressing it onto all of the double sided hook-and-loop strips on the back straps.





Removing the back straps

- 1) Carefully pull the back padding off the back straps.
- 2) **If necessary:** Pull the double sided hook-and-loop strips off the back straps (see fig. 20).
- 3) Open the hook-and-loop fasteners on both ends of the back straps (see fig. 19, item 1).
- 4) Open and remove the Y hook-and-loop buckles on both ends of the back straps (see fig. 18).
- 5) Pull the free ends of the back straps out of the plastic clamps (see fig. 16).
- 6) Pull the plastic clamps off the back straps (see fig. 15).

6.8 Adjusting the head support (option)

Adjusting the height and position of the head support is described in more detail in the enclosed instructions for use (user).

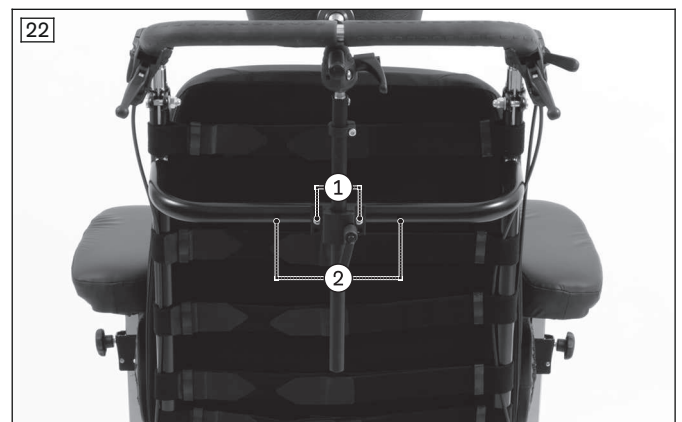
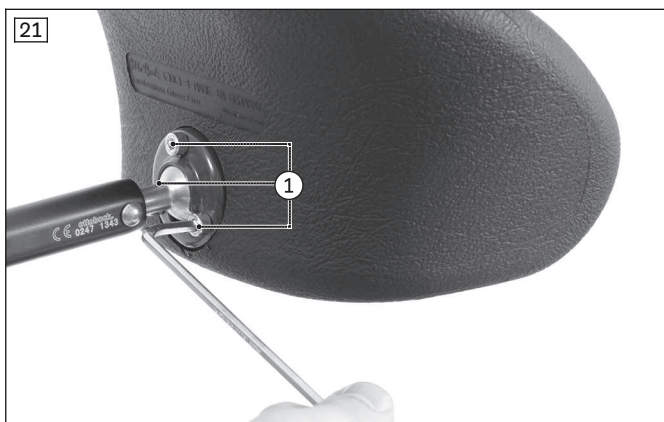
The following adjustments can also be made to the head support:

Adjusting the angle and position of the head support on the ball joint

- 1) Loosen the screw connections on the ball joint of the head support (see fig. 21, item 1).
- 2) Swivel the head support to the desired position.
- 3) Firmly tighten all screw connections on the ball joint (see fig. 21, item 1).

Shifting the head support sideways on the cross tube of the back frame

- 1) Loosen and remove the screw connections between the head support holder and the cross tube of the back frame (see fig. 22, item 1).
- 2) Slide the head support and holder along the cross tube of the back frame to the desired position (see fig. 22, item 2).
- 3) Insert the screw connections into the appropriate slots between the head support holder and the cross tube of the back frame and firmly tighten them (see fig. 22, item 1).



6.9 Adjusting the legrests (option)

⚠ CAUTION

Improper adjustment of the legrests/footplates

Tipping over, falling due to user error

- ▶ After changing the legrest/footplate settings, verify that the legrests/footplates do not collide with the caster wheels at any of the seat tilt settings (seat angle adjustment).
- ▶ The distance between the legrest/footplate and the caster wheel must be at least **25 mm**.

The footplates are the supporting surfaces for the feet.

Their distance from the seat bottom influences sitting stability. The height adjustment acts on the pelvis and ischial bones.

The angle of the footplates should permit a comfortable ankle position.

6.9.1 Adjusting the depth of the legrests/footplates

a) Adjusting the depth of the following legrests:

- Single-panel
- Segmented (aluminium/plastic)
- Segmented for short lower leg length (aluminium)

The depth of the legrest can be adjusted using the perforated holes in the seat bars.

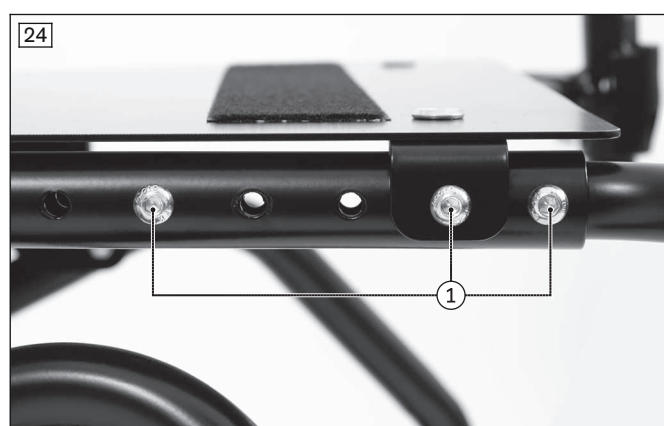
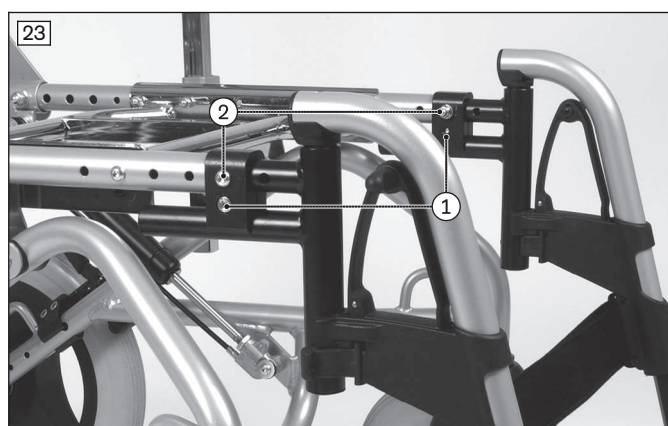
- 1) Loosen the lower screw connection of the legrest fixture on both sides (see fig. 23, item 1).
- 2) Loosen and remove the upper screw connection of the legrest fixture on both sides (see fig. 23, item 2).
- 3) Slide the legrest and legrest fixture to the desired depth.
- 4) Insert the screw connections into the appropriate slots between the seat bar and legrest fixture and firmly tighten them (see fig. 23, item 1/2).

b) Adjusting the depth of the following legrests:

- Elevating with ratchet joint (aluminium)
- Elevating, segmented with calf pad (plastic)
- Elevating, segmented with calf band (plastic)

The depth of the legrest can be adjusted using the perforated holes in the seat bars.

