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EN Instructions for use (user) 3

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1 Foreword

INFORMATION

Date of last update: 2021-12-03

- ► Please read this document carefully before using the product and observe the safety notices.
- ► Obtain instruction from the qualified personnel in the safe use of the product.
- ► Please contact the qualified personnel 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 (see inside or outside of back cover for addresses).
- ► You can request this document as a PDF file at ccc@ottobock.com or from the manufacturer's service department (see inside or outside of back cover for addresses). 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.
- Note the address and telephone number of the responsible qualified personnel and keep this information with you, especially when using the product outdoors. Inform the qualified personnel immediately in case of a malfunction. Provide all relevant details to make quick assistance possible.
- Your product may differ from the models shown. In particular, not all the options described in these instructions for use will be installed on your 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 indoors and outdoors on solid surfaces (Category B according to EN 12184).

The drive system is powered by two 12-V batteries. The product is equipped with rear-wheel drive for good directional stability, a small turning radius and to allow obstacles to be crossed easily.

The power wheelchair is controlled by the nVR2 wheelchair control device (see page 16). It includes a control panel for entering driving commands and displaying the current status as well as a controller that controls the drive motors based on the input data.

The special features of the power wheelchair include:

- Compact design and ease of use.
- Open frame design
- Tracking stability, including on uneven terrain
- Straightforward seat depth and lower leg length adjustment
- Serviceability due to easy, straightforward access to all components.

2.2 Product overview

1

1 Back support
2 Arm support (flip-up)
3 Control panel with joystick
4 Seat cushion
5 Positioning belt (lap belt)
6 Cantilever frame
7 Battery cover
8 Leg support with foot plate
9 Caster wheel
10 Drive wheel
11 Anti-tipper with anti-tipper rollers
12 Motors with brake release
13 Back support angle adjustment
14 Push bar

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 indoor and outdoor transportation of people with temporary or permanent limitations of the ability to walk, inability to walk or difficulty standing up. It is operated by the user.

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 offered with the product.

The manufacturer assumes no liability for combinations with third-party medical devices and/or accessories not included in the modular system.

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

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

Hazards due to improper use of the product

⚠ WARNING

Improper product operation

Falling, tipping over, collision due to user error

- ► The product may be used only by a qualified user.
- ► As a user or attendant, you must be trained in the use of the product by qualified personnel.
- ► Read the entire instructions for use.
- ► The product may not be used in case of exhaustion or under the influence of alcohol, medications or drugs.
- ► The product may **not** be used by users who have any cognitive limitations that can temporarily or permanently limit attentiveness and judgement.
- ► Observe road traffic regulations during operation in public road traffic.

⚠ WARNING

Impermissible use

Risk of pinching, crushing, being pulled in, tipping, falling due to improper handling

- ► Only use this product for its original intended purpose.
- ► Only one person may be transported with the product at any one time.

⚠ WARNING

Overloading

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

- ► Do not exceed the maximum load (see the nameplate and section "Technical data").

⚠ WARNING

Exceeding the service life

Serious injuries due to failure to observe the manufacturer's requirements

- ► Using the product beyond the specified expected service life leads to increased residual risk.
- ► Observe the specified service life.

⚠ CAUTION

Skin damage

Skin damage or pressure points due to overloading

- ► Check your skin for intactness before and during use of the product.
- ► Pay attention to diligent skin care and pressure redistribution during interruptions in using the product.
- ► If skin damage or other problems occur during use, stop using the product. Consult the qualified personnel.

⚠ CAUTION

Use of the product during diagnostic examinations and therapeutic treatment

Impairment of the examination results or the effectiveness of treatment due to interactions of the product with devices that are used

- ► Make sure that examinations and treatments are carried out exclusively under the prescribed conditions.

⚠ CAUTION

Extreme temperatures

Hypothermia or burns due to contact with components, failure of components

- ► Do not expose the product to any extreme temperatures (e.g. direct sunlight, sauna, extreme cold).
- ► Do not leave the product in the immediate vicinity of heaters.

