



CE

Start Multi

EN Instructions for use 3

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1 Foreword

INFORMATION

Date of last update: 2023-10-06

- ▶ Please read this document carefully before using the product and observe the safety notices.
- ▶ Instruct the user in the safe use of the product.
- ▶ Please contact the manufacturer if you have questions about the product or in case of problems.
- ▶ Report each serious incident related to the product to the manufacturer and to the relevant authority in your country. This is particularly important when there is a decline in the health state.
- ▶ Please keep this document for your records.

INFORMATION

- ▶ New information regarding product safety and product recalls as well as the declaration of conformity can be obtained at ccc@ottobock.com or from the manufacturer's service department (visit www.ottobock.com for addresses).
- ▶ You can request this document as a PDF file at ccc@ottobock.com or from the manufacturer's service department. The PDF file can also be displayed in a larger size.

You have received a product that is very versatile for everyday use at home and outdoors.

In order to exclude injuries of any type, familiarise yourself with the handling, functions and intended use of the product before using it. These instructions for use provide you with the related necessary information.

Please note the following in particular:

- All users and/or their attendants must be trained by qualified personnel in the use of the product. In particular, users and/or attendants must be informed of the residual risks with the aid of the safety notices in these instructions for use.
- The product was adapted to the needs of the user. Subsequent changes may be made only by qualified personnel. We recommend checking the product settings **once per year** to ensure optimal treatment over the long term. Especially for users with a changing anatomy (for example body dimensions, weight), an adjustment at least **once every six months** is recommended.
- The product may differ from the variants shown. Not all options described in these instructions for use will be installed on the product.
- The manufacturer reserves the right to make technical changes to the model described in these instructions for use.

2 Product description

2.1 Function

The wheelchair is intended exclusively for transporting one person on the seat.
The wheelchair can be used on solid ground both indoors and outdoors.

2.2 Product overview

2.2.1 Variant with 12" drive wheels



1	Head support	9	Foot plate
2	Push handle	10	Knee lever wheel lock
3	Back support frame	11	Leg support
4	Side panel	12	Seat cushion
5	Drum brake	13	Pommel
6	Anti-tipper	14	Forearm support
7	Drive wheel	15	Back support pad
8	Caster wheel		

2.2.2 Variant with 24" drive wheels



1	Head support	9	Foot plate
2	Push handle	10	Knee lever wheel lock
3	Back support frame	11	Leg support
4	Side panel	12	Seat cushion
5	Drive wheel	13	Pommel
6	Drum brake	14	Forearm support
7	Anti-tipper	15	Back support pad
8	Caster wheel		

3 Intended use

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

3.1 Indications for use

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

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

The wheelchair may only be used with the options listed on the product order form.

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

Only one person may be transported with the product at any one time.

Use with other products is the responsibility of the user. The combinations tested by the manufacturer are listed at www.ottobock.com.

3.2 Indications

- Minor to pronounced or complete restrictions of mobility

3.3 Contraindications

3.3.1 Absolute Contraindications

- None known

3.3.2 Relative Contraindications




- Failure to meet physical or mental requirements

3.4 Qualification

Assembly and adjustment tasks may only be carried out by qualified personnel. Compliance with all manufacturer specifications and all applicable legal provisions is required. Please contact the manufacturer's service department for further information.

4 Safety

4.1 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.

4.2 General safety instructions

4.2.1 Safety notices regarding use

- ▶ Always practise using the product in the presence of an attendant. Attendants are persons who understand the instructions for use, assume responsibility for operating the product and provide support.
- ▶ Use the product in accordance with local legal regulations during its entire lifetime.
- ▶ Do not exceed the maximum load (see the nameplate and section "Technical data").
- ▶ Please note that certain accessories and add-on components will reduce the remaining load capacity.
- ▶ Attaching loads (e.g. backpacks) can adversely affect stability. Therefore, suspending additional loads on the wheelchair is not permitted.
- ▶ When persons with cognitive disabilities use the product, never leave them unattended. There is a risk of strangulation and suffocation due to components that can become loose (e.g. belts, small parts).
- ▶ Only lift the product by firmly mounted components (e.g. on the main frame).
- ▶ Do not modify the settings established by the qualified personnel. You may adjust only the settings described in the section "Use" in these instructions for use. All activities described in the section "Adjustments" may only be performed by qualified personnel.
- ▶ If any faults, defects or other hazards are detected, the product must be taken out of service immediately. This includes uncontrolled movements as well as unexpected or previously not noted sounds or odours that deviate significantly from the state of the product at the time of delivery. Contact the qualified personnel promptly.

- ▶ Activate the wheel lock each time before you get into or out of or transfer to or from the wheelchair.
- ▶ Never step on the foot plates when getting in and out.
- ▶ When getting into/out of the wheelchair, do not support yourself on the wheel lock.
- ▶ Prior to activities that require bending forward in the seat (e.g. getting in, tying shoes), maximise the stability of the product. In order to do so, push the product backwards until the caster wheels turn forward.
- ▶ The user must not lean too far out of the seat when reaching for objects.
- ▶ The product includes moveable components that can pinch and crush the user (e.g. seat tilt, back support angle adjustment, leg supports, wheel locks). Do not reach between the moveable components.
- ▶ Please note that diagnostic examinations and therapeutic treatment with medical devices may result in improper interactions between your product and the devices used. Examinations and treatments must be carried out exclusively under the prescribed conditions.
- ▶ Do not expose the product to any extreme temperatures (e.g. prolonged direct sunlight, sauna, close proximity to heating appliances, prolonged extreme cold).
- ▶ Note that, in extreme temperatures, hypothermia or burns may occur in case of unprotected contact with components.
- ▶ Check your skin for intactness where it is in contact with the product before and during use of the product.
- ▶ Note that excessive strain on the skin may result in skin damage or pressure points. Pay attention to diligent skin care and pressure redistribution. If skin damage occurs, stop using the product and consult qualified personnel.
- ▶ In case of damage, have the seat cushions, pads and covers replaced immediately.
- ▶ Note that dirt, salt and sand may damage the wheelchair components (e.g. bearings, joints). Always clean them promptly and observe the maintenance and care instructions.

4.2.2 Safety notices for driving

General:

- Practise on level, open ground first.
- Learn with the support of an assistant how the product reacts to changes in centre of gravity, e.g. downward or upward slopes, inclines or when overcoming obstacles.
- Always step into the product from the side if possible.
- Do not reach between the drive wheel and wheel lock or drive wheel and side panel when driving the wheelchair.
- Do not reach into the spokes of the rotating drive wheels.
- Note that heat generated when braking with hand Rims can cause burns due to insufficient protection of hands. Wear wheelchair gloves when travelling at high speeds.
- Adapt your speed to the conditions and reduce it accordingly in danger areas, on downgrades and when crossing obstacles. Typical hazards and obstacles are:
 - narrow paths along waterways, slopes, precipices (e.g. quay walls, embankments etc.),
 - confined spaces or areas,
 - steps, curbs
 - steep downgrades (e.g. in the mountains, towards roads),
 - unpaved terrain (construction sites, crossings, level crossings),
 - snow-covered paths.
- Only manoeuvre backwards over short distances and on even surfaces.
- Wear light-coloured clothing or clothing with reflectors when driving in the dark. Install active lighting on your product. Ensure that the reflectors on the product are clearly visible.
- When using public transit, always observe the currently applicable legal requirements and the safety notices of the public transit operator.
- Use the permanently installed seats in the vehicle. If you need to use your wheelchair as a seat, please use the designated wheelchair spaces and safety securing equipment provided. Always ensure that you are held in place securely.
- The wheelchairs in this series comply with the minimum technical requirements for wheelchairs transportable by train. Please note that it is possible that not every individual wheelchair will meet the minimum requirements due to the variation in designs (please see see page 53 for further details).

Obstacles (steps, curbs, tracks):

- Use available technical equipment (e.g. ramps, lifts) to negotiate stairs and obstacles. If such facilities are not available, ask attendants to help you.
- Raise the front wheels before crossing obstacles. If you are inexperienced, use an anti-tipper and/or have an assistant or attendant help or secure you.
- Approach obstacles at right angles and drive over them at one go.
- Do not “jump” the chair down from higher surfaces.
- Do not lean out of the wheelchair while crossing obstacles.
- Do not use escalators.
- Negotiate level crossings so the caster wheels cannot get caught in the gap between the rail and the road surface.

Inclines and downgrades:

- Cross obstacles or negotiate inclines or downgrades only if they are within the permitted maximum limits. For more information, see the section “Technical data” (see page 51).
- Do not cross over any obstacles while driving on inclines and downgrades.
- Before negotiating slopes or crossing obstacles, the seat tilt must be lowered (horizontal position of the seat). It is advisable to incline the seat tilt slightly to the rear when driving downhill.
- Avoid getting into or out of the product on inclines and downgrades.
- Never park the product on slopes with the user in the seat.
- Do not drive downhill backwards. Briefly manoeuvring on ramps with supervision is permitted (for example, when exiting a vehicle for transporting persons with reduced mobility).

4.2.3 Safety notices for qualified personnel

- ▶ When carrying out work, use only tools that are suitable for the conditions at the workplace and for which safety and the protection of health are assured when used as intended. Observe the specifications in the section “Required tools”.
- ▶ The gas compression springs must be fully extended when any work is carried out (seat tilt released, seat in the 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.

4.3 Side effects

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

- Neck, muscle and joint pain
- Circulatory disorders, pressure sores








Contact a doctor or therapist in case of problems.

4.4 Further information

The serial number required for enquiries and ordering spare parts and accessories is found on the nameplate. For explanations of the nameplate, see the section “Nameplate” (see page 11).

4.5 Nameplate and warning labels**4.5.1 Nameplate**

The nameplates are found on the frame.

Label	Meaning
	A Name of the product
	B CE marking
	C Maximum load (see section “Technical data”)
	D Manufacturer information/address
	E Serial number ¹⁾
	F Manufacturing date ²⁾
	G Symbol for medical device
	H WARNING! Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).

Label	Meaning
	I Manufacturer's reference number for the product variant
	J Serial number (PI) ^{3),1)}
	K Global Trade Item Number (DI) ⁴⁾

1) YYYY = year of manufacture; WW = week of manufacture; PP = production site; XXXX = sequential production number

2) YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

3) UDI-PI to GS1 standard; UDI = Unique Device Identifier, PI = Production Identifier

4) UDI-DI to GS1 standard; UDI = Unique Device Identifier, DI = Device Identifier

4.5.2 Warning labels

Label	Meaning
	Fixation point to attach the product in vehicles for transporting persons with reduced mobility. The product is approved as a seat in a vehicle for transporting persons with reduced mobility only if this symbol is stuck onto the fixation points of the product.

5 Delivery

5.1 Scope of delivery

The product is generally delivered fully assembled and with the drive wheels removed (variant with 24" drive wheels). The wheels are already preassembled on the variant with 12" drive wheels.

The scope of delivery includes:

- Preassembled wheelchair
- 2 drive wheels
- Instructions for use

5.2 Standard equipment

Standard equipment includes:

- Seat frame: seat tilt from -5° to 30°
- Back support: back support inclination from 0° to 50°, with specified back support angle from 90° to 140°
- Telescoping push handles
- Drive wheels: 12" or 24" PU with drum brakes
- Caster wheels: 8" PU in caster forks with threaded axle
- Seat cushion
- Back support pad
- Elevating leg supports
- Pommel
- Head support
- Lap belt
- Anti-tipper 2 x

5.3 Storage

5.3.1 Storage during daily use

The product should always be stored so it is protected against external influences.

5.3.2 Storage during extended disuse

The product must be stored in a dry place. Specific information for extended storage: see page 51.

It is not necessary to disassemble the product.

Maintain sufficient clearance from sources of heat. If the product is parked for an extended period of time or the tyres overheat (e.g. in the vicinity of radiators or in case of exposure to strong sunlight behind glass), the tyres may become permanently deformed.

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

6 Preparing the product for use

6.1 Assembly

WARNING

Failure to verify readiness for use before putting into service

Falling, tipping over, serious injuries due to incorrect adjustment or installation

- ▶ Check the existing settings of the product before you start using it for the first time.
- ▶ After every assembly of drive wheels with a quick-release axle, check that they are properly mounted. The quick-release axles must be firmly locked in the wheel attachment device.
- ▶ Check the centre of gravity of the sitting position. This must be adjusted in so that smooth adjustment is possible when the release lever of the seat tilt is activated. Contact the qualified personnel if necessary.
 - Centre of gravity too far forward: The user could tip forward when the seat is tilted.
 - Centre of gravity too far back: The user could tip backwards when the seat is tilted.
- ▶ Pay particular attention to the stability against tipping, free running of the wheels and correct function of the brakes/wheel locks.
- ▶ Ensure that the knee lever wheel lock is properly adjusted (**approx. 5 mm** distance to the tyre, technical changes reserved).