- 1) Loosen and remove the screw connections on the legrest fixture (see fig. 24, item 1).
- 2) Slide the legrest and legrest fixture to the desired depth.
- 3) Insert the screw connections into the appropriate slots between the seat bar and legrest fixture and firmly tighten them (see fig. 24, item 1).



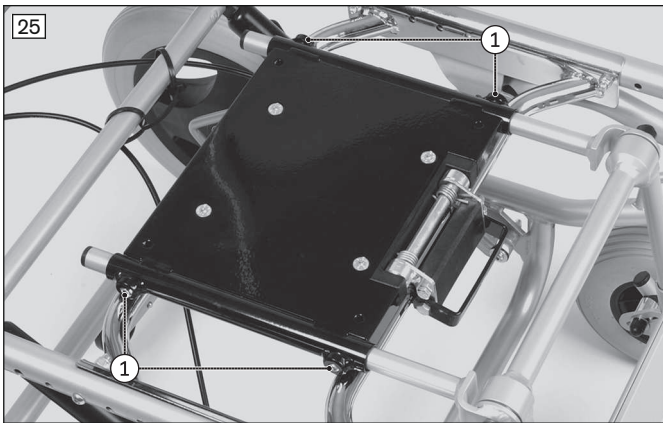
c) Adjusting the depth of the following legrests:

- With single-panel footplate for seating shell interface (steel)

The legrest is mounted on the seating shell interface. The depth of the legrest can be continuously adjusted on the side attachments of the seating shell interface.

- 1) Loosen the screw connections on both sides between the seating shell interface and the legrest bars (see fig. 25, item 1).
- 2) Slide the legrest and the bars to the desired depth.

- 3) Firmly tighten the screw connections on the seating shell interface to a torque of **1.5 Nm** (see fig. 25, item 1).
- 4) Check that the legrest is securely mounted.



6.9.2 Adjusting the lower leg length

The required footplate position depends on the lower leg length of the user and the thickness of the seat cushion / seating shell / seating system that is used.

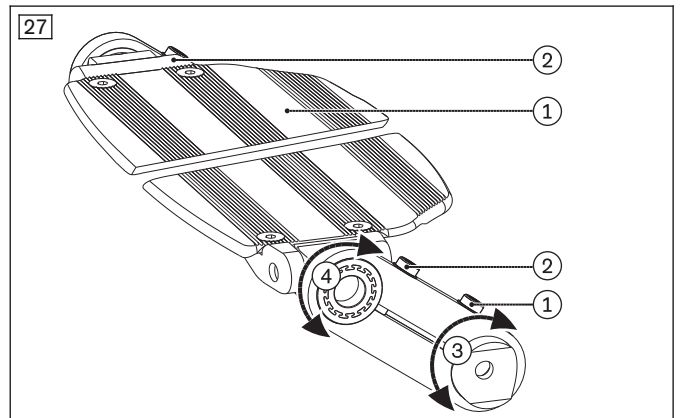
a) Adjusting the lower leg length of the following legrests:

- Single-panel
 - Segmented (aluminium/plastic)
 - Segmented for short lower leg length (aluminium)
 - Elevating with ratchet joint (aluminium)
 - Elevating, segmented with calf pad (plastic)
 - Elevating, segmented with calf band (plastic)
- 1) Loosen the lower clamping screw on both guide tubes (see fig. 26).
 - 2) Adjust the lower leg length (continuously adjustable). The footplate mounting bars must remain inserted in the guide tube of the legrest holder to a depth of at least **40 mm**; otherwise, they can slide out of the guide tube.
INFORMATION: Verify sufficient ground clearance.
 - 3) Slide the legrest and legrest fixture to the desired depth.
 - 4) Firmly tighten the clamping screw to a torque of **10 Nm** (see fig. 26).

Additional adjustment for short lower leg length

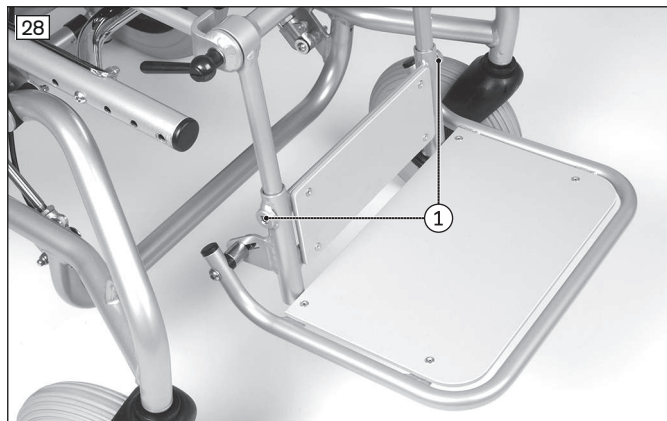
The lower leg length of the "Segmented for short lower leg length" legrest can be further adjusted using a slotted hole plate.

- 1) Loosen the clamping screws (see fig. 27, item 1/2).
- 2) Swing the footplate to the desired height and the desired angle (see fig. 27).
INFORMATION: Verify sufficient ground clearance.
- 3) Slide the legrest and legrest fixture to the desired depth.
- 4) Firmly tighten the clamping screws (see fig. 27, item 1/2).



b) Adjusting the lower leg length of the following legrests:

- With single-panel footplate for seating shell interface (steel)
- 1) Loosen the clamping screws on both mounting bars (see fig. 28, item 1).
 - 2) Adjust the lower leg length (continuously adjustable). The guide tubes for the footplate must remain slid onto the mounting bars of the legrest by at least **40 mm**, as they could otherwise slide down and off the mounting bars.
- INFORMATION: Verify sufficient ground clearance.**
- 3) Firmly tighten the clamping screws on both mounting bars to a torque of **1.5 Nm** (see fig. 28, item 1).
 - 4) Check that the legrest is securely mounted.