NOTICE

Use under incorrect environmental conditions

Damage to the product due to excessively high or low temperatures

- ► Only use the product within a temperature range of **-15 °C to +40 °C (5 °F to +104 °F)**.

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 Interference due to electromagnetic fields

⚠ CAUTION

Electromagnetic fields of other electrical equipment

Falling, collision with persons or objects due to interference with the power wheelchair's control signals

- ► The power wheelchair complies with all applicable EMC directives and standards and has been tested accordingly.
- ► Nevertheless, interference with the product's control device by other electronic equipment may be possible under certain circumstances (e.g. radio and television stations, amateur radio transmitters (HAM), two-way radios, medical equipment that emits radiation or also mobile phones). This can influence the functions of the control device and lead to unwanted deviations of the driving characteristics.
- ► In this case, move the product out of range of the interference source or turn the interference source off. If this is not possible, turn the product's control device off and inform the qualified personnel.
- ► Interference due to other portable electrical devices is more unlikely (e.g. cordless telephones, laptops, tablets, networked wristwatches, radios, electric shavers or electric toothbrushes).

INFORMATION

- ► Interference with other devices in the vicinity (e.g. alarm systems in department stores or automatic doors) by the product's own electromagnetic fields cannot be excluded.
- ► In this case, move your product out of interference range or turn off the power wheelchair's control device.

4.5 Further information

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 10).

4.6 Nameplate and warning labels

4.6.1 Signage on the product

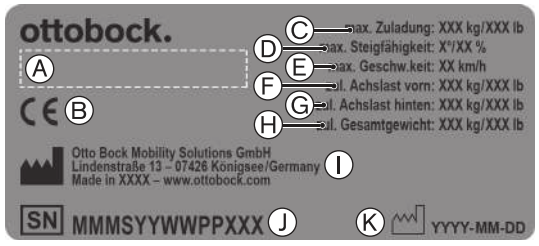
The warning signs and nameplates are attached at the following mounting points to the power wheelchair:

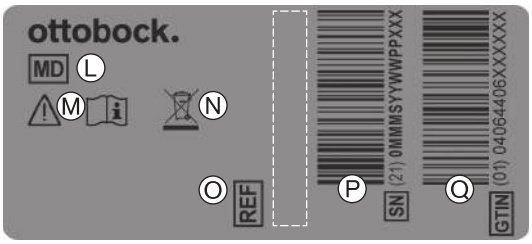
2

Warning signs and nameplates on the power wheelchair

4.6.2 Nameplate

The nameplates are found on the side of the frame under the seat.

Label		Meaning
	**A**	Manufacturer’s product name
	B	CE marking
	C	Maximum load (see section “Technical data”)
	D	Maximum climbing ability (see section “Technical data”)
	E	Maximum speed (see section “Technical data”)
	F	Allowable axle load, front
	G	Allowable axle load, rear
	H	Allowable overall weight
	I	Manufacturer information/address
	J	Serial number[1)]
	K	Manufacturing date[2)]

Label		Meaning
	**L**	Symbol for medical device
	M	**WARNING!** Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).
	N	Symbol for separate collection of electrical and electronic devices. Components of the power wheelchair and batteries may not be disposed of in household waste.
	O	Manufacturer's reference number for the product variant
	P	Serial number (PI)[3),1)]
	Q	Global Trade Item Number (DI)[4)]

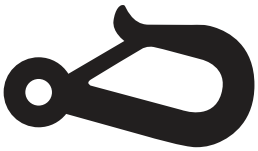
[1)] MMM = model/model variant; S = speed code; YY = year of manufacture; WW = week of manufacture; PP = production site; XXX = sequential production number

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

[3)] UDI-PI to GS1 standard; UDI = Unique Device Identifier, PI = Product Identifier

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

4.6.3 Warning labels

Label		Meaning
	**A**	Power driving mode: motor brake locked
	B	Manual driving mode: motor brake unlocked
		Fixation point/eyebolt to attach the product in vehicles for transporting persons with reduced mobility

5 Delivery

5.1 Scope of delivery

As a rule, the power wheelchair is ready for use on delivery.