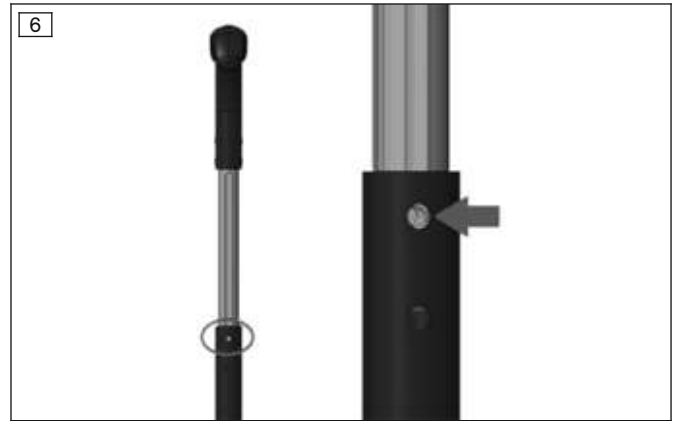
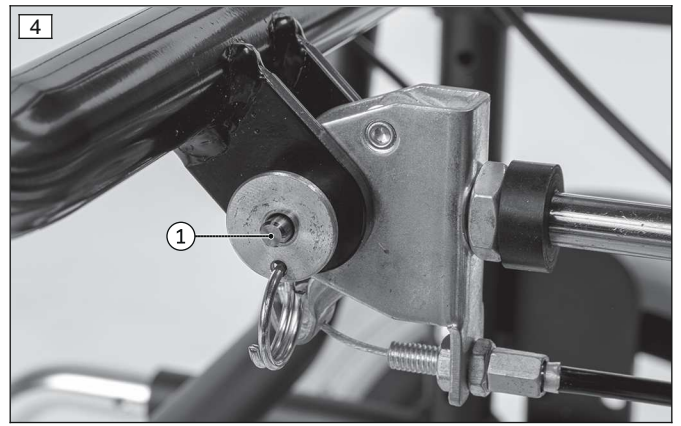
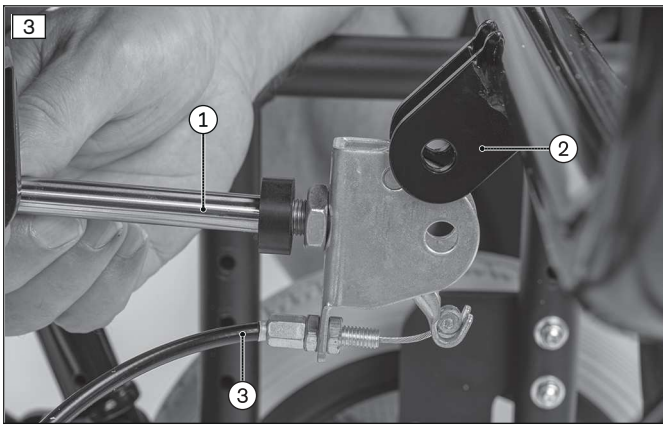
WARNING

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 accessories and add-on components will reduce the remaining load capacity.

- 1) If present: Remove the transport locks and packaging material.
INFORMATION: Save the packaging in case transportation is subsequently required.
- 2) Fold the back support to the vertical position.
- 3) Insert the gas compression spring of the back support angle adjustment (see fig. 3, item 1) into the adapter on the back support (see fig. 3, item 2). Make sure that the Bowden cable is aligned down (see fig. 3, item 3). Secure the gas compression spring with the locking bolt (see fig. 4, item 1).
- 4) Slide the push handles into the back support tubes (see fig. 5). Guide the clamping lever through the upper bore in the back support tube and screw it into the clamping piece of the push handle (see fig. 6). Attach the push handles with the clamping levers and washers (see fig. 7).
INFORMATION: Adjust both push handles to the same height (see fig. 8).
- 5) Insert the drive wheels into the wheel attachment device (see page 31). The quick-release axles must not be removable after the press button is released.
- 6) Attach the side panels (see page 38).
- 7) Slide the head support into the holder on the back plate and attach it with the clamping lever (see page 39, see fig. 71, item 1).
- 8) Attach the holder of the pommel underneath the seat plate (see page 27; see fig. 40, item 1). Attach the pommel to the holder (see page 27; see fig. 39, item 1).
- 9) Fit the seat cushion to the hook-and-loop closure and secure it against sliding (see page 36).
- 10) Press the back support pad onto the back support with the double sided hook-and-loop strips at the desired height and secure it against sliding (see page 34).
- 11) Slide the leg supports into the holders on the front frame tube (see page 36, see fig. 65).
- 12) Fold down the foot plates (see page 36, see fig. 62).
- 13) Verify the stability of the assembled product.



7 Adjustments by qualified personnel

7.1 Prerequisites

WARNING

Faulty settings

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

- ▶ Adjustment and installation work may be carried out only by qualified personnel.
- ▶ Only the adjustments described in these instructions for use may be carried out.
- ▶ Settings may be changed only 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 any questions, contact the manufacturer's service department (see www.ottobock.com for addresses).
- ▶ 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

Unsecured screw connections

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

- ▶ Always firmly re-tighten the mounting screws and nuts after changing settings. Observe the specified torques in doing so.
- ▶ Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite 241).
- ▶ Always replace self-locking screws and nuts with new self-locking screws and nuts after disassembly.

Fine-tuning and adjustments should always be carried out in the presence of the user. The user should be sitting upright in the wheelchair during the fine-tuning process.

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 53).

7.2 Adjusting the drive wheels

WARNING

Lack of fine adjustment of the drive wheels

Tipping over, falling of the user due to incorrect adjustment

- ▶ Check the standard adjustments of the wheelchair for stability against tipping and function of the drive wheels. Avoid any extreme settings.

WARNING

Incorrectly adjusted wheelbase

Tipping over, falling of the user due to unstable settings

- ▶ Please note that with the drive wheel in a more forward mounting position and with an unfavourable body position, the user may tip backwards even on level ground.
- ▶ Use an anti-tipper for inexperienced users and with extreme settings of the drive wheel.
- ▶ Be sure to position the drive wheels towards the rear for transfemoral amputees. This improves the stability of the wheelchair.

INFORMATION

Changing the drive wheel position can also change the angle between the caster wheel journal and the ground. However, this must always be **approx. 90°** and thus readjusted accordingly. The knee lever wheel lock also has to be readjusted.

7.2.1 Setting the drive wheels horizontally

The horizontal position of the drive wheels can be changed by horizontally shifting the drive wheel adapter. Changing the drive wheel position has the following effects:

Position of drive wheel	Effects
Move backwards (passive setting)	<ul style="list-style-type: none"> • Larger wheelbase • Larger turning circle • Greater stability of the wheelchair • Wheelchair is harder to tip backwards when crossing obstacles • Position recommended for inexperienced users
Move forwards (active setting)	<ul style="list-style-type: none"> • Smaller wheelbase • Less load on caster wheels = greater manoeuvrability • Less stability of the wheelchair • Wheelchair is easier to tip backwards when crossing obstacles <p>INFORMATION: An anti-tipper should be installed if necessary.</p> <ul style="list-style-type: none"> • Setting recommended only for experienced users

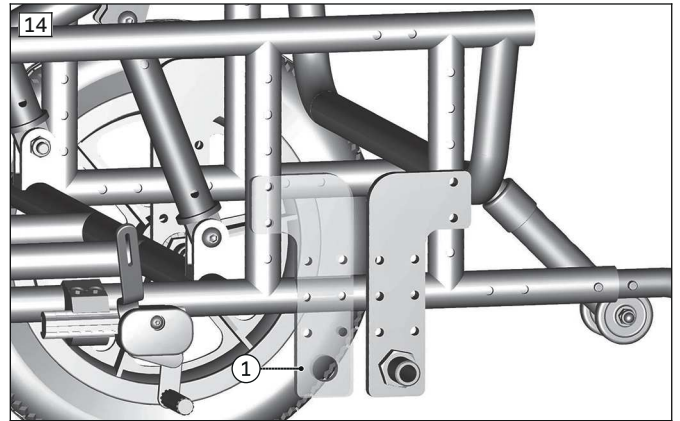
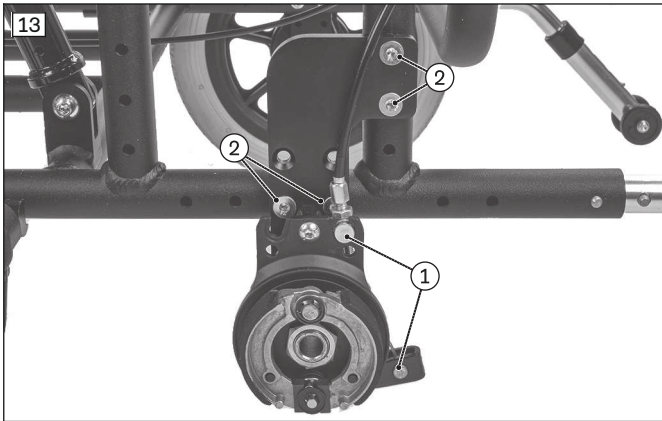
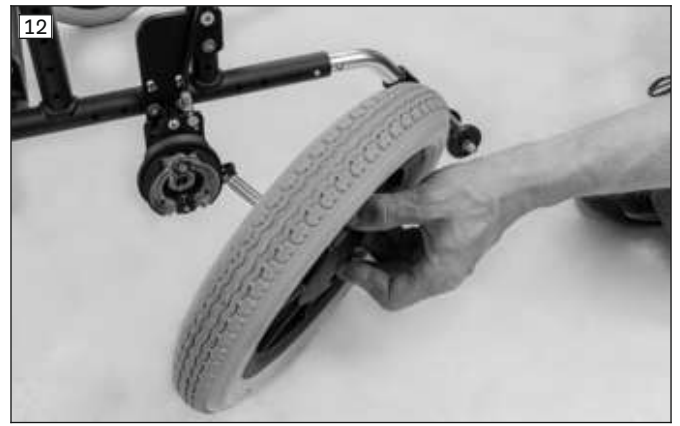
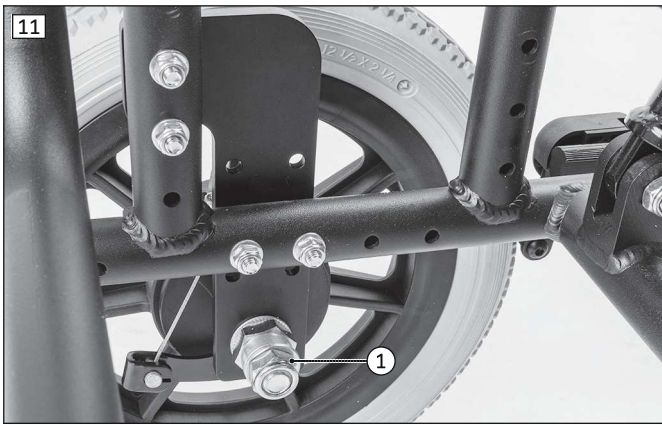
12" drive wheels

- 1) Remove the cover cap on the hub of the drive wheel (see fig. 9, item 1).
- 2) Loosen the wheel axle screw connection (see fig. 10, item 1; see fig. 11, item 1).
- 3) Remove the drive wheel (see fig. 12).
- 4) Unhook the wheel lock Bowden cable from the drive wheel adapter (see fig. 13, item 1).
- 5) Remove the hexagon socket screws on the drive wheel adapter (see fig. 13, item 2).
- 6) Replace the left and right drive wheel adapters and reposition them (see fig. 14, item 1).
- 7) Tighten the hexagon socket screws to **8 Nm**.

INFORMATION: Once changed, the left and right drive wheel adapters must both have the same horizontal position on the frame.

- 8) Hook the wheel lock Bowden cable onto the drive wheel adapter.
- 9) Attach the drive wheel.
- 10) Tighten the nut on the wheel axle (see fig. 11, item 1).
- 11) Push the cover cap onto the hub of the drive wheel.
- 12) After adjusting the position of the drive wheels, check the following settings:
 - Height and alignment of the caster attachment device (see page 19)
 - Adjustment of the brakes (see page 20)



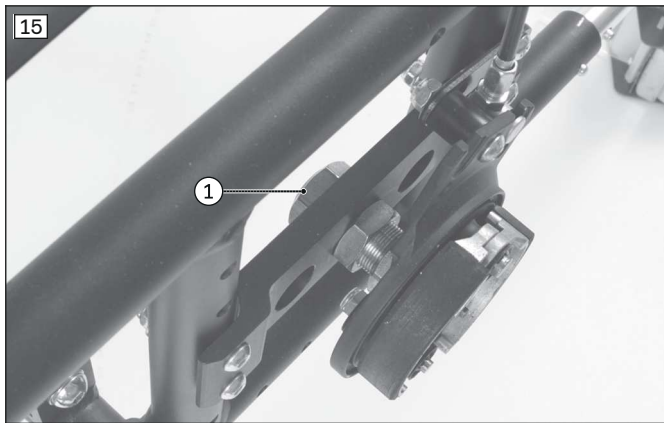


24" drive wheels

The horizontal position of the rear wheels can be adjusted by moving the quick-release axle mountings horizontally in the drive wheel adapter.

The drive wheel can be adjusted to 3 depth positions.

- 1) Remove the drive wheel (see page 31).
- 2) Remove the hexagon socket screw of the torque support of the drum brake (see fig. 17, item 2).
- 3) Loosen the hexagon nut on the quick-release axle mounting and remove the quick-release axle mounting (see fig. 15, item 1).
- 4) Reattach the quick-release axle mounting in the desired position and tighten the hexagon nut to **50 Nm**.
INFORMATION: After changing, the left and right quick-release axle mountings must both have the same horizontal position on the frame.
- 5) Install the hexagon socket screw of the torque support of the drum brake on the frame and tighten it to **8 Nm**.
- 6) Attach the drive wheel.
 - The drive wheels must not be removable after the press button on the quick-release axle is pressed.
- 7) After adjusting the position of the drive wheels, check the following settings:
 - Height and alignment of the caster attachment device (see page 19)
 - Adjustment of the brakes (see page 20)



7.2.2 Adjusting vertical the position of the drive wheels

The frame must be set to the same height at the front and back to ensure tipping resistance.

The vertical position of the drive wheels can be changed by vertically moving the drive wheel adapter in the frame. Changing the drive wheel position has the following effects:

Drive wheel position	Effects
Move upwards	<ul style="list-style-type: none"> • The higher the drive wheel position, the more the seat surface is tilted to the rear • Wheelchair is easier to tip backwards when crossing obstacles • The change in the centre of gravity results in a lower, more stable seat position in the wheelchair • The seat height can be further adjusted in combination with a height adjustment of the caster wheels.
Move downwards	<ul style="list-style-type: none"> • The lower the drive wheel position, the less the seat surface is tilted to the rear • Wheelchair is harder to tip backwards when crossing obstacles • The seat height can be further adjusted in combination with a height adjustment of the caster wheels.

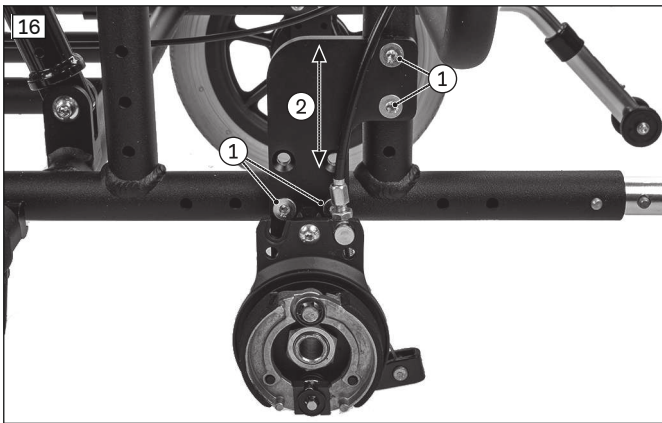
12" drive wheels

The drive wheel can be adjusted to 3 height positions.