**6.9.3 Adjusting the support angle**

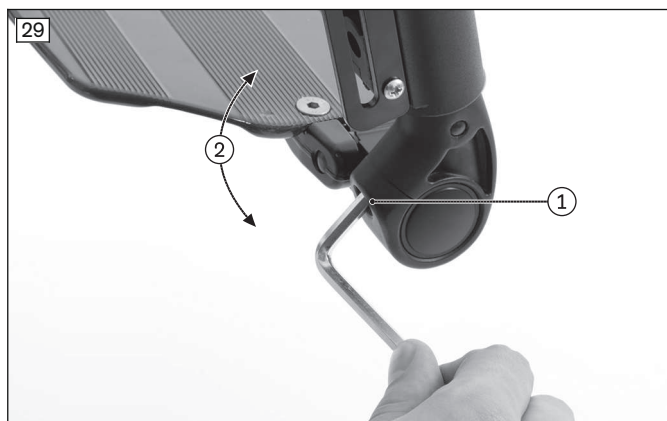
The footplate angle setting should be chosen so that the ankle is in a relaxed, comfortable position.

a) Adjusting the support angle of the following legrests:

- Segmented (aluminium)
 - Segmented for short lower leg length (aluminium)
 - Elevating with ratchet joint (aluminium)
- 1) Loosen the clamping screw on the joint of the footplate (see fig. 29, item 1).
 - 2) Set the desired footplate angle (see fig. 29, item 2).
 - 3) Firmly tighten the clamping screw on the joint of the footplate to a torque of **10 Nm** (see fig. 29, item 1).

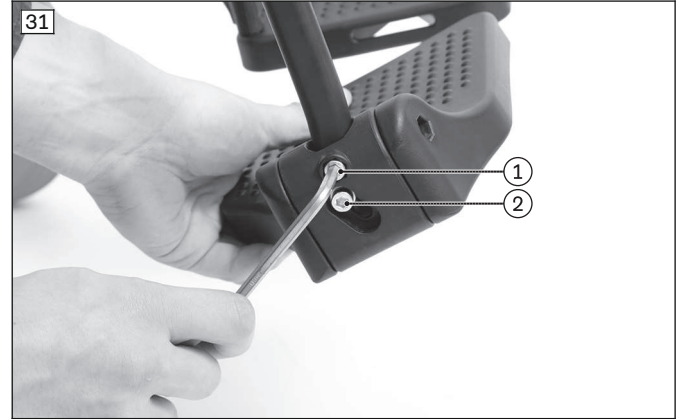
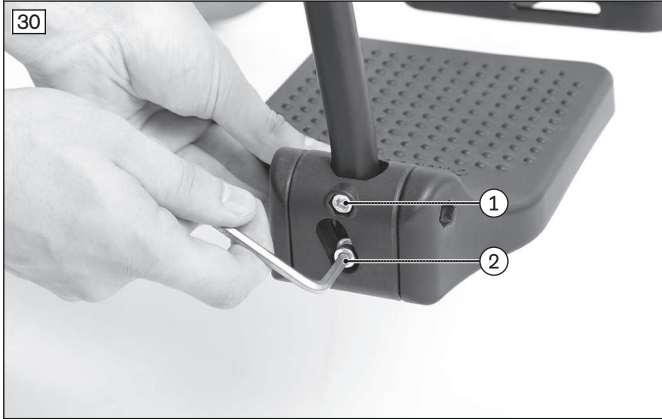
b) Adjusting the support angle of the following legrest:

- Single-panel
- 1) Loosen the clamping screw on the left and right joint of the footplate (see fig. 29, item 1).
 - 2) Set the desired footplate angle (see fig. 29).
- INFORMATION: Set the same angle on the left and right joint so that the footplate is correctly positioned.**
- 3) Firmly tighten the clamping screw on the left and right joint of the footplate to a torque of **10 Nm** (see fig. 29, item 1).

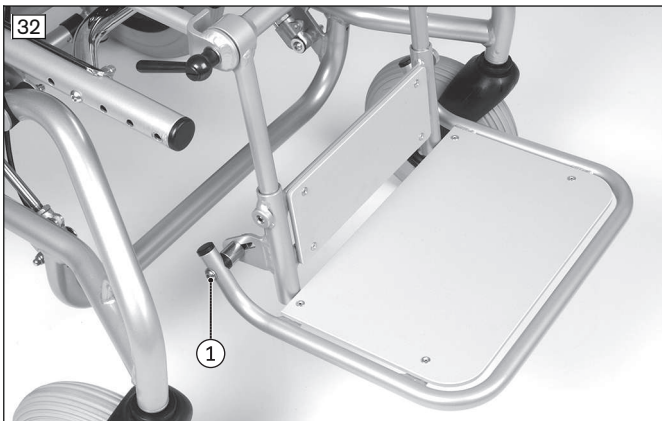


c) Adjusting the support angle of the following legrests:

- Segmented (plastic)
 - Elevating, segmented with calf pad (plastic)
 - Elevating, segmented with calf band (plastic)
- 1) Loosen the screw connections on the mounting for adjusting the footplate angle (see fig. 30, item 1/2).
 - 2) Set the desired footplate angle (see fig. 31).
 - 3) Firmly tighten the screw connections to a torque of **6 Nm** (see fig. 31, item 1/2).

**d) Adjusting the support angle of the following legrest:**

- With single-panel footplate for seating shell interface (steel)
- 1) Loosen the clamping screws on the left and right joint of the footplate (see fig. 32, item 1).
 - 2) Set the desired footplate angle. Slide the clamping screws evenly in the left and right slotted hole without tilting.
 - 3) Firmly tighten the clamping screws on the left and right joint of the footplate (see fig. 32, item 1).
- INFORMATION: Sufficiently tighten the clamping screws so that the footplate remains securely positioned even when flipped up.**

**6.10 Adjusting the armrests (option)****6.10.1 Adjusting the armrest depth with short arm support**

The depth of the armrests with short arm support can be adjusted.

- 1) Remove the cover caps on the bottom of the arm support (see fig. 33, item 1).
 - 2) Loosen and remove the screw connections on the bottom of the arm support (see fig. 33, item 2).
 - 3) Slide the arm support along the connection tube to the desired position.
- INFORMATION: Shift the left and right arm supports to the same depth.**
- 4) Insert the screw connections into the appropriate holes on the bottom of the arm support and carefully tighten them.
 - 5) Firmly push the cover caps into the open holes on the bottom of the arm support.

Extended armrest depth

The armrest with short arm support can be rotated to expand the adjustment range for the armrest depth.