The scope of delivery includes:

- Fitted power wheelchair with main components
- Battery charger
- Instructions for use (user)
- Instructions for use for accessories (depending on equipment)

5.2 Storage

5.2.1 Storage during daily use

The power wheelchair should always be protected against external influences.

The control unit must be turned off.

5.2.2 Storage during extended disuse

NOTICE

Deep discharge

Battery damage due to standby current

► If the product will not be used for more than three days, disconnect the battery cable from the controller (see page 13).

Please observe the following if the power wheelchair is not used for more than **3 days**:

Storage conditions

- Store the power wheelchair in a dry, enclosed room with sufficient air circulation and protection from external influences. Specific information about storage conditions: see page 47.
- Protect the wheels against ground frost, for example by taking all weight off them using an assembly stand or by setting them onto wooden blocks.
- 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.
- Rotate the wheels weekly to prevent flat spots from extended standing.
- For extended storage, store the power wheelchair so the wheels are not in contact with the ground.

Note regarding the tyres

- If the power wheelchair is not moved for several days, permanent colour changes may develop where it comes into contact with the ground. A suitable base should therefore be used when parking it for extended periods of time.
- Avoid unnecessary parking outdoors. Direct exposure to sunlight/UV radiation causes the tyres to age more quickly. As a result, the tread surface hardens and corner pieces break out of the tread.
- The tyres must be changed when the tread is less than **1 mm (0.04")** to ensure safe driving behaviour.
- The tyres should be replaced every **2 years** regardless of wear and tear.
- When power wheelchairs with PU tyres are parked for longer periods, the tyres may become deformed (flat spots). This deformation will go away on its own over time while driving.

6 Preparing the product for use

6.1 Safety instructions

General hazards while putting into operation

⚠ WARNING

Improper handling of packaging materials

Risk of suffocation due to neglect of the duty to supervise

► Packaging materials must be kept out of the reach of children.

⚠ WARNING

Uncontrolled movement of components when making adjustments

Crushing, pinching, blows due to non-observance of the maintenance and repair instructions

► Ensure that body parts, such as hands or head, are never in the danger zone.

► Perform the work with the aid of a helper for support.

⚠ WARNING

Independent modification of settings

Serious injuries to the user due to improper changes to the product

► Do not modify the settings established by the qualified personnel. Only the settings described in the section “Use” in these instructions for use may be adjusted independently.

► In case of problems with the settings, please contact the qualified personnel who adjusted your product.

⚠ CAUTION

Screw connections not tightened

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

► After all adjusting/readjusting work authorised by the manufacturer, retighten the mounting screws/nuts firmly. Observe any torque settings which may be specified.

6.2 Initial operation

The qualified personnel delivers the power wheelchair fully assembled and in operational condition.

The following additional tasks may be required:

- Connecting the battery cable (see page 13)

- Charging the battery (see page 26)
- Folding up the backrest (see page 15)
- Installing the arm supports (see page 14)

6.3 Settings

The user or attendant may only perform the fine-tuning adjustments described in the following. The user should be sitting upright in the power wheelchair while making adjustments.

- Adjusting the back angle (see page 15)
- Adjusting the height of the arm supports (see page 14)
- Adjusting the positioning belt (lap belt) (see page 28)

Further adjustments may be made only by qualified personnel

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

6.3.1 Adjusting the control device

⚠ WARNING

Incorrect configuration of the control device

Falling, tipping over, collision due to incorrect parameter settings

► The parameter settings of the control device may only be changed by qualified personnel. The manufacturer of the product and the control device manufacturer are not liable in case of damage caused by parameter settings that were incorrectly configured or not adjusted properly according to the user's abilities.

If necessary, the qualified personnel can adapt the preconfigured parameters of the wheelchair control device to the specific requirements of the user.