- 1) Remove the drive wheels (see page 16).
- 2) Remove the hexagon socket screws on the drive wheel adapter (see fig. 16, item 1).
- 3) Move the drive wheel adapter to the desired position (see fig. 16, item 2).
- 4) Tighten the hexagon socket screws to **8 Nm**.

INFORMATION: Once changed, the left and right drive wheel adapters must both have the same vertical position in the frame.

- 5) Mount the drive wheels.
- 6) After adjusting the position of the drive wheels, check the following settings:
 - Height and alignment of the caster attachment device (see page 19)
 - Adjustment of the brakes (see page 20)



24" drive wheels

The drive wheel can be adjusted to 5 height positions.

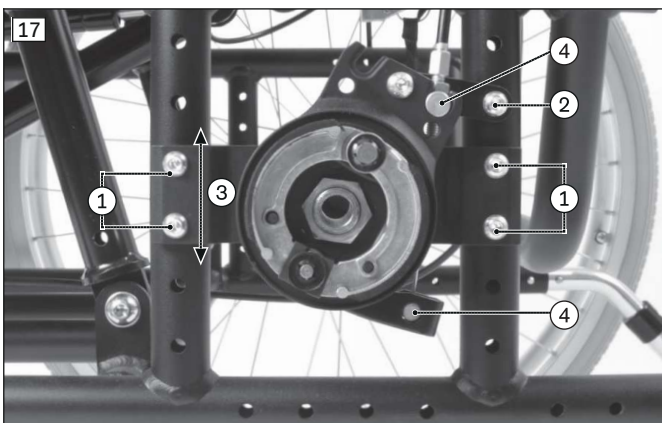
- 1) Remove the drive wheels (see page 31).
- 2) Remove the hexagon socket screws on the drive wheel adapter (see fig. 17, item 1).
- 3) Remove the hexagon socket screw of the torque support of the drum brake (see fig. 17, item 2).
- 4) Move the drive wheel adapter to the desired position (see fig. 17, item 3).

INFORMATION: Depending on the position of the drive wheel adapter, the hexagon socket screw of the drum brake can be installed on the side, upper or lower frame tubes (see fig. 17, item 2).

- 5) If necessary, unhook and reposition the wheel lock Bowden cable (see fig. 17, item 4).
- 6) Tighten the hexagon socket screws to **8 Nm**.

INFORMATION: Once changed, the left and right drive wheel adapters must both have the same vertical position in the frame.

- 7) After adjusting the position of the drive wheels, check the following settings:
 - Height and alignment of the caster attachment device (see page 19)
 - Adjustment of the brakes (see page 20)



7.2.3 Adjusting the quick-release axle

Adjust the quick-release axle so the wheel is correctly engaged, without play on the axle. It must also be possible to install the drive wheels on the opposite side and lock them securely.

7.2.4 Adjusting the handrims

With this wheelchair type, the handrims cannot be adjusted.

7.3 Adjusting the caster wheels

7.3.1 Changing the installation position of the caster wheels

The front seat height is adjusted using the row of holes in the caster fork.

- 1) Remove the screw on the caster fork (see fig. 18, item 1).
- 2) Remove the screw (see fig. 19, item 1), the washer (see fig. 19, item 2) and the nut (see fig. 19, item 3).
- 3) Remove the caster wheel (see fig. 19, item 4).

- 4) Insert the screw into the desired hole in the fork.
- 5) Install the caster wheel.
- 6) Screw on the nut with the washer and tighten the screw to **8 Nm**.
INFORMATION: After adjustment, the left and right caster wheels must have the same vertical position in the caster fork.
- 7) After changing the front seat height, always check the caster wheel journal angle and adjust it if necessary (see page 20).



7.3.2 Adjusting the caster journal angle

The threaded axle in the caster wheel adapter should be perpendicular to the ground to ensure optimum rolling behaviour of the wheelchair. The caster wheel adapter permits a continuous adjustment of this angle.

- 1) Loosen the hexagon socket screws between the caster journal bearing and the frame (see fig. 20, item 1).
- 2) Position the continuously variable caster journal bearing perpendicular to the ground.
- 3) Tighten the hexagon socket screws to **8 Nm**.
 → The caster wheel axle on each of the two caster wheel adapters must be positioned vertically.



7.4 Adjusting the wheel locks

⚠ WARNING

Failure to verify brake function

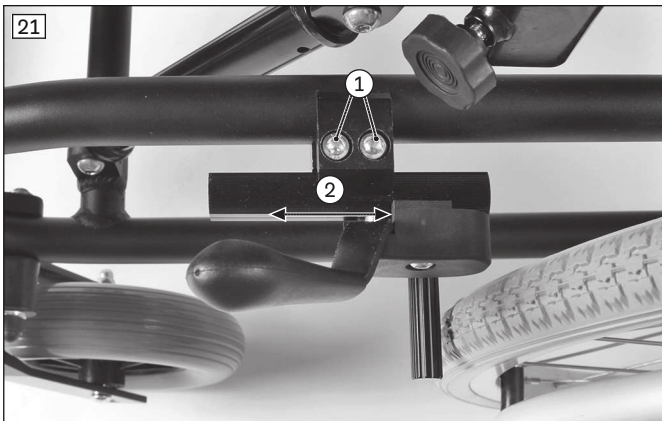
Accident, user falls due to incorrect adjustment and improperly inflated tyres

- ▶ Check the correct distance between the wheel lock bolt and tyre (see the following section for details).
- ▶ Check the correct position of the wheel lock bolt relative to the tyre. The wheel lock bolt must cover the full width of the tyre when braking but must not protrude, in order to prevent finger injuries.
- ▶ 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**.
- ▶ Only use original drive wheels with a verified maximum radial out-of-round of **1 mm**.

This adjustment must be made for fine adjustment of the wheel lock.

7.4.1 Adjusting the knee lever wheel locks

- 1) Loosen the hexagon socket screws on the tube clamp (see fig. 21, item 1).
- 2) Adjust the knee lever wheel lock by sliding it (see fig. 21, item 2). When the wheel lock is disengaged, the clear distance between the tyre and wheel lock bolt must not exceed **5 mm** (see fig. 22).
 - The distance between the wheel lock bolt and the drive wheel may be **1 – 5 mm** when the wheel lock is not engaged.
 - It must be possible to operate the brake evenly and easily on both sides.
 - The wheel lock bolt must lock the drive wheel securely when stationary.
- 3) Alternately tighten the hexagon socket screws to **15 Nm**.
 - After adjustment, the left and right knee lever wheel locks must both have the same braking force.



7.4.2 Adjusting the braking force of the drum brake

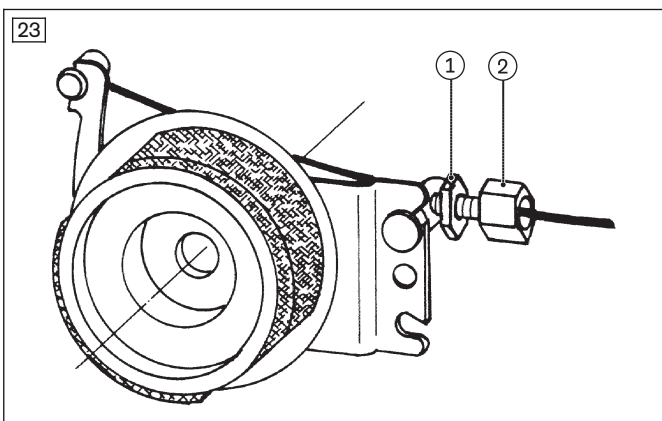
INFORMATION

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. 23, item 2).

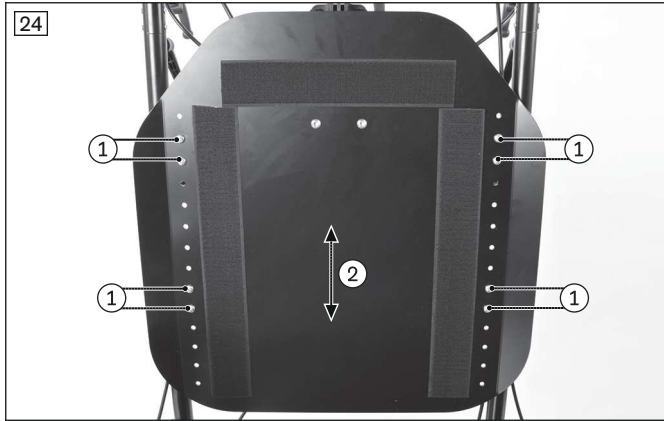
- **Increase the braking force:** Back off the adjusting screw.
 - **Reduce the braking force:** Screw in the adjustment screw.
- 1) Loosen the counter nut (see fig. 23, item 1) and back off the adjustment screw until a scraping noise can be heard when the rear wheel is rotated.
 - 2) Screw in the adjustment screw (see fig. 23, item 2) until the scraping noise at the rear wheel disappears and the wheel runs freely.
 - 3) Tighten the counter nut (see fig. 23, item 1) until the adjustment screw is fixed.
- The braking force of both rear wheels must be adjusted equally.



7.5 Adjusting the back support

7.5.1 Adjusting the back support height

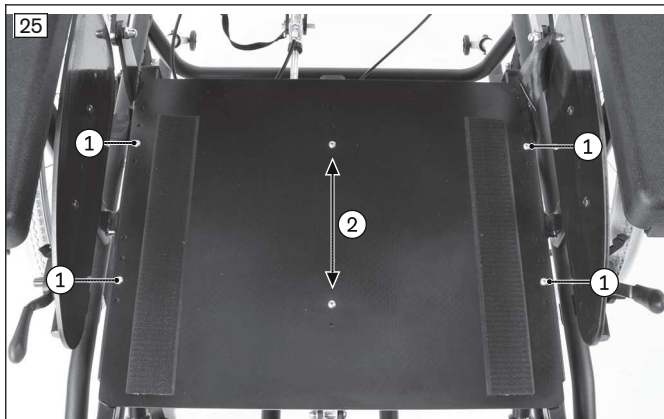
- 1) Remove the back support pad (see page 34).
- 2) Remove the hexagon socket screws on the back plate (see fig. 24, item 1).
- 3) Move the back plate to the desired height (see fig. 24, item 2).
- 4) Attach the back plate. Tighten the hexagon socket screws to **6 Nm**.
- 5) Press the back support pad onto the back plate and secure it against sliding.



7.6 Adjusting the seat

7.6.1 Adjusting the seat depth

- 1) Remove the seat cushion (see page 36).
- 2) Remove the hexagon socket screws on the seat plate (see fig. 25, item 1).
- 3) Move the seat plate to the desired depth (see fig. 25, item 2).
- 4) Attach the seat plate. Tighten the hexagon socket screws to **6 Nm**.
- 5) Adjust the depth of the leg supports (see page 23).
- 6) Fit the seat cushion.



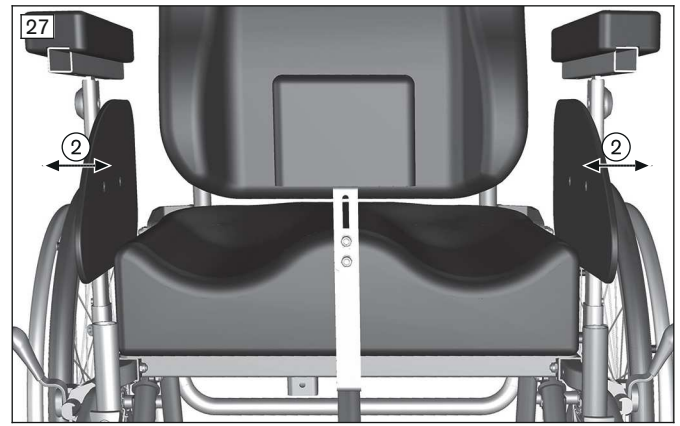
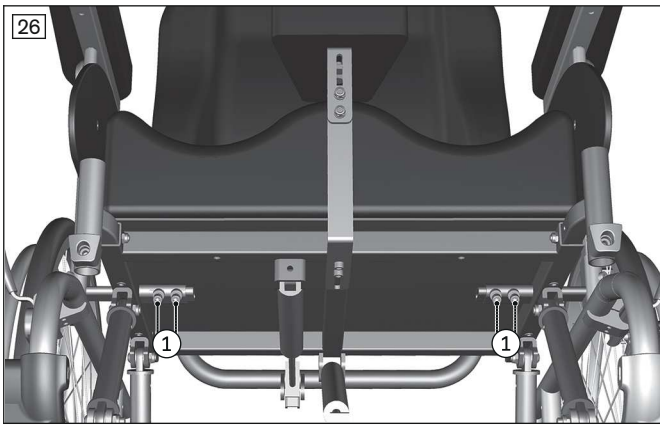
7.6.2 Adjusting the seat width

The seat width is adjusted via the distance between the side panels.

The delivery condition of the seat width for size S = 390 mm, M = 440 mm, L = 490 mm. The seat width can be additionally increased by 60 mm in any size.

Adjusting the distance of the side panels

- 1) Remove the leg supports (see page 36).
- 2) Loosen the hexagon socket screws underneath the side panel attachment device on the seat frame (see fig. 26, item 1).
- 3) Depending on the desired seat width, slide the side panels inwards or outwards (see fig. 27, item 2).
- 4) Tighten the hexagon socket screws on the side panel mounting to **6 Nm**.
- 5) Install the leg supports.



7.7 Adjusting the leg supports

⚠ 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 distance between the footplates and the sitting surface influences sitting stability. The height adjustment acts on the pelvis and ischial bones.

7.7.1 Adjusting the depth of the leg supports

- 1) Remove the leg supports (see page 36).
- 2) Remove the hexagon socket screws on both sides between the leg support holder and the seat bar (see fig. 28, item 1).
- 3) Slide the leg support holders to the desired depth (see fig. 28, item 2). Ensure that the depth setting is the same.
- 4) Tighten the hexagon socket screws to **6 Nm**.
- 5) Install the leg supports.