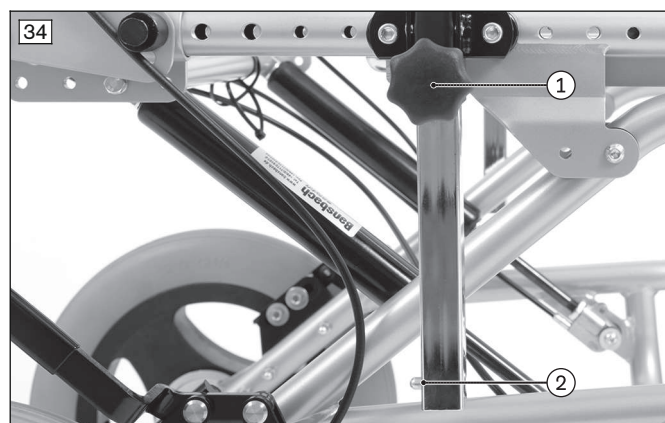
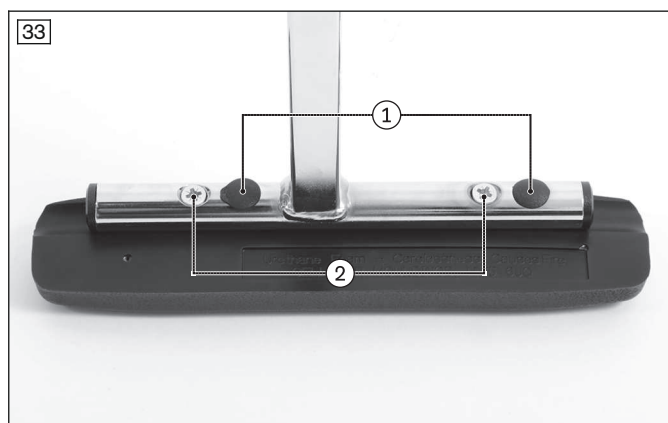
- 1) Loosen the clamping screw on the armrest (see fig. 34, item 1).
- 2) Press the tripod spring on the armrest (see fig. 34, item 2) and pull the armrest out of the armrest holder.
- 3) Rotate the armrest **180°**.

INFORMATION: As you do so, swap the left and right armrests so that the arm supports and the clamping levers for the angle adjustment (optional) are always facing outwards.

- 4) Press the tripod spring on the armrest (see fig. 34, item 2) and insert the armrest into the armrest holder from above.

INFORMATION: Slide the armrest at least far enough in until the tripod spring audibly engages and the armrest locks.

- 5) Firmly tighten the clamping screw on the armrest (see fig. 34, item 1).



6.10.2 Adjusting the distance between the armrests with long arm support

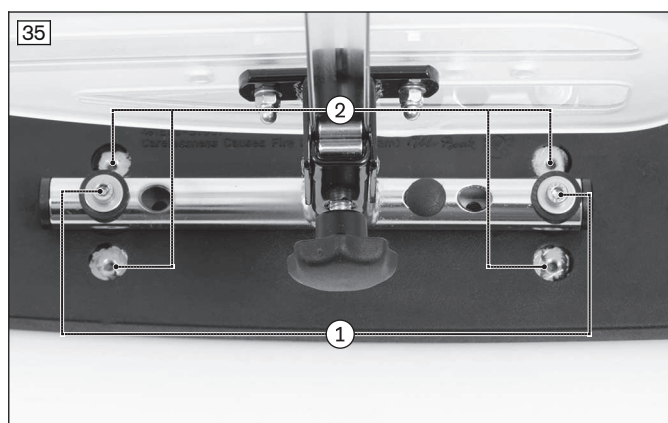
The distance between the armrests with long arm support can be adjusted. This can be done by moving the arm supports inwards or outwards.

- 1) Loosen and remove the screw connections on the bottom of the arm support (see fig. 35, item 1).
- 2) Move the arm support to the desired position on the connection tube.

INFORMATION: Move the left and right arm supports evenly in or out.

INFORMATION: The arm support must not be rotated. Align the narrow side of the armrest to the front according to the original position.

- 3) Insert the screw connections into the appropriate holes on the bottom of the arm support and carefully tighten them (see fig. 35, item 2).



6.10.3 Adjusting the armrest height and the armrest angle

Adjusting the armrest height and the armrest angle is described in more detail in the included instructions for use (user).

6.11 Adjusting the clothing protector (option)

The height of the clothing protector can be adjusted. Adjusting the height and position of the clothing protector is described in more detail in the enclosed instructions for use (user).

6.12 Belts / belt systems (option)

⚠ CAUTION

Incorrect approach to the adjustment process

Injuries, malpositions, illness of the user due to adjustment errors

- ▶ The belt system may only be installed by qualified personnel.
- ▶ The qualified personnel is responsible for individual positioning and fitting of the belt system.
- ▶ Excessively tight adjustment of the belt system may lead to unnecessary pain or illness of the user.
- ▶ Adjusting the belt system too loosely can cause the user to slide into a dangerous position. In addition, the fastening snaps could open unintentionally if they slide against hard parts of clothing (e.g. buttons).
- ▶ For proper installation and adjustment, follow the instructions for use included with the product.

⚠ CAUTION

Lack of instruction

Injuries, malpositions, illness of the user due to information errors

- ▶ The qualified personnel is responsible for making sure that the user and/or attendant/nursing staff has understood the proper adjustment, use, maintenance and care of the belt system.
- ▶ In particular, ensure that the user and/or attendant/nursing staff knows how to quickly loosen and open the product to avoid delays in case of emergency.

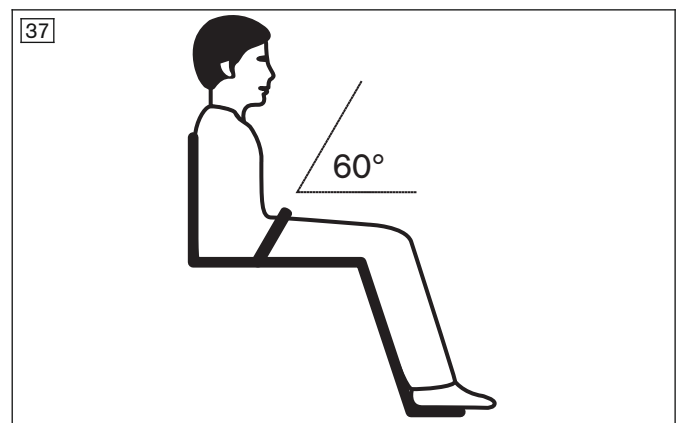
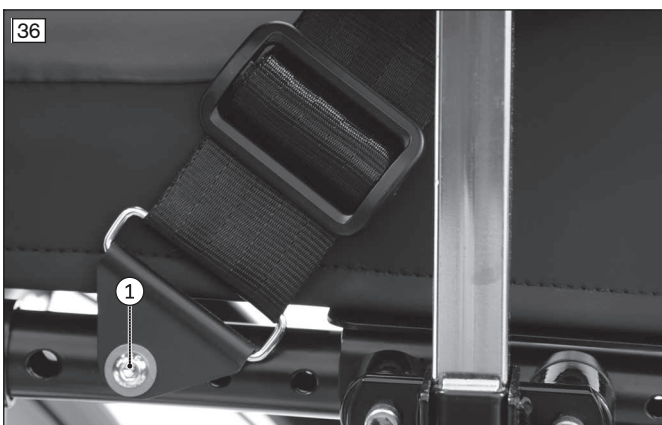
6.12.1 Attaching belts / belt systems

INFORMATION

Observe the instructions for use and the safety information for the respective products regarding the installation and safe use of the belts and positioning systems.