7 Use

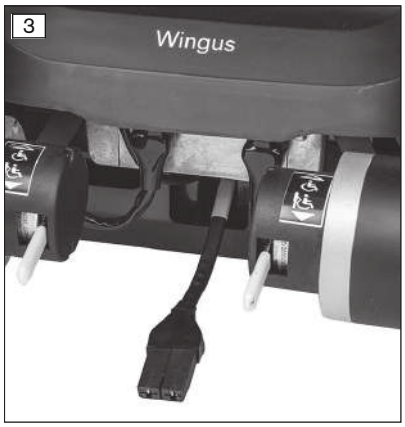
7.1 Operational readiness

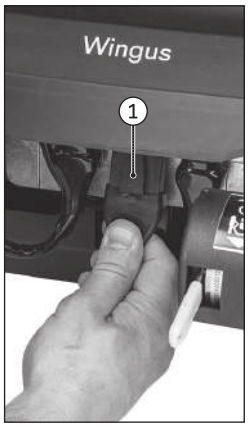
INFORMATION

If the product will not be used for an extended period of time, the battery cable should be disconnected from the plug connection on the controller.

Notice: As a rule, the plug connection between the battery and controller is already connected on delivery, and the power wheelchair is therefore ready for operation.

If this is not the case, the plug connection has to be connected. The plug connection is below the back of the battery cover.





Connecting the battery cable

1) Take the plug of the battery cable in your hand. The plug is located between the motors, below the battery cover (see fig. 3, left).
2) Connect the plug to the plug connection on the controller (see fig. 3, right).

Disconnecting the battery cable

1) Disconnect the plug of the battery cable from the controller. To release the plug, push the snap-fit (see fig. 3, item 1).
2) Let the battery cable hang down loosely (see fig. 3, left).

7.2 Arm supports

⚠ CAUTION

Exposed pinch points

Pinching, crushing of limbs due to improper handling

► Do not reach into the danger area with your fingers when folding the arm supports up and down.

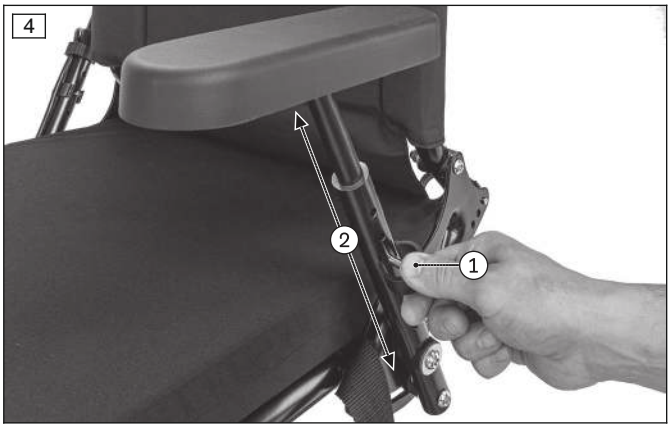
INFORMATION

Please contact the qualified personnel for subsequent adjustment of the control panel position.

The arm supports offer the user support for the forearms.

7.2.1 Removing/installing the arm supports

The arm supports can be removed if necessary.



Removing the arm support

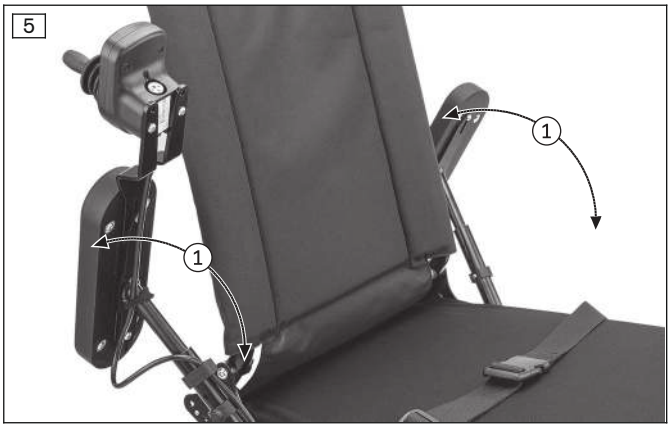
1) Pull out the clamping pins (clamps) by hand (see fig. 4, item 1).
2) Pull the arm support up and out, and lay it aside (see fig. 4, item 2).
3) **Only for arm support with control panel**:
   → Turn the control device off (see page 16).
   → For transporting the power wheelchair, place the arm support on the seat.