7.7.2 Adjusting the depth of the foot plate

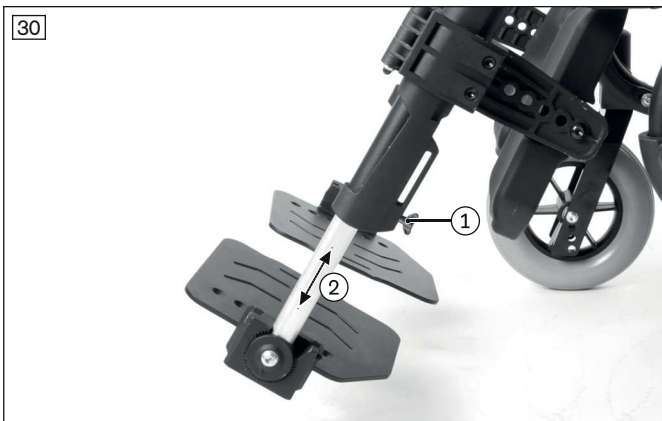
- 1) Loosen the hexagon socket screws on the foot plate (see fig. 29, item 1).
- 2) Slide the foot plate to the desired depth.
- 3) Tighten the hexagon socket screws to **6 Nm**.



7.7.3 Adjusting the lower leg length

The required leg support height depends on the lower leg length of the user and the thickness of the seat cushion.

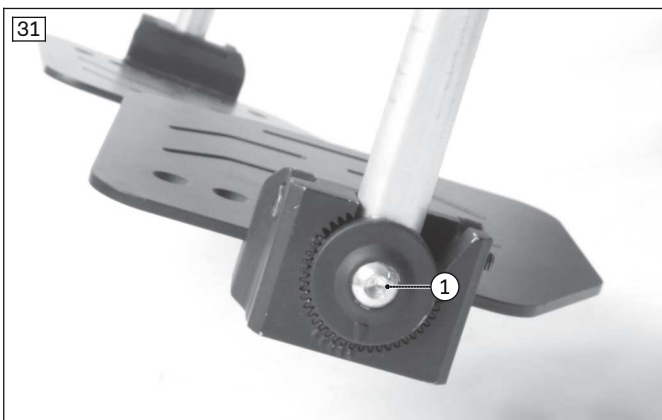
- 1) Loosen the thumb screw on the leg support holder (see fig. 30, item 1).
- 2) Adjust the lower leg length as needed (see fig. 30, item 2). Ensure that the foot plate bar is inserted at least **40 mm** into the leg support holder.
- 3) Tighten the thumb screw.



7.7.4 Adjusting the support angle

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

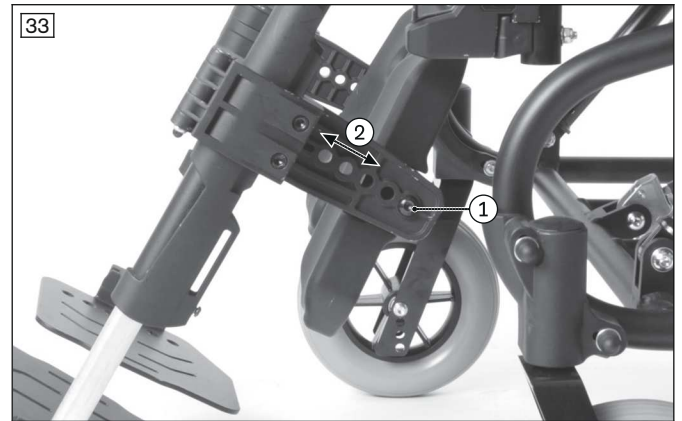
- 1) Loosen the hexagon socket screw on the foot plate suspension (see fig. 31, item 1).
- 2) Turn the foot plate to the desired angle.
- 3) Tighten the hexagon socket screw to **6 Nm**.



7.7.5 Adjusting the posterior lower leg pad

The calf pads are adjustable in height and depth.

- 1) **Height adjustment:** Loosen the hexagon socket screws on the tube clamp (see fig. 32, item 1). Slide the calf pad to the desired height (see fig. 32, item 2). Tighten the hexagon socket screws.
- 2) **Depth adjustment:** Loosen and remove the hexagon socket screw on the calf pad (see fig. 33, item 1). Move the calf pad to the desired position (see fig. 33, item 2). Tighten the hexagon socket screw.

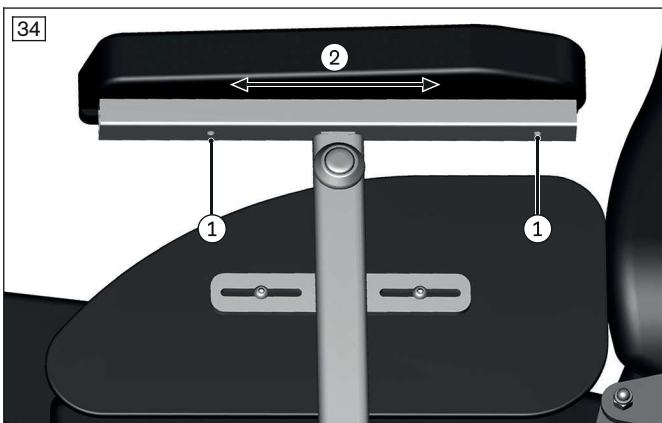


7.8 Adjusting the side panels

7.8.1 Adjusting the depth of the forearm supports

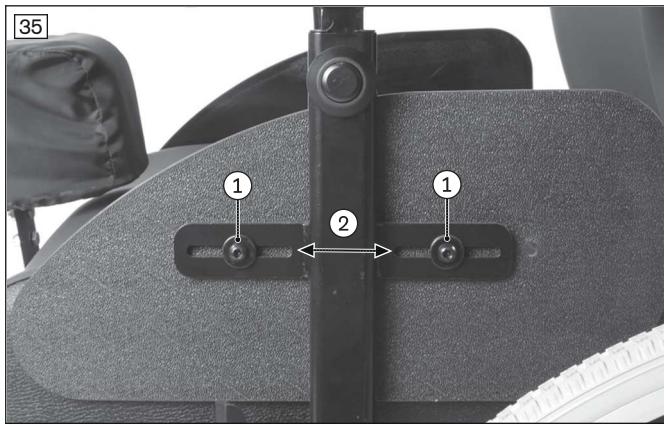
The depth of the forearm support can be adjusted to 2 positions.

- 1) Remove the hexagon socket screws underneath the forearm support (see fig. 34, item 1).
- 2) Adjust the depth of the forearm support (see fig. 34, item 2).
- 3) Tighten the hexagon socket screws.



7.8.2 Adjusting the clothing guard

- 1) Loosen the hexagon socket screws on the clothing guard (see fig. 35, item 1).
- 2) Adjust the depth of the clothing guard (see fig. 35, item 2).
- 3) Tighten the hexagon socket screws.



7.9 Installing and adjusting the anti-tipper

⚠ WARNING

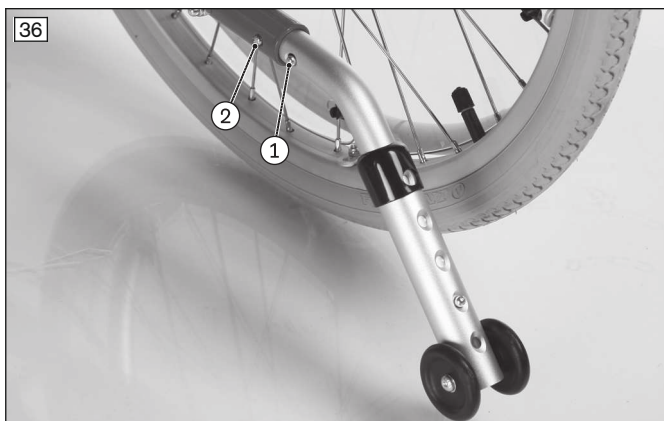
Incorrect installation of the anti-tipper/missing anti-tipper

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.

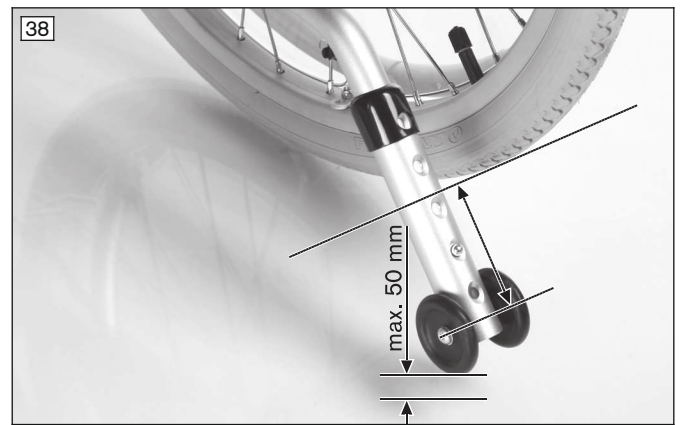
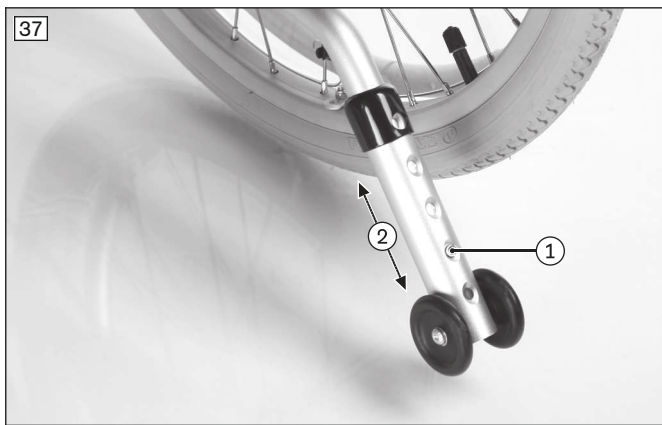
7.9.1 Installing the anti-tipper

- 1) Press in the rear press button on the upper tube section of the anti-tipper (see fig. 36, item 1).
- 2) Slide the anti-tipper into the frame tube until the tripod spring snaps into place automatically (see fig. 36, item 2).



7.9.2 Adjusting the anti-tipper

- 1) Depress the spring button on the lower tube section of the anti-tipper (see fig. 37, item 1).
- 2) Adjust the length of the anti-tipper (see fig. 37, item 2):
 - The distance between the anti-tipper rollers and the ground must be **50 mm** max. (see fig. 38).
 - As a minimum, the anti-tipper rollers must project beyond the largest diameter of the drive wheel (see fig. 38).
- 3) Allow the spring button to engage.



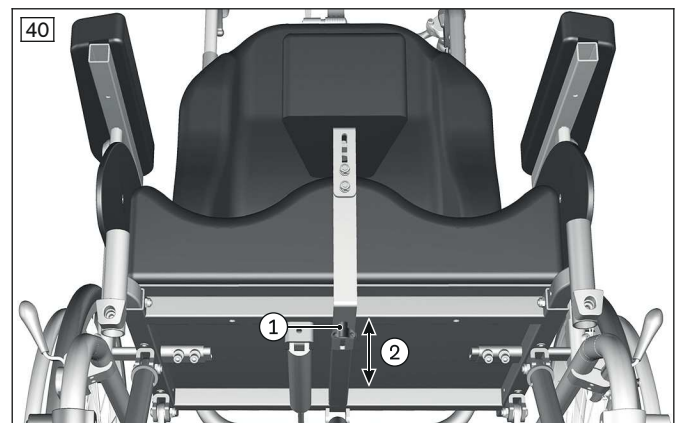
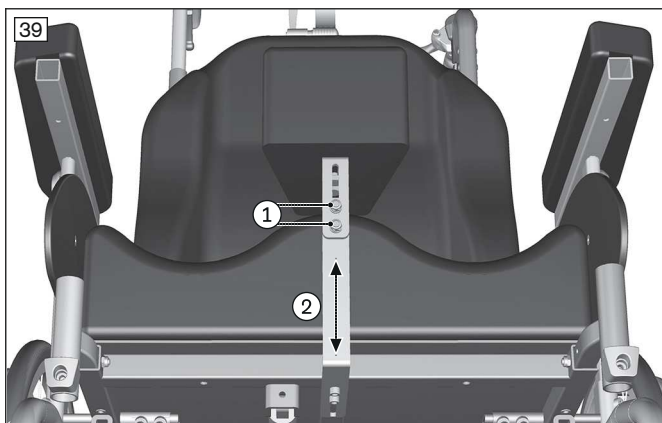
7.10 Adjusting the pommel

Adjusting the height of the pommel

- 1) Loosen the hexagon socket screws on the holder of the pommel (see fig. 39, item 1).
- 2) Slide the pommel to the desired height (see fig. 39, item 2).
- 3) Alternately tighten the hexagon socket screws.

Adjusting the depth of the pommel

- 1) Loosen the thumb screw on the holder of the pommel (see fig. 40, item 1).
- 2) Slide the pommel to the desired depth (see fig. 40, item 2).
- 3) Tighten the thumb screw.



7.11 Installing and adjusting the lap belt

⚠ CAUTION

Incorrect adjustment procedure

Injuries, malpositions, user discomfort due to adjustment errors

- ▶ The belt system may be installed and adjusted only by qualified personnel in accordance with the mounting specifications.
- ▶ The qualified personnel is responsible for the individual positioning and fitting of the belt system. This also applies to belt systems installed in the factory.
- ▶ Adjusting the belt system too tightly may lead to unnecessary pain or user discomfort.
- ▶ 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 move against hard parts of clothing (e.g. buttons).

⚠ CAUTION**Lack of instruction**

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

- ▶ 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/care staff knows how to quickly loosen and open the product to avoid delays in case of emergency.

Installing the lap belt

- 1) Attach the lap belt on the seat frame (see fig. 41, item 1). Use the respective hexagon socket screws, washers and self-locking hexagon nuts to do so (see fig. 42).
- 2) On both sides, tighten the hexagon socket screws.