Lap belt, standard

- 1) Screw the anchor points of the lap belt directly to the seat bars of the seat frame (see fig. 36, item 1).
INFORMATION: Select the holes on the seat bars such that the lap belt can be applied at an angle of approx. 60° to the seat bottom (see fig. 37).
- 2) Guide the lap belt from the inside through the plastic eyelet and the anchor point (see fig. 38).
- 3) Guide the lap belt through the plastic eyelet from the inside again and pull it tight (see fig. 39).
INFORMATION: The free end of the lap belt must be pulled through the anchor point at least 100 mm. Secure or shorten excessively long ends of the lap belt so that these do not drag on the ground or get caught in the wheels.





Lap belt, padded

The lap belt is delivered with a mounting kit for the seat bars.

All information on installing the anchor points and routing the lap belt are included in the instructions for use for the lap belt and the mounting kit.

6.13 Adjusting the wheel adapter with 22"/24" drive wheels (custom fabrication version)

⚠ WARNING

Incorrectly adjusted wheelbase

Tipping over, falling of the user due to incorrect adjustment

- ▶ Only adjust the wheel adapter after completing the adjustments described above.
- ▶ Maximum stability is achieved when the frame is set in the lowest position and the rear wheels are set in the rearmost position. Deviations from this setting reduce the stability of the mobility base for seating shells.
- ▶ Avoid extreme settings that could lead to tipping when adjusting the seat angle.
- ▶ Please note that with the rear wheel in a more forward mounting position and with an unfavourable body position, the user may tip backwards even on level ground.
- ▶ Position the drive wheels towards the rear for transfemoral amputees. This improves the stability of the product.
- ▶ Changing the size and position of the drive wheels may cause the caster wheels to wobble at higher speeds. If changes are required, verify the horizontal alignment of the main frame.

⚠ WARNING

Improper assembly of removable wheels

Tipping, falling over of the user due to wheels coming off

- ▶ After each assembly, verify the proper fit of the removable wheels. The quick-release axles must be firmly locked in the wheel attachment.

INFORMATION

To change the position of the wheel adapter, the knee lever wheel lock first has to be loosened and subsequently readjusted ().

If 22"/24" drive wheels are installed, the wheelbase can be adjusted on a special wheel adapter. This has the following effects:

Position of the wheel adapter / drive wheel	Effect
Shifting to the rear (farther away from the seating centre of gravity)	Larger wheelbase; tipping resistance increases; mobility base for seating shells is harder to tip backwards when crossing obstacles; larger forces required for tipping
Shifting forward (closer to the seating centre of gravity)	Smaller wheelbase; tipping resistance decreases; mobility base for seating shells is easier to tip backwards when crossing obstacles; lower forces required for tipping

The permissible positions of the wheel adapter on the main frame are determined by the wheel size:

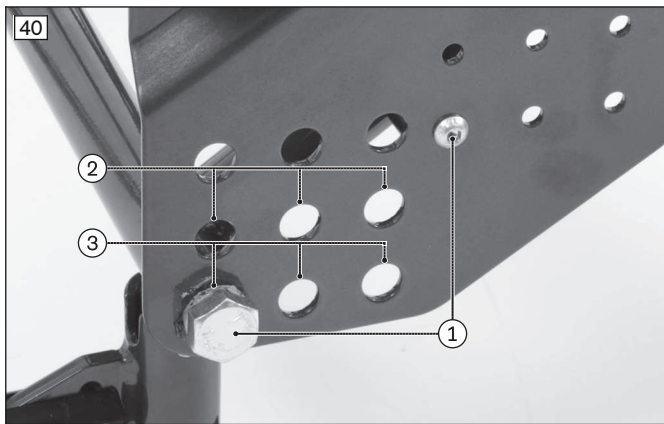
- permissible positions for 22" drive wheels (see fig. 40, item 2)
- permissible positions for 24" drive wheels (see fig. 40, item 3)

Setting recommendations

Depending on the clinical picture of the user, the intended area of application and the experience/strength of the attendant, the position of the wheel adapter can be individually readjusted. The safe position of the mobility base for seating shells on slopes/inclines must be ensured at all times.

Adjusting the wheel adapter

- 1) Loosen the wheel locks and remove the drive wheels with quick-release axles.
- 2) Loosen and remove the screw connections on the wheel adapter on both sides (see fig. 40, item 1; see fig. 41, item 1).
- 3) Adjust the height and depth of the wheel adapter on both sides. Avoid tilting or canting.
- 4) Insert the screw connections into the appropriate slots on the wheel adapter and firmly tighten them (see fig. 40, item 1; see fig. 41, item 1).
- 5) Put on the drive wheel with quick-release axle. The quick-release axle must not be removable after releasing the pushbutton.
- 6) Readjust the knee lever wheel lock on both sides ().
- 7) Readjust the anti-tipper (see Page 28).



6.14 Adjusting the brakes

⚠ WARNING

Failure to verify brake functionality

Accident, falling of the user due to incorrect adjustment and improperly inflated tyres

- ▶ Verify the correct setting of the wheel lock (especially the distance between the wheel lock bolt and tyre).
- ▶ Always carry out adjustments to the wheel lock on both sides.
- ▶ Ensure that the user can operate the wheel lock without great effort. The force required to do so must not exceed **60 N (~ 6 kg)**.
- ▶ Check the tyre pressure of the drive wheels. Note the information in the section "Technical data" or on the tyre sidewall.
- ▶ Only use original drive wheels with a verified maximum radial out-of-round of **1 mm**.

6.14.1 Adjusting the knee lever wheel locks

The knee lever wheel lock must be adjusted on both sides when carrying out readjustments.

When changing the position of the drive wheels (for custom fabrication version with 22"/24" drive wheels), both knee lever wheel locks must be readjusted by moving them on the frame.

Adjusting/readjusting the knee lever wheel lock by sliding it in the slotted hole (for 12" rear wheels)

- 1) Loosen the screw connections on the slotted hole in the clamping plate (see fig. 42, item 1).
- 2) The knee lever wheel lock is continuously adjustable in the slotted hole (see fig. 42, item 2). Set the gap between the tyre and wheel lock bolt to approx. **5 mm** when the wheel lock is disengaged (see fig. 43).

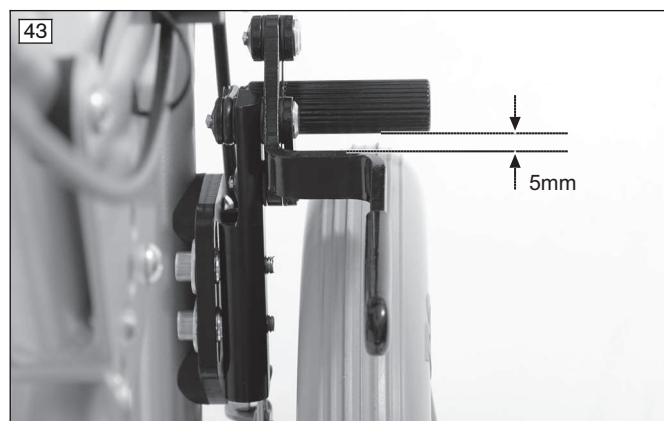
- 3) Firmly tighten the screw connections on the slotted hole of the clamping plate to a torque of **15 Nm**.
INFORMATION: Adjust the left and right knee lever wheel locks so that they have the same braking effect.

Adjusting by shifting on the frame (for custom fabrication version with 22"/24" drive wheels)

INFORMATION

Ottobock Custom Fabrication installs the knee lever wheel lock directly on the 22"/24" drive wheels with a clamp bracket.

- 1) Loosen the screw connections on the clamp bracket of the knee lever wheel lock (see fig. 44, item 1).
- 2) Shift the clamping mechanism on the main frame. When the wheel lock is not engaged, the gap between the tyre and the wheel lock bolt should be max. **5 mm** (not illustrated).
- 3) Firmly tighten the screw connections on the clamp bracket of the knee lever wheel lock (see fig. 44, item 1).
INFORMATION: Adjust the left and right knee lever wheel locks so that they have the same braking effect.



6.14.2 Adjusting the braking force of the drum brake (option)

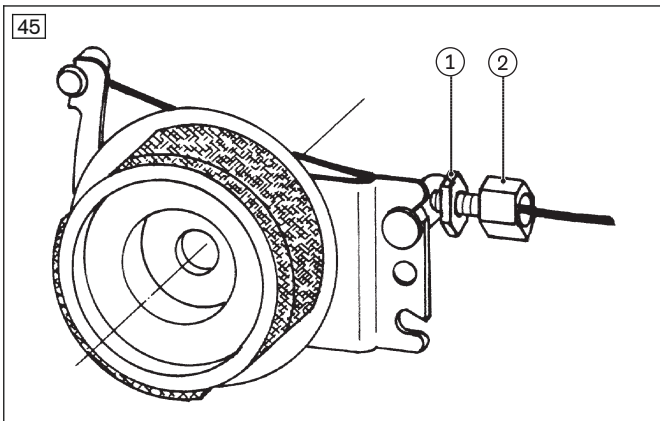
INFORMATION

After making adjustments, check that activating the manual brake lever creates a sufficient braking effect. Note that the drum brake must still be able to produce sufficient braking force even when the manual brake lever is locked into a ratchet position.

To achieve an optimum braking effect, the braking force is adjusted using the adjustment screw (see fig. 45, item 2).

- **Increase the braking force:** Back off the adjusting screw.
 - **Reduce the braking force:** Screw in the adjustment screw.
- 1) Loosen the counter nut (see fig. 45, item 1) and back off the adjustment screw until a scraping noise can be heard when the rear wheel is rotated.
 - 2) Screw in the adjustment screw (see fig. 45, item 2) until the scraping noise at the rear wheel disappears and the wheel runs freely.

- 3) Tighten the counter nut (see fig. 45, item 1) until the adjustment screw is fixed.
 → The braking force of both rear wheels must be adjusted equally.



6.15 Adjusting the anti-tipper

⚠ WARNING

Use of alternative seating systems

Serious injuries to the user due to missing anti-tipper

- ▶ If the product is fitted with an alternative seating system or seating shells from other manufacturers, special attention must be paid to static stability.
- ▶ The qualified personnel is obligated to ensure the static stability of such a combination.
- ▶ Using an anti-tipper may be required depending on the centre of gravity.
- ▶ Verify that the anti-tipper has been installed and adjusted properly.

6.15.1 Discovery Care Chair with 12"/22"/24" rear wheels

⚠ WARNING

Incorrect installation of the anti-tipper

Tipping over, falling of the user due to failure to observe the installation instructions

- ▶ Adjusting the anti-tipper is not permitted.
- ▶ Verify that the anti-tipper has been installed and adjusted properly on both sides. The mounting screw on the respective anti-tipper tube has to be firmly tightened.

The anti-tipper setting may not be changed when 12" rear wheels are installed. The mounting screw on the anti-tipper tube has to stay firmly installed (not illustrated).

When 22"/24" rear wheels are installed, the length and height of the anti-tipper can be adjusted separately (see next section).

6.15.2 Discovery Standard, Discovery for Leckey KIT seat & Leckey Mygo Max or custom fabrication versions with 12"/22"/24" rear wheels

⚠ WARNING

Incorrect installation of the anti-tipper/missing anti-tipper

Tipping over, falling of the user due to failure to observe the installation instructions and because of incorrect adjustment

- ▶ Depending upon the settings of the chassis, the centre of gravity, the back angle and the experience of the user, the use of an anti-tipper may be necessary.
- ▶ For a small wheelbase and a backrest that is tilted far back, an anti-tipper may need to be installed on both sides, depending upon the user's experience.
- ▶ Verify that the anti-tipper has been installed and adjusted properly. Find the appropriate position with the assistance of a helper.

CAUTION**Incorrectly adjusted anti-tipper**

Tipping over, falling, loss of functionality due to incorrect adjustment

- ▶ After it is adjusted, the anti-tipper always has to protrude a few centimetres beyond the outer radius of the rear wheel.
- ▶ The adjustments must always be done in the same way on both sides.
- ▶ After making adjustments, take note of the sound made by the anti-tipper locking mechanism as it engages.
- ▶ After making any adjustments to the product, verify the proper functionality of the anti-tipper. Adjust the anti-tipper if needed.

6.15.2.1 Adjustment for 12" rear wheels

With this version, the length/height of the anti-tipper can only be adjusted in one operation.

- 1) Push in the tripod spring on the bar of the anti-tipper (see fig. 46, item 1).
- 2) Adjust the length/height of the anti-tipper using the perforated holes (see fig. 46, item 2).

INFORMATION: The anti-tippers must be no more than 50 mm above the floor.

INFORMATION: After making this adjustment, the anti-tipper has to protrude a few centimetres beyond the outer radius of the rear wheel.

- 3) Allow the tripod spring to engage.
- 4) Check the height of the anti-tipper and readjust it if necessary.

6.15.2.2 Adjustment for 22"/24" drive wheels (custom fabrication version)

With this version, the length and height of the anti-tipper can be adjusted separately.