Adjusting the lap belt

- 1) Prior to adjustment, position the user correctly in the seat.
- 2) Open the strap at the closure.
- 3) Place the belt around the user and fasten it.
- 4) Pull the loose ends of each adjustment strap through the glide buckle until the correct length is reached.

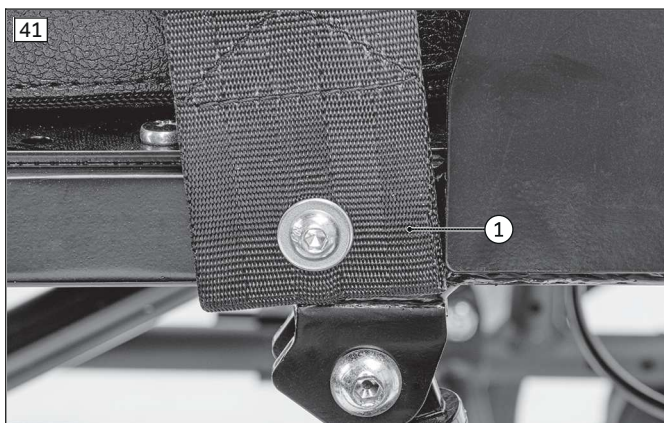
INFORMATION: Both belt halves should be adjusted evenly so that the closure stays centred in the middle. The belt should be tight enough so the pelvis is sufficiently stabilised or positioned, but not so tight as to be uncomfortable. The adjustment angle between the belt and seat frame should be about 60°. Adjust the belt so that no loose ends can hang over the product.

Possible adjustment errors

- The belt is positioned above the user's pelvis in the area of the soft tissue of the abdomen.
- The user is not sitting upright in the seat.

INFORMATION: This does not apply if the user is unable to assume a 90° sitting position.

- If the harness is put on too loosely, the user can shift/slide out to the front.
- During assembly/adjustment, the harness is routed over parts of the seating system (e.g. over forearm supports on the seat). This causes the harness to lose its positioning and retaining function.

**8 Delivery****8.1 Final inspection**

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

- Are the drive wheels correctly positioned?
- Do the wheels turn easily?
- Do the quick-release axles rotate freely and lock securely?
- Are the leg supports/side panels/forearm supports adjusted correctly?
- Can the back angle adjustment be operated smoothly and securely locked?
- Can the seat tilt be operated smoothly and securely locked?
- Only after adjustment: Have the brakes (wheel locks) been adjusted correctly?

- Only after adjustments: Has the respective caster journal angle been adjusted vertically?
- Only after adjustments: Has the anti-tipper been adjusted correctly?
- Are all screws firmly tightened and all hook-and-loop fasteners firmly fastened?

8.2 Transport to the customer

NOTICE

Use of unsuitable packaging

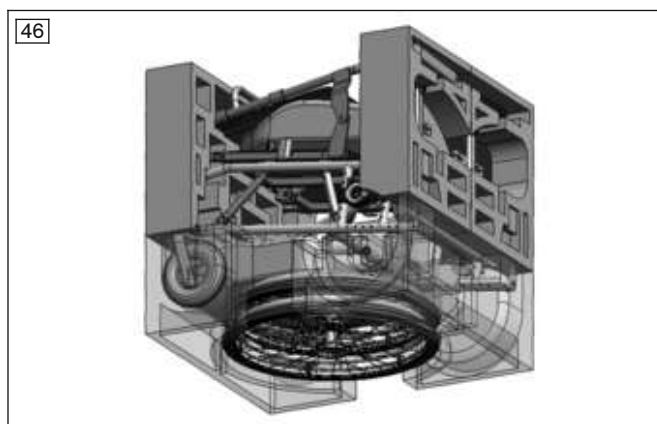
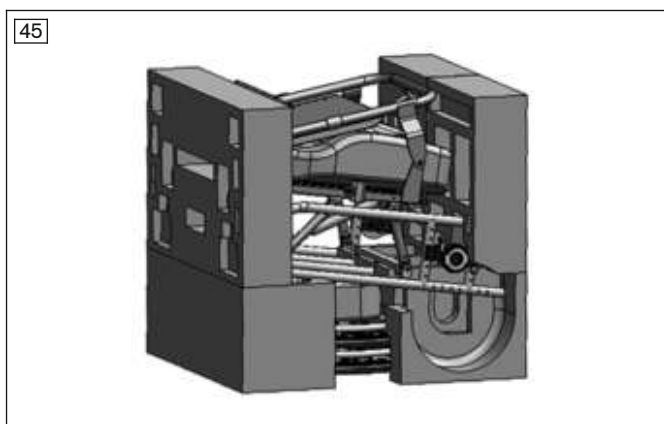
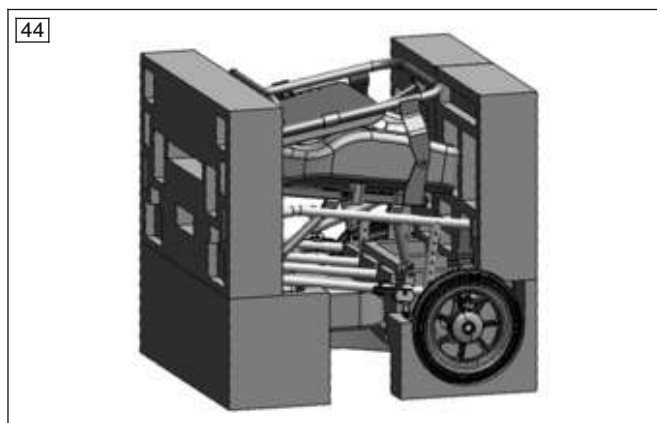
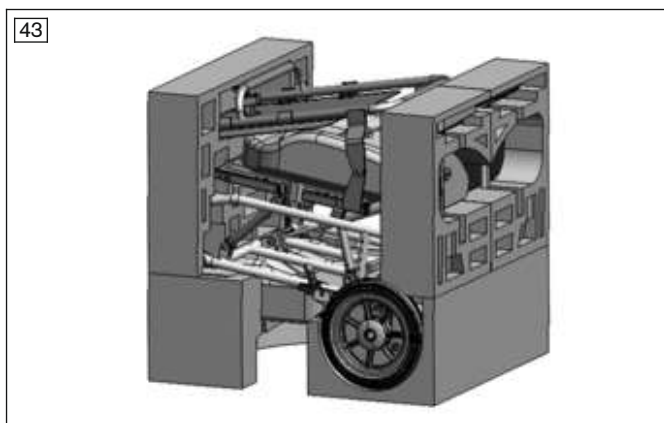
Damage to the product caused by transportation using incorrect packaging

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

The wheelchair should be transported to the user in disassembled state using the outer packaging.

The wheels should be removed if necessary for delivery with 24" drive wheels.

The following illustrations show the packaged wheelchairs (variant with 12" drive wheels: see fig. 43, see fig. 44; variant with 24" drive wheels: see fig. 45, see fig. 46).



8.3 Handing over the product

⚠ 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.

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.
- To ensure that the seat tilt and back support angle adjustment can be operated easily, the seating centre of gravity must be checked with the user seated and the presumed attendant and readjusted 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, these instructions for use must be used.
- The instructions for use must be given to the user or an attendant upon delivery 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.
- Keep packaging materials out of the reach of persons with cognitive disabilities and children (risk of suffocation). Dispose of all materials in an environmentally friendly manner.

9 Use

9.1 Getting in and transferring

Users can choose the method for getting into and out of the wheelchair which is most suitable for them. The respective procedure should be discussed and practised with a therapist.

As a rule, the frame tubes, seat bottom or side panels can be used as supports for getting into the wheelchair.

If getting in independently is not possible, transferring or getting in always has to be performed with the help of an assistant. The manufacturer also offers transfer aids for getting in, such as transfer boards.

- 1) Drive the wheelchair as close as possible to the seat/bed.
- 2) Engage the wheel locks (knee lever wheel locks) or drum brakes on both sides (see fig. 47, see fig. 48).
- 3) Fold up the foot plates (see fig. 62) and swing away the leg supports (see page 36).
- 4) Bring the seat into a horizontal position (see page 35).
- 5) **If needed:** Remove the side panels (see page 38).
- 6) Make the transfer to the wheelchair from the front:
 - **INFORMATION: Find the most suitable method by practising with the user. Use a transfer aid (lifter, transfer board) if possible.**
 - If the user does not meet the physical prerequisites due to their disability, support should be provided by an attendant.
- 7) Fold the foot plates down, position the feet on the footplates and secure them if necessary.
- 8) **If necessary:** Attach the side panels.
- 9) Release the knee lever wheel locks or drum brakes.
 - The wheelchair can now be used.



9.2 Drive wheels

⚠ 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.

⚠ CAUTION**Incorrect removal/attachment of the wheels**

Tipping, falling due to incorrect installation

- ▶ The user is not permitted to sit in the wheelchair during wheel replacement.
- ▶ For changing wheels, set the wheelchair onto a solid surface.
- ▶ To change the wheels, secure the wheelchair against tipping over or rolling away.
- ▶ If the drive wheel does not lock securely or has too much sideways play, contact the qualified personnel promptly.

⚠ CAUTION**Defective tyres**

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

- ▶ Ensure that the tyres have sufficient tread depth.
- ▶ Replace the drive wheels in case of tyre damage or damage on the rim.

Variant with 24" drive wheels: The wheelchair is moved, steered, braked and stopped with the help of the handrims on the drive wheels.

To make transport easier, drive wheels with quick-release axle can be taken off the wheelchair.

9.2.1 Removing and mounting the drive wheels**Taking off and mounting the 24" drive wheels**

- 1) Release the wheel lock (see page 32).
- 2) Grip the area between the spokes near the hub with your fingers.
- 3) Use your thumb to press in the press button on the quick-release axle (see fig. 49).
- 4) Detach or attach the drive wheel.
 - The drive wheels must not be removable after the press button on the quick-release axle is pressed.

**Taking off and mounting the 12" drive wheels**

The 12" drive wheels may only be removed and attached by qualified personnel.

9.3 Caster wheels and caster forks**⚠ WARNING****Failure of caster wheels or caster forks**

Falling, severe injury due to the wheelchair tipping over

- ▶ Regularly inspect the caster wheels and caster forks for damage.
- ▶ Regularly clean and oil the caster wheel axles and the threaded axles on the caster forks, especially in case of stiffness.
- ▶ Inform the responsible qualified personnel in case of changes to the driving characteristics.

The combination of caster wheels and caster forks ensures the ability to hold a straight line and navigate bends securely.

The caster wheels and caster forks have been chosen by the qualified personnel according to the needs of the user.



9.3.1 Approach in case of stiffness

INFORMATION

Do not remove the caster wheels yourself.

If the caster wheels or caster forks still do not turn smoothly, inform the responsible qualified personnel.

In case of stiffness, the caster wheel axles should be cleaned and oiled.

Oiling the caster axle

- 1) Remove dirt from the caster axle between the caster wheel and caster fork.
- 2) Lubricate the caster axle between the caster wheel and caster fork with a few drops of thin, resin-free oil (sewing machine oil).

9.4 Wheel locks

The product is equipped on both sides with a wheel lock (knee lever wheel lock and/or drum brake). The wheel locks secure the parked product against rolling away.

The drum brakes also allow the attendant to slow the product easily and safely by activating the wheel lock lever.

9.4.1 Using the wheel locks

⚠ WARNING

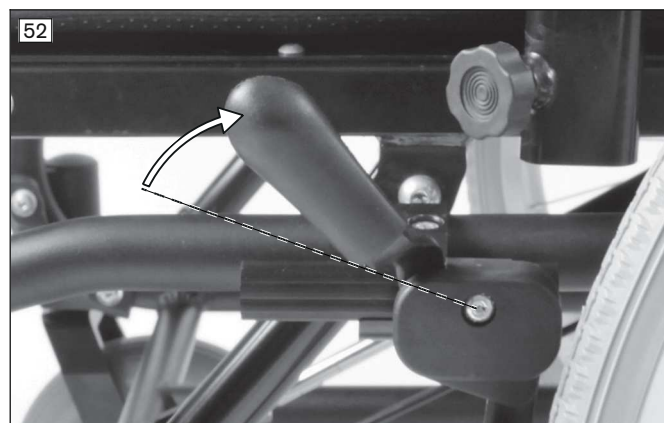
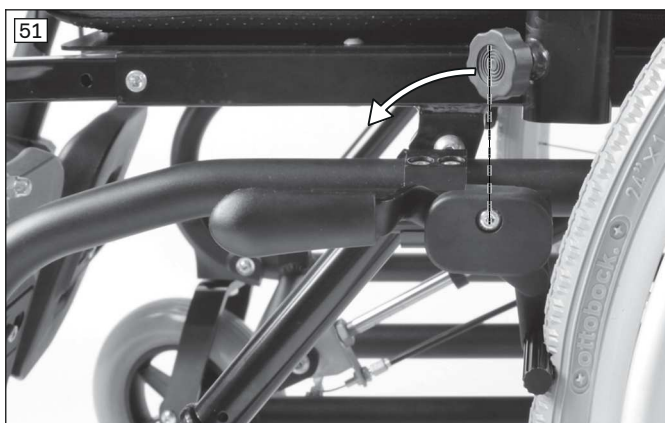
Improper use of the wheel lock

Falls due to abrupt braking, rolling away of the product, crushing of hands

- ▶ Do not use the wheel lock as a driving brake.
- ▶ Always engage the wheel lock on both sides.
- ▶ Engage the wheel lock to prevent the product from moving when it is parked on uneven ground or during transfers (e.g. into a car).
- ▶ Do not reach between the rear wheel and the wheel lock when driving the product.
- ▶ Ensure that the knee lever wheel lock is properly adjusted (max. **5 mm** gap between wheel lock bolt and tyre). The wheel lock bolt must lock the drive wheel securely when stationary.
- ▶ Please contact the qualified personnel who adjusted your product for readjustment of the wheel lock.

Activating/deactivating the knee lever wheel lock

- 1) Push the handle of the knee lever wheel lock forward (see fig. 51).
→ The wheel lock bolt secures the wheel.
- 2) Pull the wheel lock lever upwards (see fig. 52).
→ The wheel lock bolt releases the wheel.