Adjusting the length of the anti-tipper

- 1) Loosen and remove the screw connection on the bar of the anti-tipper (see fig. 47, item 1).
- 2) Adjust the length of the anti-tipper using the perforated holes (see fig. 47, item 2).

INFORMATION: After making this adjustment, the anti-tipper has to protrude a few centimetres beyond the outer radius of the rear wheel.

- 3) Insert the screw connection into the appropriate hole on the bar of the anti-tipper and firmly tighten it (see fig. 47, item 1).

- 4) Check the height of the anti-tipper and adjust it if necessary.

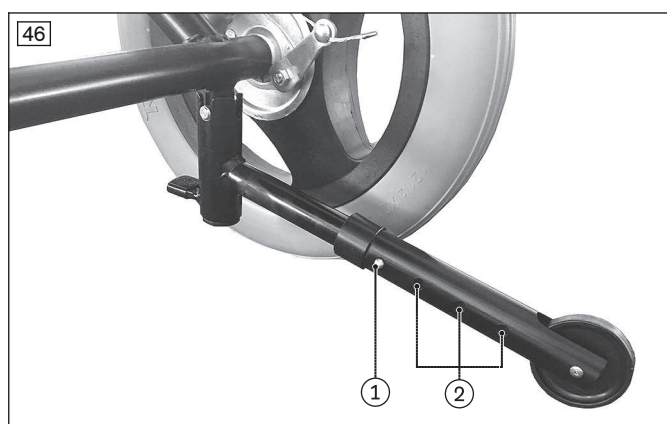
INFORMATION: The anti-tippers must be no more than 50 mm above the floor.

Adjusting the height of the anti-tipper

- 1) Loosen and remove the screw connection on the joint of the anti-tipper (see fig. 47, item 3).
- 2) Adjust the height of the anti-tipper.

INFORMATION: The anti-tippers must be no more than 50 mm above the floor.

- 3) Insert the screw connection into the appropriate hole on the joint of the anti-tipper and firmly tighten it (see fig. 47, item 3).

**7 Delivery****7.1 Final inspection**

A final check must be carried out before the wheelchair can be handed over:

- Are all options installed according to the order form?
- Do the wheels turn easily?
- Is the seating shell / seating system correctly adapted to the user?
- Is the seating centre of gravity adjusted correctly?
- Are the legrests/armrests (option) adjusted correctly?
- Does the back angle adjustment engage securely in the proper position?
- Can the seat tilt be operated smoothly and securely locked?
- **For custom fabrication version with 22"/24" drive wheels:** Can the quick-release axles be easily removed when pulled on firmly and inserted?
- **For pneumatic tyres:** Is the tyre pressure correct (see Page 31)?
- Only after adjustment: Have the brakes (wheel locks) been adjusted correctly?
- **If present:** Is the anti-tipper mounted and adjusted correctly?
- Are the tripod springs of the arm supports securely engaged?
- Are all screws firmly tightened and all hook-and-loop fasteners firmly fastened?

7.2 Transport to the customer

The mobility base for seating shells should be transported to the user in a completely assembled state using the outer packaging.

The wheels should be removed if necessary for delivery as a custom fabrication version with 22"/24" drive wheels.

7.3 Handing over the product

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

- Have the user get into the product and perform a trial seat fitting. Pay special attention to proper positioning according to medical considerations.
- In order to ensure that the seat tilt feature operates smoothly, final verification of the seating centre of gravity is required with the seated user and the designated attendant; adjustments must be made if necessary. The seating centre of gravity must be set so that the attendant can easily change the angle.
- Attendants and – if possible – the user must be instructed in the safe use of the product. In particular, the enclosed instructions for use (user) are to be used.
- The instructions for use (user) must be issued to the user or an attendant during handover of the wheelchair.
- The user or attendant should acknowledge that they have been instructed in how to use the product and were informed of the residual risks.

8 Maintenance and repair

The manufacturer recommends regular maintenance of the product every **12 months**.

More information on cleaning, disinfection, maintenance and repair can be found in the instructions for use (user).

The service manual contains detailed information on repairs.

9 Disposal

9.1 Disposal information

All components of the product must be disposed of properly in accordance with the respective national environmental regulations.

9.2 Information on re-use

CAUTION

Used seat padding

Functional and/or hygienic risks due to re-use

- ▶ Replace the seat padding if the wheelchair is to be re-used.

The product is suitable for re-use.

Similar to second-hand machines or vehicles, products that are being re-used are subject to increased strain. Features and functions must not change in a way that could endanger users or other persons within the product's lifespan.

The product must first be thoroughly cleaned and disinfected before it can be re-used. Then the product must be examined by an authorised specialist to check the condition and to look for wear and possible damage. All worn and damaged parts as well as components which do not fit or are unsuitable for the new user must be replaced.

Detailed information on replacing components as well as information on the required tools and the prescribed service intervals can be found in the service manual.

10 Legal information

All legal conditions are subject to the respective national laws of the country of use and may vary accordingly.

10.1 Liability

The manufacturer will only assume liability if the product is used in accordance with the descriptions and instructions provided in this document. The manufacturer will not assume liability for damage caused by disregarding the information in this document, particularly due to improper use or unauthorised modification of the product.

10.2 CE conformity

This product meets the requirements of the European Directive 93/42/EEC for medical devices. This product has been classified as a class I device according to the classification criteria outlined in Annex IX of the directive. The declaration of conformity was therefore created by the manufacturer with sole responsibility according to Annex VII of the directive.

10.3 Warranty

Further information on the warranty terms and conditions is available from the manufacturer's service (see inside back cover for addresses).

10.4 Service life

Expected service life: **4 years.**

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

Using the product beyond the specified expected service life leads to increased residual risk and should only take place subject to the due diligence and deliberations of qualified personnel.

If the service life is reached, the user or a responsible attendant should contact the qualified personnel who fitted the product or the manufacturer's servicing department (see inside rear cover or back page for address). Here the user can obtain information about known risks and the current options for refurbishing the product.

11 Technical data

INFORMATION

- ▶ Much of the technical data below is given in mm. Please note that product settings – unless otherwise specified – cannot be adjusted in the mm range but only in increments of approx. **0.5 cm** or **1 cm**.
- ▶ Note that the values achieved during adjustment may deviate from the values specified below. The deviation can be **±10 mm** and **±2°**.

INFORMATION

- ▶ All measurements indicated below are values which have been theoretically determined.
- ▶ Note that not all adjustment possibilities can be used with all wheelchair versions. Furthermore, the adjustment combinations are limited by the compact frame geometry.
- ▶ Technical changes and tolerances are reserved by the manufacturer.

General information

Discovery	
Max. load	110 kg (242 lbs)
Max. load when using a leg support with continuous foot support for seating shell interface (steel)	50 kg (110 lbs)
Max. load when using a leg support for short lower leg lengths	90 kg (198 lbs)

Discovery	
Max. load when using a parallel seating shell interface (frame width 360 mm)	75 kg (165 lbs)
Max. load when using a parallel seating shell interface (frame width 400 – 450 mm)	100 kg (220 lbs)

Discovery	Minimum	Maximum
Gross weight (without user)	18 kg	34 kg ¹⁾
Weight of the heaviest removable component:		
• Leg support with continuous foot support for seating shell interface	---	2.5 kg (5.5 lbs)
• Arm support, height-adjustable	---	1.9 kg (4.2 lbs)
• 24" drive wheel	---	1.8 kg (4 lbs)
• Leg support, elevating with ratchet joint	---	1.8 kg (4 lbs)
• 22" drive wheel	---	1.7 kg (3.7 lbs)
• Leg support, segmented, aluminium	---	1.6 kg (3.5 lbs)
Overall length (with 12" drive wheels) ²⁾	750 mm (29.5")	800 mm (31.5")
Overall length (with 22" drive wheels) ²⁾	875 mm (34.4")	925 mm (35.4")
Overall length (with 24" drive wheels) ²⁾	900 mm (36.4")	950 mm (37.4")
Overall width (with 12" drive wheels)	550 mm (21.7")	690 mm (27.2")
Overall width (with 22"/24" drive wheels)	570 mm (22.4")	710 mm (28")
Length (folded)	no deviation from overall length	
Width (folded)	no deviation from overall width	
Height (folded)	530 mm (20.9")	740 mm (29.1")
Static stability, uphill ^{3), 4)}	---	10° (17.6 %)
Static stability, downhill ⁴⁾	---	12° (21.3 %)
Static stability, sideways ⁴⁾	---	10° (17.6 %)
Dynamic stability, uphill ⁴⁾	---	6° (10.5 %)
Seat bottom angle (seat tilt)	0°	35°
Effective seat depth	405 mm (16")	480 mm (19")
Effective seat width	360 mm (14.5")	500 mm (20")
Front seat height ⁵⁾	450 mm (17.7")	550 mm (21.6")
Back support angle	0°	30°
Back support height	440 mm (17.3") (standard)	620 mm (24.4") (extended)
Distance foot support to seat bottom ⁶⁾	130 mm (5.1")	350 mm (13.8")
Angle between leg support and seat bottom ⁷⁾	5°	85°
Distance arm support to seat bottom ⁶⁾	60 mm (2.4")	390 mm (15.4")
Distance front edge of arm support to front edge of wheelchair	140 mm (5.5")	145 mm (5.7")
Handrim diameter	490 mm (19.3")	540 mm (21.3")
Horizontal axle position	150 mm (5.9")	300 mm (11.8")
Minimum turning radius ⁸⁾	740 mm (29.2")	---
Adjustment range, push handles/push bars ⁹⁾	---	~ 200 mm (8")
Load capacity of storage bag (optional)	---	5 kg (11 lbs)

¹⁾ Encompasses the maximum installation of accessories, including tray

²⁾ Without seating unit and activated anti-tipper; varies depending on installed leg support

³⁾ 2 x anti-tipper mandatory with Care Chair version

⁴⁾ Depending on seat positioning

⁵⁾ At full tilt, with 12" drive wheels: 470 mm (18.5")

⁶⁾ Discovery with seat plate without seat cushion; other seating systems vary

⁷⁾ Depending on the type of leg support, maximum value with elevating leg support

⁸⁾ Discovery Standard with 360 mm frame width and 12" drive wheels; in accordance with ISO 7176-5

⁹⁾ Not with option of 600 mm back support height with deep back support bracket

Additional information

Discovery							
Tyre types	Pneumatic or tubeless PU tyres						
Front wheels	8"						
Rear wheels / drive wheels	12"	22"	24"		24"		
Wheelbase	480 mm (18.9")	480 mm (18.9")	505 mm (19.9")	530 mm (20.9")	480 mm (18.9")	505 mm (19.9")	530 mm (20.9")
Seat tilt ¹⁾	0° – 35°	0° – 22.5°	0° – 35°	0° – 35°	0° – 17.5°	0° – 20.5°	0° – 35°
Frame width	360 mm (14.5")	400 mm (16")	450 mm (18")	500 mm (20")			
Distance between arm supports							
without spacers	370 mm (14.6")	420 mm (16.5")	470 mm (18.5")	520 mm (20.5")			
with spacers	420 mm (16.5")	470 mm (18.5")	520 mm (20.5")	590 mm (23.2")			
Transport weights ²⁾							
Frame with 12" rear wheels	18 kg (39.7 lbs)	18.5 kg (40.8 lbs)	19.5 kg (43 lbs)	20 kg (44.1 lbs)			
Frame with 22"/24" drive wheels	26 kg (57 lbs)	26.5 kg (58.4 lbs)	27 kg (59.5 lbs)	27.5 kg (60.6 lbs)			
22" drive wheel (pair)	3.4 kg (7.5 lbs)						
24" drive wheel (pair)	3.6 kg (7.9 lbs)						

¹⁾ with standard installation of compression springs. The adjustment range can be limited to 15° with the custom fabrication version with 22"/24" drive wheels and lashing points.

²⁾ Discovery Standard without leg supports, arm supports and seating unit; the specified weights vary according to the selected options and model.

Environmental conditions

Discovery	
Ambient temperature	-10 °C to +40 °C (14 °F to 104 °F)
Storage temperature	-10 °C to +40 °C (14 °F to 104 °F)
Relative humidity	45 % – 85 %

Permissible tyre pressure (for pneumatic tyres)

INFORMATION

Note the safety instructions regarding air pressure and tyres.

Wheel	Wheel size	Tyre pressure ¹⁾
Caster wheel	8"	2.5 bar (250 kPa; 36 psi)
Drive wheel	12"	2.5 bar (250 kPa; 36 psi)
	22"	2.5 bar (450 kPa; 65 psi)
	24"	6 bar (600 kPa; 87 psi)

¹⁾ see also print on the tyre wall

12 Appendices

12.1 Required tools

The following tools are required for adjustments and maintenance work:

- Allen wrenches in sizes 4, 5, 6
- Ring and open-end wrenches in sizes 8, 10, 13, 19 and 24
- Phillips head screwdriver (size: 2)
- Screwdriver (blade width: 3 mm)
- Torque wrench (measurement range 5-50 Nm)

12.2 Torque values of the screw connections

Unless otherwise specified, screw connections are tightened with the following torque values:

- Thread diameter M4: 3 Nm
- Thread diameter M5: 5 Nm
- Thread diameter M6: 10 Nm
- Thread diameter M8: 25 Nm

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