9.4.2 Drum brake

⚠ WARNING

Insufficient braking of the drum brake

Accident, falling of the user, loss of control by the attendant

- ▶ Verify the functionality of the drum brake prior to every use. Contact the qualified personnel in case of insufficient braking.
- ▶ Apply the drum brakes to prevent the product from moving when it is parked on uneven ground or during transfers (e.g. into a car). Ensure that they lock securely with the help of the lock slide.

The drum brakes allow the attendant to slow the wheelchair easily and safely by activating the wheel lock lever on the push handles.

INFORMATION

The drive wheels with quick-release axle can still be removed via the quick-release axles when the wheel lock lever is released (not illustrated).

Activating/deactivating the drum brake

- 1) Pull the wheel lock lever (see fig. 53, item 1).
- 2) If necessary, secure the wheel lock lever by additionally actuating the lock slide (see fig. 53, item 2).
→ The wheelchair remains securely braked.
- 3) Deactivate the wheel lock again by pulling the wheel lock lever or the lock slide.



9.5 Backrest

⚠ WARNING

Incorrect use of back support angle adjustment

Falling, tipping over due to operation without anti-tipper

- ▶ Note that adjusting the back support angle shifts the centre of gravity. Only use the back support angle adjustment with the anti-tipper activated.

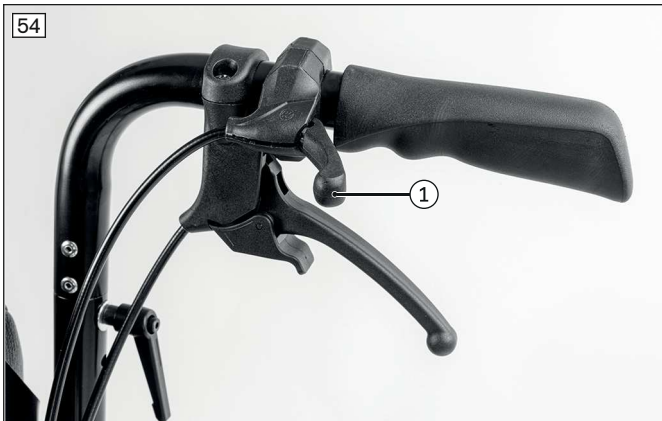
⚠ CAUTION**Pinching on components**

Crushing and pinching of fingers due to lack of caution in danger areas

- ▶ Do not reach between the moving frame components when adjusting the back angle.

9.5.1 Adjusting the back support angle

- 1) Hold the push handles firmly.
- 2) Activate and hold the release lever on the right push handle (see fig. 54, item 1).
→ The locking mechanism is released.
- 3) Move the back support to the desired angle by moving the push handles (see fig. 55).
- 4) Let go of the release lever.
→ The back support is secured at the desired angle.

**9.5.2 Folding down the back support**

The backrest can be folded down for stowing or transportation.

- 1) **CAUTION! Hold the back support when removing the locking bolt and secure the gas compression spring against falling. Get a second person involved if necessary.** Remove the locking bolt on the gas compression spring connection (see fig. 56, item 1).
- 2) Fold the back support forward onto the seat (see fig. 57).

**9.5.3 Removing and fastening the back support pad****Removing and fastening the back support pad**

The back support pad can be removed for cleaning:

- 1) Carefully pull the back support pad off the hook-and-loop closure on the back support (see fig. 58, item 1).
- 2) After cleaning (see page 47): Put the back support pad onto the back support. Secure the back support pad against sliding by pressing it onto the hook-and-loop closure.



9.6 Seat

⚠ WARNING

Seat cushions and back support pads may ignite

Burns due to user error

- ▶ The seat and back support upholstery as well as seat cushions, padding and covers fulfil the normative requirements for flame resistance. However, they may still ignite if fire is handled improperly or negligently.
- ▶ Keep away from all ignition sources, especially lit cigarettes.

9.6.1 Adjusting the seat angle

⚠ CAUTION

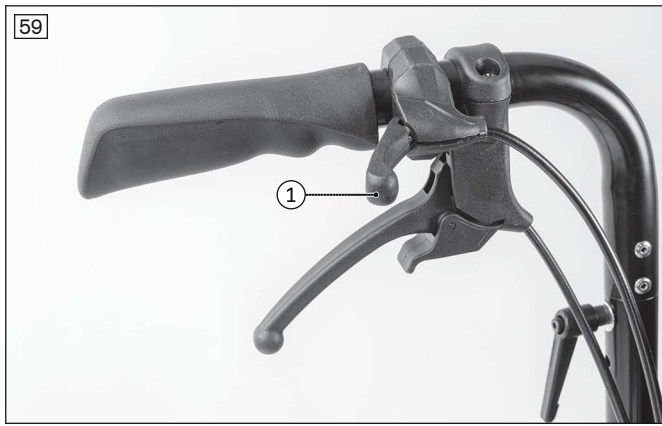
Incorrect handling of the seat tilt (seat inclination)

Tipping over, falling out of the seating shell/seat due to errors in handling the product

- ▶ First practise operating the seat tilt without the user sitting in the seat.
- ▶ Only operate the seat tilt on a level, firm surface.
- ▶ Always activate the anti-tipper before operating the seat tilt.
- ▶ Before negotiating slopes or crossing obstacles, the seat tilt must be lowered (horizontal neutral position of the seat). It is advisable to incline the seat tilt slightly to the rear when driving downhill.
- ▶ Never use the release lever to operate the seat tilt in an uncontrolled manner.
- ▶ When activating the release lever, always secure the user against falling out to the front or rear. To do so, hold on tight to the push handle.

The seat is continuously adjustable from **-5°** to **30°**.

- 1) Hold the push handles firmly.
- 2) Activate and hold the release lever on the left push handle (see fig. 59, item 1).
 - The locking mechanism is released.
- 3) **CAUTION! Do not reach into the adjustment mechanism when using the seat tilt. Avoid getting caught in the Bowden cable.** Bring the seat to the desired angle by moving the push handles (see fig. 60).
- 4) Let go of the release lever.
 - The seat is fixed in the desired position.



9.6.2 Removing and fastening the seat cushion

Removing and fastening the seat cushion

The seat cushion can be removed for cleaning.

- 1) Remove the pommel (see page 41).
- 2) Carefully pull the seat cushion off the hook-and-loop closure on the seat plate (see fig. 61, item 1).
- 3) After cleaning (see page 47): Place the seat cushion on the seat plate. Secure the seat cushion against sliding by pressing it onto the hook-and-loop closure.
- 4) Attach the pommel.



9.7 Legrests

⚠ CAUTION

Improper use of the leg supports/foot plates

Tipping over, falling due to user error

- ▶ Fold up the foot plates before getting in.
- ▶ The height of the leg supports is adapted to the user's anatomy. Make sure that both legs lie securely on the foot plates.
- ▶ The leg supports must engage audibly when they are locked.

The legrests support the user's legs.

The height of the legrest has been adjusted by qualified personnel to the length of the user's lower legs.

The angle of the footrest has been set by the qualified personnel so that it allows the ankles to rest in a comfortable position.

9.7.1 Removing and attaching the leg supports

The leg supports can be removed to make it easier for the user to get in and out.

Removing the leg support

- 1) Fold the foot plate up (see fig. 62).
- 2) Pull back the release lever (see fig. 63, item 1).

- 3) Swing the leg support outwards by **90°** (see fig. 64, item 1) and remove it upwards.

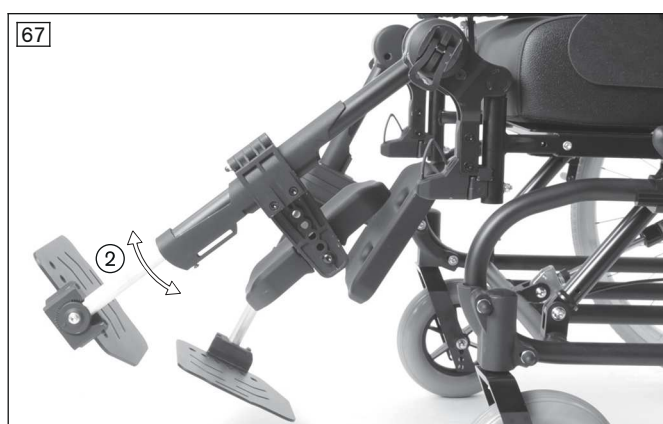
Attaching the leg support

- 1) Hold the leg support **90°** out to the side and insert it into the leg support retainer (see fig. 65).
- 2) Swing the leg support into the direction of travel until it engages.
- 3) Fold the foot plate down.



9.7.2 Adjusting the angle of the elevating leg support

- 1) **CAUTION! Hold the leg support during unlocking and relieve the mechanism.** Open the locking lever on the leg support (see fig. 66, item 1).
- 2) Move the leg support to the desired angle (see fig. 67, item 2).
- 3) Close the locking lever.



9.7.3 Folding the foot plate up and down

Hold the foot plate by the edge and fold it up or down (see fig. 62).

9.7.4 Removing and fastening the calf strap

The calf strap offers additional support for the user's legs. It can be removed for cleaning.

Attaching the calf strap

- 1) Open all hook-and-loop closures on the calf strap.
- 2) Thread the calf strap through the eyelet on the swivel segment (see fig. 68, item 1).
- 3) Thread the other end through the eyelet on the foot plate (see fig. 68, item 2).
- 4) Adjust the length and fasten the hook-and-loop closure.

Removing the calf strap

- 1) Undo the hook-and-loop closure.
- 2) Remove the calf band.



9.7.5 Adjusting the leg supports

Further adjustments may be made only by qualified personnel.

9.8 Side panels

The side panels protect the user and his/her clothing from getting dirty. The installed armrests offer the user additional support for the forearms.

9.8.1 Removing the side panels

Removing the side panel

- 1) Loosen the star knob on the side panel mounting (see fig. 69, item 1).
- 2) Pull the side panel out of the side panel mounting (see fig. 69, item 2).

Attaching the side panel

- 1) Slide the side panel into the side panel mounting.
- 2) Tighten the star knob.



9.8.2 Adjusting the forearm supports

- 1) Press in the press button on the forearm support (see fig. 70, item 1).
- 2) Slide the forearm support to the desired height until the press button re-engages (see fig. 70, item 2).



9.9 Head support

Adjusting the height of the head support

- 1) Release the clamping lever for adjusting the height of the head support (see fig. 71, item 1).
- 2) Slide the head support to the desired height.
- 3) Tighten the clamping lever.

INFORMATION: If the clamping lever protrudes from the holder after adjustment, pull it out slightly and turn it to a position as parallel to the holder as possible.

- 4) Verify that the head support is firmly engaged.

Adjusting the position of the head support

- 1) Release the clamping levers for the head support (see fig. 71, item 2).
- 2) Swivel/slide the head support to the desired position.
- 3) Tighten the clamping levers.

INFORMATION: If a clamping lever protrudes from the holder after adjustment, pull it out slightly and turn it to a position as parallel to the holder as possible.

- 4) Verify that the head support is firmly engaged.



Further adjustments to the head support may be made only by qualified personnel.

9.10 Push handles

The push handles make pushing the wheelchair easier for the attendant.

9.10.1 Adjusting the push handles

The height of the push handles can be adjusted in order to make pushing easier for the attendant.

- 1) Release the clamping levers on the right and left sides of the back support tubes (see fig. 72, item 1).
- 2) Adjust the height of the push handles.
- 3) Tighten the clamping levers on the right/left sides of the back support tubes.

INFORMATION: Adjust both push handles to the same height.



9.11 Anti-tipper

⚠ WARNING

Anti-tipper not activated

Tipping over, falling of the user due to improper operation of a safety device

- ▶ Ensure that an installed anti-tipper is activated before travelling over obstacles and on inclines.
- ▶ The anti-tipper has to engage audibly prior to use. Proper engagement must be checked by the user or an attendant.
- ▶ The use of an anti-tipper is highly recommended for transfemoral amputees and inexperienced users.

⚠ WARNING

Incorrectly adjusted anti-tipper

Tipping over, falling of the user due to errors in handling the product

- ▶ If only one attendant helps in overcoming steps, the attendant must first deactivate the anti-tipper so that it cannot collide with the steps during transport.
- ▶ The attendant must activate the anti-tipper again after overcoming the steps.

The anti-tipper prevents the wheelchair from tipping backwards when overcoming obstacles and going uphill.

The anti-tipper is set for a maximum ground clearance of **50 mm** and so that the anti-tipper rollers, as a minimum, project fully beyond the largest diameter of the drive wheels.

A mounted anti-tipper must always be active.

When overcoming obstacles (such as steps and curbs that are not lowered) **upwards**, the anti-tipper rollers contact the ground.

When overcoming obstacles (such as steps and curbs that are not lowered) **downwards**, the anti-tipper has to be deactivated by the user or attendant to avoid damaging the anti-tipper.

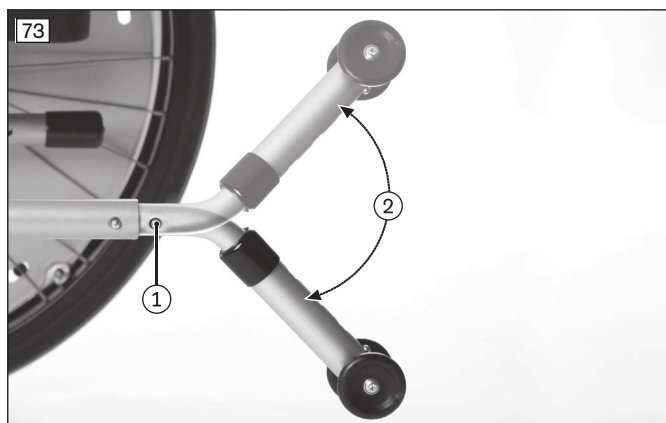
9.11.1 Activating and deactivating the anti-tipper

Activate

- 1) Press in the press button on the upper tube section of the anti-tipper (see fig. 73, item 1).
- 2) Swing the anti-tipper downwards by **180°** (see fig. 73, item 2).
- 3) Allow the press button to engage.
 - The anti-tipper is activated.

Deactivate

- 1) Press in the press button on the upper tube section of the anti-tipper (see fig. 73, item 1).
- 2) Swing the anti-tipper upwards by **180°** (see fig. 73, item 2).
- 3) Allow the press button to engage.
 - The anti-tipper is deactivated.



9.12 Pommel

Removing and attaching the pommel

- 1) Loosen the thumb screw on the holder of the pommel (see fig. 40, item 1).
- 2) Remove the pommel.
- 3) Position the pommel under the seat.
- 4) Tighten the thumb screw.

9.13 Lap belt (seat belt)

⚠ WARNING

Using the belt system or positioning aid as a passenger restraint system in vehicles for transporting persons with reduced mobility is prohibited

Serious injuries due to improper handling of the product

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

⚠ CAUTION

Incorrectly adjusted lap belt

Malpositions, illness, falling of the user due to installation/adjustment errors

- ▶ Do not modify the settings established by the qualified personnel. In case of problems with the adjustments (unsatisfactory sitting position) please contact the qualified personnel who fitted the product.
- ▶ The lap belt has to fit closely but not too tightly so the user is not injured. It should be possible to slide two fingers comfortably between the belt and thigh.
- ▶ Have the settings of the belt system checked regularly. Adjustments may be required due to the growth of the user or because of changes in the course of the disease or different clothing.

⚠ CAUTION

Improper use

Falls, user falling out due to improper use

- ▶ The lap belt must be put on when getting into the product and used at all times while using the product.
- ▶ Only open the lap belt when the user is ready to get out of the product.
- ▶ Do not leave the user unsupervised if the cognitive abilities of the user could lead to unintentional opening of the positioning system.

The lap belt (seat belt) prevents the user from slipping and supports positioning.

It is installed on the product by qualified personnel if needed and adapted to the requirements of the user.

Information about subsequent acquisition and mounting is provided by the qualified personnel that handed over the product.

The following belt is available for the product:

- Lap belt with metal buckle (see fig. 74)

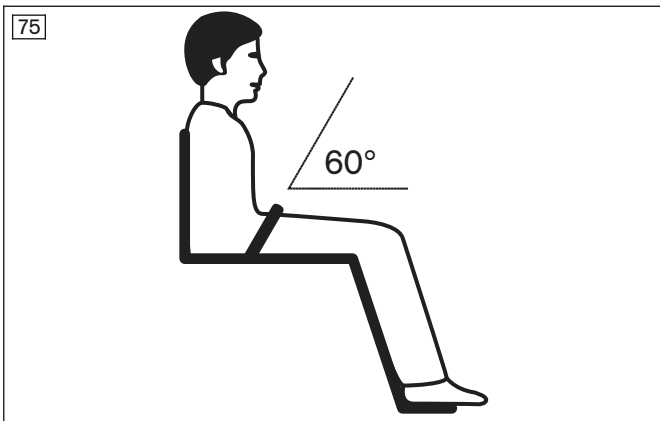


Using the lap belt

- 1) Open the buckle.
- 2) Place the user in an upright, 90° seated position (if physiologically possible). Ensure that the back is up against the back support pad (if physiologically possible).
- 3) Close the buckle.
- 4) The lap belt should be at an angle of about 60° to the seat bottom. The belt strap should run across the thighs in front of the pelvic bones (see fig. 75).

Possible errors

- The lap belt is positioned above the user's pelvis in the area of the soft part of the stomach.
- The user does not sit upright in the seat.
- If the lap belt is too loose, the user can shift/slide out to the front.
- During the installation/adjustment, the lap belt is routed over parts of the seating system (e.g. over forearm supports or seat pads). This causes the lap belt to lose its retaining function.



9.14 Disassembly and transport

NOTICE

Deformation of the folded backrest

Problems unfolding due to unallowable loads

- ▶ Never rest heavy objects on the backrest when it is folded in.

INFORMATION

- ▶ When transporting the product in vehicles, fold it up and remove the legrests and drive wheels if necessary.
- ▶ Follow the IATA (International Air Transport Association) rules and those of the relevant airline when transporting the product in an aircraft. Inform the airline several days before your flight. Use the SSR (special service request) codes to describe the type of limited mobility if necessary. You can for example research these on the Internet.
- ▶ For more information please visit the www.iata.org website. The manufacturer recommends contacting the airline directly before every flight to obtain information regarding special transport regulations.

The wheelchair must be prepared for transport in a passenger vehicle.

- 1) Fold up the foot plates (see page 37).
- 2) Remove the leg supports (see page 36).
- 3) Remove the side panels (see page 38).
- 4) Remove the pommel (see page).
- 5) Remove the seat cushion (see page 36).
- 6) Pull out the push handles completely (see page 39).
- 7) Fold the back support forwards until it lies on the seat surface (see page 34, see fig. 76).
- 8) Remove the drive wheels (see page 31).
- 9) Place the wheelchair securely in the vehicle.

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9.15 Use in vehicles for transporting persons with reduced mobility

⚠ WARNING**Use in vehicles for transporting persons with reduced mobility**

Serious injuries in case of accidents due to user error

- ▶ Always use the seats and personal restraint systems in the vehicle for transporting persons with reduced mobility first. This is the only way to ensure optimum protection of passengers in the event of an accident.
- ▶ The product may be used as a seat in a vehicle for transporting persons with reduced mobility if the safety elements provided by the manufacturer and appropriate fastening and personal restraint systems are used. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- ▶ Use the product in a vehicle for transporting persons with reduced mobility only when the back support is in a vertical position and the seat tilt is in a horizontal position.
- ▶ Note the limitations regarding installed options (see page 47).

⚠ WARNING**Using the belt system or positioning aid as a passenger restraint system in vehicles for transporting persons with reduced mobility is prohibited**

Serious injuries due to improper handling of the product

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

⚠ WARNING**Prohibited transportation with activated back support angle adjustment/seat tilt**

Loss of safe restraint in the product due to user error

- ▶ Ensure that the passenger is sitting upright during transportation.
- ▶ Move the back support to the vertical position and the seat tilt to the horizontal position before travel.

The product has been tested by the manufacturer according to ISO 7176-19 and may be used as a seat in vehicles for transporting persons with reduced mobility subject to the conditions defined below.

The product must be sufficiently secured during transport in vehicles for transporting persons with reduced mobility. The illustrations that follow show an example for anchoring in a motor vehicle.

The manufacturer is not responsible for the fastening systems that are used. Ensure that only fastening systems that meet the applicable legal requirements and are designed for the overall weight of the product including the user are used.

The transport weight of the person to be transported in a vehicle for transporting persons with reduced mobility corresponds to the maximum permissible user weight (see page 51).

9.15.1 Required accessories

The use of additional accessories is required for the product to be used as a seat in a vehicle for transporting persons with reduced mobility:

- 4 belt loops (e.g. from the manufacturers Q'STRAIT or BraunAbility, tested according to ISO 10542-1)

The qualified personnel who fitted the wheelchair can provide more information about accessories.

9.15.2 Using the product in a vehicle**⚠ WARNING****Positioning in vehicles for transporting persons with reduced mobility**

Serious injuries in case of accidents due to user error

- ▶ Positioning of the product in vehicles for transporting persons with reduced mobility may only be performed by the qualified personnel.
- ▶ The product must always face forwards when it is used as a seat in a vehicle for transporting persons with reduced mobility.
- ▶ Instruct the qualified personnel regarding the mounting points described below and the required accessories on your product.

⚠ WARNING**Inadequate transportation safety**

Loss of safe restraint due to failure to observe transportation instructions

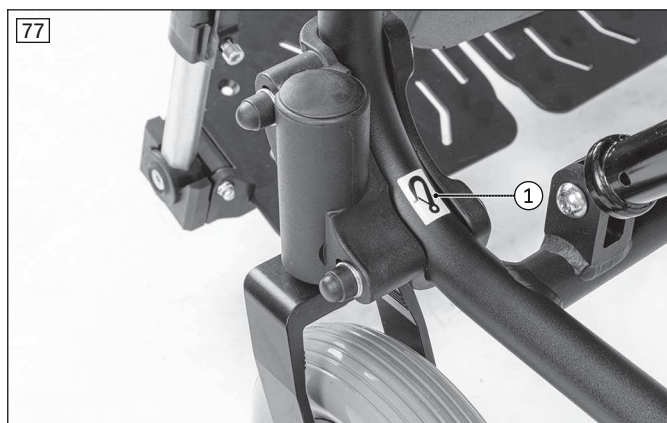
- ▶ Observe the following instructions for correct transport safety in the vehicle for transporting persons with reduced mobility.
- ▶ If necessary, instruct the qualified personnel on the following information.

Securing the product in the vehicle for transporting persons with reduced mobility

The wheelchair is secured in the vehicle for transporting persons with reduced mobility with the help of four belt loops, on which the vehicle side wheelchair restraint belts are attached.

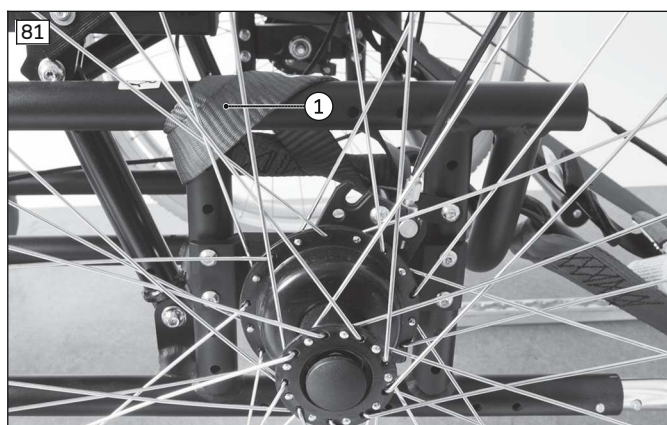
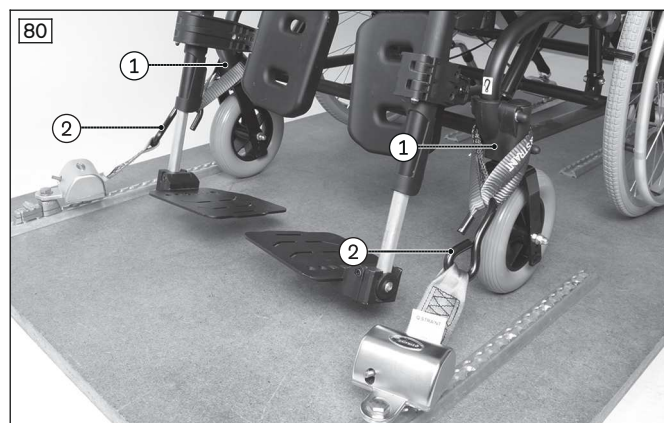
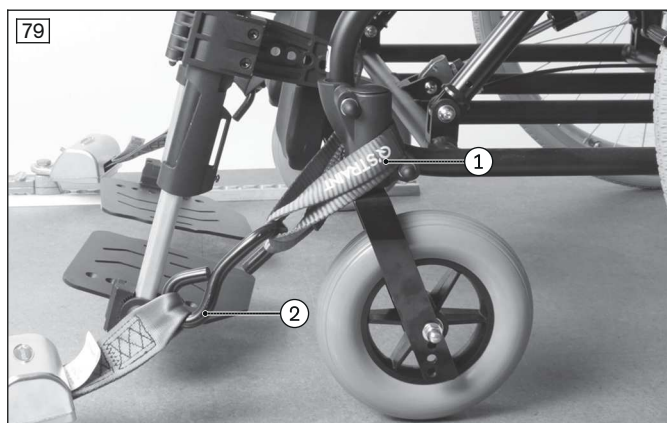
The fixation points of the belt loops are marked with stickers. These stickers show where the user has to pass the belt loops around the frame tube:

- The stickers that label the front fixation points are found on the front frame tube on each side (see fig. 77, item 1).
- The stickers that label the rear fixation points are found on the rear frame tube on each side (see fig. 78, item 1).



Attaching the belt loops

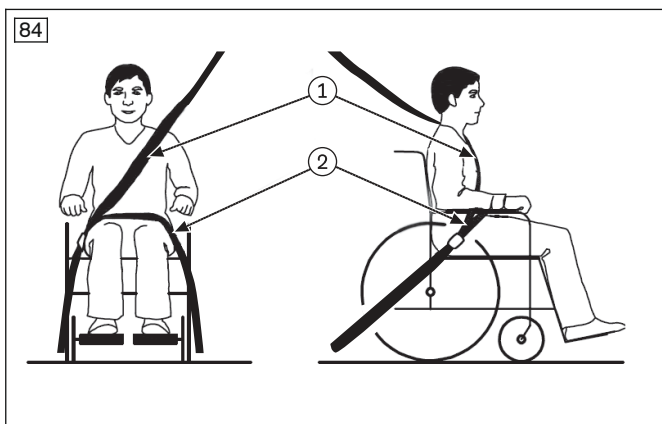
- 1) Position the product in the vehicle for transporting persons with reduced mobility. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- 2) Engage the two wheel locks (see page 32).
- 3) **Front fixation points:** Attach 1 belt loop around each of the frame tubes on the left and right of the front frame, wrapping them around the frame tubes at the marked position once or twice depending on the length (see fig. 79, item 1; see fig. 80, item 1).
- 4) Engage the hook of the respective vehicle side wheelchair restraint belt in the belt loop (see fig. 79, item 2, see fig. 80, item 2).
- 5) **Rear fixation points:** Attach 1 belt loop around each of the frame tubes on the left and right, wrapping them around the frame tubes at the marked position (see fig. 81, item 1; see fig. 82, item 1).
- 6) Engage the hook of the respective vehicle side wheelchair restraint belt in the belt loop (see fig. 82, item 2).
- 7) Tighten the vehicle side wheelchair restraint belts at the front and rear as firmly as possible.
→ The product showing the correct positioning of the attachment straps (see fig. 83).





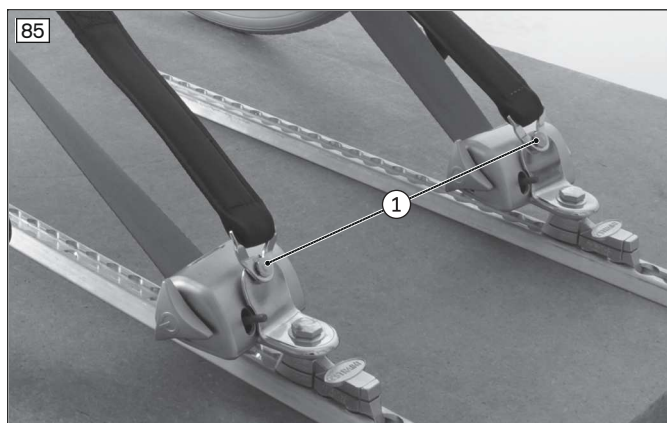
Information on correct transport safety of the user in the vehicle for transporting persons with reduced mobility

- Using the personal restraint system of the vehicle for transporting persons with reduced mobility is required. Attaching personal restraint systems of the vehicle for transporting persons with reduced mobility to the wheelchair is not permitted. The 3-point restraint has to be realised entirely on the vehicle:
 - The lap belt of the personal restraint system is usually attached by the qualified personnel to the left and right sides respectively on the mounting point/pin of the rear lashing straps (wheelchair restraint belts on the vehicle bottom).
 - The shoulder belt of the personal restraint system is usually mounted on the vehicle pillar and is attached by the qualified personnel to the corresponding mounting point/pin provided on the lap belt.
- The straps of the personal restraint system must always be routed close to the user's body. The straps must not be routed over the side panels and wheels (see fig. 84 item 2).
- The shoulder belt must always be routed over the user's shoulder (see fig. 84, item 1).
- The belt strap must not be twisted on the user's body.



Placement of the personal restraint system integrated in the vehicle for transporting persons with reduced mobility

- 1) Pull each end of the restraint lap belt from the inner side of the seat through to the outside.
- 2) Hook in the ends of the restraint lap belt on the mounting point/pin of the rear lashing straps/on the vehicle side mounting points, on the left and right sides respectively (see fig. 85, item 1).
Alternatively, a retractor-based restraint system of the vehicle for transporting persons with reduced mobility can also be used (not illustrated). In this case, the lap belt is likewise passed around the user from the bottom of the vehicle and anchored in the corresponding vehicle buckle on the opposite side. The shoulder harness is also fastened to the mounting point of the lap belt.
- 3) Secure the shoulder harness on the mounting point/pin provided on the lap belt (not illustrated).
 - The restraint lap belt is pulled through and fastened.
 - The lap belt runs between the side panel and seat cushion on each side.



9.15.3 Restrictions for use

⚠ WARNING

Using the product with certain settings and/or installed options

Severe injury in case of accidents due to options coming loose

- ▶ Before using the product as a seat in a vehicle for transporting persons with reduced mobility, remove options that need to be taken off for safe transportation in such a vehicle. Please observe the following table.
- ▶ Stow all removed options securely in the vehicle.
- ▶ Please note that certain settings on the product exclude the use of the product in a vehicle for transporting persons with reduced mobility.

Component ¹⁾	Transportation in a vehicle for transporting persons with reduced mobility is not possible	Disassembling the component	Securing the component on the product
Head support			X
Leg supports			X
Back support angle adjustment			X ²⁾
Seat tilt			X ³⁾
Pommel		X	
Lap belt			X ⁴⁾
Tray		X	

¹⁾ Not all of the components named are installed on all products.

²⁾ Move the back support to the upright position.

³⁾ Move the seat tilt to the horizontal position.

⁴⁾ The lap belt can be used to position the passenger during transportation. Using the personal restraint system is nevertheless required.

9.16 Care

⚠ CAUTION

Lack of or improper cleaning

Health hazard due to infections, damage to the product due to user error

- ▶ Clean the product at regular intervals.
- ▶ Check the driving behaviour of the product after cleaning it.

INFORMATION

Take note of the washing and care instructions on the sewn-in labels on the fabric covers and other textile parts of the product.

9.16.1 Cleaning

Clean the product regularly depending on the degree of soiling and frequency of use, **at least 1x per month**:

To avoid contamination with germs, clean seat cushions and back support upholstery whenever they get soiled.

9.16.1.1 Cleaning by hand

- 1) Clean the padding with warm water and a mild detergent.
- 2) Remove any spots with a sponge or a soft brush.
- 3) Rinse with clear water and let the components dry.

Important information on cleaning

- Clean plastic parts, frame parts and the chassis and wheels with a mild cleaner and a damp cloth. Dry thoroughly afterwards.
- Do not use any aggressive cleaners, solvents or hard brushes etc.
- Do not clean the product with a pressure washer or a jet of water. The penetration of water can cause corrosion.

9.16.1.2 Cleaning the seat cushion

Seat cushion with foam core

- 1) Open the zip and remove the foam core (see fig. 86).
- 2) Clean the cover according to the attached care label.
- 3) Hand wash all foam parts at **40 °C** using a mild, environmentally friendly detergent. Allow to air dry.
- 4) Reinsert the foam core with proper alignment. Close the zip.



Important information on cleaning

- For more information on cleaning seat cushions, see the care instructions on the product or the supplied instructions for use.

9.16.1.3 Cleaning the belt

Cleaning a belt system with metal closure

INFORMATION

Observe the washing recommendations on the product and the information in the corresponding instructions for use provided for the product.

- Straps with metal closures **may not be washed in the washing machine** as the penetration of water could cause corrosion and subsequent malfunctions.
- Clean the belt straps by gently dabbing them with warm soapy water (with some disinfectant) or carefully wipe with a dry, clean, absorbent cloth.

Additional cleaning instructions

- Allow the belts to air dry. Ensure that the belts and pads are completely dry before installation.
- Do not expose the belts to direct heat (e.g. sunshine, stove or radiator).
- Do not iron or bleach the belts.

9.16.2 Disinfection

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

Important information about disinfecting

- If the product is used by more than one person, using a conventional disinfectant is required.
- Only use colourless water-based disinfectants. Follow the instructions for use provided by the disinfectant manufacturer.

10 Maintenance and repair**10.1 Maintenance****⚠ WARNING****Insufficient maintenance**

Severe user injuries, damage to the product due to failure to observe maintenance intervals

- ▶ Only carry out the maintenance tasks described in this section. All other maintenance and service tasks may only be carried out by qualified personnel.
- ▶ The functionality and operating safety of the product must be verified and a service performed at least **once per year**.
- ▶ For users with a changing anatomy (for example body dimensions, weight) or users with a changing clinical picture, have the product inspected, adjusted and serviced at least **once every six months**.

⚠ WARNING**Lack of maintenance**

Severe user injuries, damage to the product due to maintenance errors

- ▶ Check the adjustment functions at least **once per month** for visible signs of damage and to ensure they are secure.

⚠ WARNING**Improper maintenance**

Severe injury of the user due to screw connections coming loose

- ▶ Check the tightness of the screw connections at regular intervals.
- ▶ Contact the qualified personnel promptly if defects are noted.

- The function of the product should be checked **before each use**.
- The product may not be used if defects are noted, e.g. loose, worn, bent or damaged components, frame cracks, broken frame components. This applies in particular in case of instability of the product or changed driving characteristics as well as problems with the user's sitting position or the stability of the seat. Inform the qualified personnel promptly to rectify defects.
- Some maintenance tasks can be carried out to a certain extent by the user at home (see the sections "Maintenance intervals" and "Maintenance tasks").
- Failure to maintain the product can lead to injuries for the user of the product.

10.1.1 Maintenance intervals

The functions described below must be checked by the user or an attendant at the specified intervals:

Component	Activity	Before each use	Weekly	Monthly
Main frame	Check that screw connections are tight			X
Seat frame	Check that screw connections are tight			X
Seat plate	Check attachment to the seat frame/back support		X	
Angle adjuster	Check the swivel axis for ease of operation			X
	Check screw connections of the angle adjustment for firm fit and gas compression spring mountings		X	
Back	Check screw connections of the angle adjustment for firm fit and gas compression spring mountings		X	
	Check push handles for firm fit and damage	X		
	Check back support pad for firm fit and damage	X		
Head support	Check head support and joints for firm fit and damage	X		

Component	Activity	Before each use	Weekly	Monthly
Drive wheels	Check attachment/axles for firm fit	X		
	Check for concentricity of the wheels			X
	For 24" drive wheels: check spoke tension			X
Tyres	Check the tread depth (min. 1 mm)			X
Caster wheels	Check attachment for firm fit	X		
	Check that the fork is seated in the adapter without play			X
	Check that the mounting nuts are tight			X
	Check the caster wheels to ensure they rotate freely (no dirt)	X		
Wheel locks	Verify the braking function	X		
Leg support	Check ratchet mechanism for functionality and firm fit			X
	Check foot plate for stability/damage			X
Side panel/arm supports	Check attachment for firm fit	X		
	Check side panels/arm supports for damage		X	
Padding/straps	Check the condition of the padding			X
	Check the attachment straps for wear		X	
	Check belt buckle function		X	
Anti-tipper	Check for functionality and firm fit		X	
	Check distance to the ground (min. 50 mm)			X
Bearings	Check for dirt		X	
Product	Check the legibility of all labels and labelling on the product		X	

10.1.2 Maintenance tasks

To ensure smooth operation at all times, users or attendants with some technical skills can maintain some parts of the product:

- Screw connections must be periodically checked for tightness, especially during the initial period of use or after adjustments have been made to the wheelchair. If a screw connection loosens repeatedly, contact the qualified personnel promptly.
- Particles of dirt and hair accumulate on the caster wheel axle and threaded axle of the caster fork over time. This makes the steering stiffer. Regularly remove dirt and oil the axles. See the section "Approach in case of stiffness".
- The drive wheels are equipped with a quick-release axle system as standard equipment. To keep this system operational, ensure that no dirt adheres to the quick-release axle or receiver bushing. Periodically lubricate the quick-release axle lightly with thin, resin-free oil (sewing machine oil).
- If the wheelchair becomes wet, it should be rubbed dry again.

10.2 Repair

Repairs to the product may only be carried out by qualified personnel.

11 Disposal

11.1 Disposal information

Return the product to the qualified personnel for disposal.

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

11.2 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 performance must not change in a way that could impair the safety of users or third parties during the period of use.

The relevant product must be thoroughly cleaned and disinfected before re-use. Then have the product inspected by qualified personnel with respect to its condition, wear and tear, and damage. Worn and damaged parts as well as components that do not fit or are unsuitable for the user must be replaced.

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

12 Legal information

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

12.1 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.

12.2 Warranty

Further information on the warranty terms and conditions is available from the qualified personnel that adapted this product or the manufacturer's service department.

12.3 Lifetime

Expected lifetime: **4 years**

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

Failure to observe the manufacturer's specifications and service intervals and using the product beyond the specified expected lifetime leads to increased residual risk.

13 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

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

General information

Start Multi	Variant with 12" drive wheels	Variant with 24" drive wheels
Max. load [kg]	136	
Weight [kg] ¹⁾ (for seat width 380 – 480 mm)	40.5 – 43.5	42 – 45
Seat width [mm] ²⁾	380 – 480	

Start Multi	Variant with 12" drive wheels	Variant with 24" drive wheels
Seat depth [mm] ²⁾	425 – 500	
Max. overall height [mm]	1410	
Steering range approx. [mm] ³⁾	870 – 1400	
Maximum permissible inclination [°] (%) (upwards/downwards/laterally) ⁴⁾⁵⁾	15 (26.8) / 10 (17.6) / 15 (26.8)	

¹⁾ Specified weights depending on seat width.

²⁾ In accordance with ISO 7176-5, 8.12

³⁾ Turning range/diameter in accordance with ISO 7176-5, 8.11/8.12

⁴⁾ Also applies for parking with wheel lock engaged.

⁵⁾ In accordance with ISO 7176-1.

Additional information

Variant with 12" drive wheels	Minimum	Maximum
Mass of the heaviest component [kg] (for seat width)	3.08 (380 mm)	4.01 (480 mm)
Overall length [mm] ¹⁾	---	1155
Overall width [mm]	650	750
Seat bottom angle [°]	-5	30
Effective seat depth [mm]	425	500
Effective seat width [mm]	380	480
Front seat height [mm]	580	620
Back support angle [°]	90	140
Back support height [mm]	515	640
Distance from leg support to seat [mm]	435	550
Distance from arm support to seat [mm]	200	280
Angle from foot plate to seat surface [°]	110	180
Front position of the arm support [mm]	400	450
Drive wheels	12"	
Caster wheels	8"	
Permissible tyre type	PU	
Minimum turning radius [mm] ²⁾	870	940
Horizontal axle position [mm] ³⁾	50	150

¹⁾ With leg supports

²⁾ In accordance with ISO 7176-5

³⁾ Measured in reference to the middle of the back support

Variant with 24" drive wheels	Minimum	Maximum
Mass of the heaviest component [kg] (for seat width)	3.08 (380 mm)	4.01 (480 mm)
Overall length [mm] ¹⁾	---	1155
Overall width [mm]	795	895
Seat bottom angle [°]	-5	30
Effective seat depth [mm]	425	500
Effective seat width [mm]	380	480
Front seat height [mm]	580	620
Back support angle [°]	90	140
Back support height [mm]	515	640
Distance from leg support to seat [mm]	435	550
Distance from arm support to seat [mm]	200	280
Angle from foot plate to seat surface [°]	110	180
Front position of the arm support [mm]	400	450
Drive wheels	24"	
Caster wheels	8"	

Variant with 24" drive wheels	Minimum	Maximum
Permissible tyre type	PU	
Handrim diameter [mm]	---	535
Minimum turning radius [mm] ²⁾	870	910
Horizontal axle position [mm] ³⁾	50	100

¹⁾ With leg supports

²⁾ In accordance with ISO 7176-5

³⁾ Measured in reference to the middle of the back support

Ambient conditions

Temperatures and relative humidity	
Temperature during use [°C (°F)]	-10 to +40 (14 to 104)
Transport and storage temperature [°C (°F)]	-10 to +40 (14 to 104)
Relative humidity [%]	45 to 85; non-condensing

14 Appendices

14.1 Threshold values for wheelchairs transportable by train

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

14.2 Required tools

The following tools are required for adjustments and maintenance work:

- Allen keys in sizes 3, 4, 5
- Ring and open-end wrenches in sizes 8, 10, 13, 19 and 24
- Torque wrench (measurement range 3–50 Nm)

14.3 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: 8 Nm
- Thread diameter M8: 20 Nm



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