Installing the arm support

1) Insert the arm support into the guide and move it to the desired height (see fig. 4, item 2).
   INFORMATION: There is a retaining plate on the underside of the arm pad. The curvature on this plate always faces out when the arm support is installed.
2) Reinsert the clamping pins (clamps) (see fig. 4, item 1).

7.2.2 Folding the arm supports up/down

To make it easier to get in the wheelchair from the side, the arm supports can be folded back if necessary.



Swinging the arm supports forward or back

1) Grasp the arm support with your hand.
2) Fold up the arm support towards the back to the stop (see fig. 5, item 1).
3) After getting in, fold the arm supports back down before driving.

7.2.3 Adjusting the arm supports

The height of the forearm supports can be adjusted by the user (see previous section).

In addition, qualified personnel can subsequently adjust the depth position and the width setting of the forearm supports.

7.3 Leg support

The user can place their feet on the central leg support.

The height of the foot plate has been adjusted by qualified personnel to the length of the user's lower legs. The angle of the foot plate has been set by qualified personnel so that it allows the ankles to rest in a comfortable position.

7.3.1 Folding the foot plate up/down

⚠ CAUTION

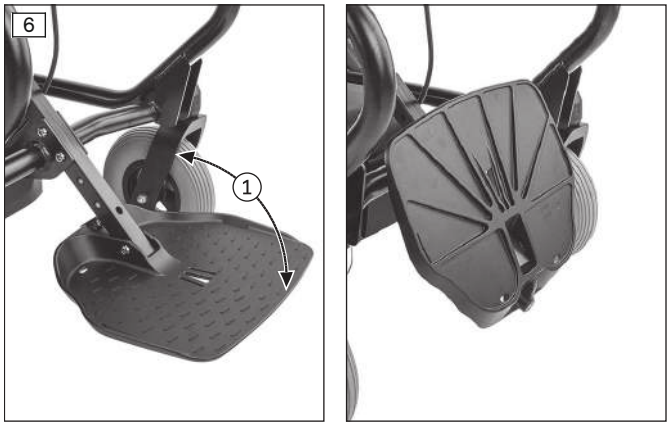
Exposed pinch points

Crushing, pinching due to incorrect handling

► Do not reach into the danger area with your fingers when folding the foot plate up or down.

The user's feet can be placed on the footplate.

To make getting into the wheelchair easier, the footplate can be folded up.



Folding the foot plate up/down

1) Grasp the front of the foot plate.
2) Fold the foot plate up or push it down (see fig. 6, item 1).

7.4 Backrest

⚠ CAUTION

Exposed pinch points

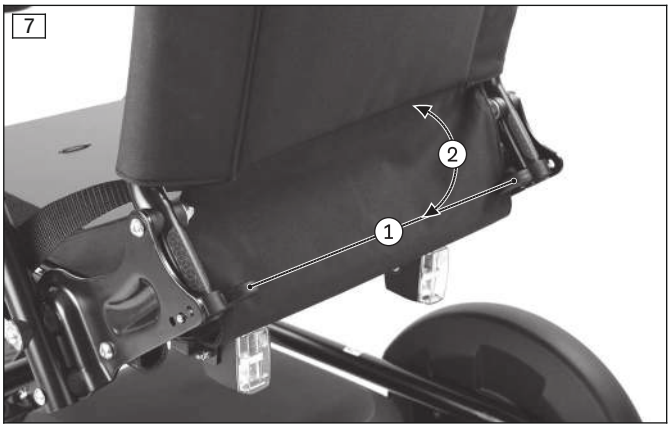
Crushing, pinching due to incorrect handling

► Do not reach into the danger area with your fingers when folding the backrest up or down.

The backrest provides pressure redistribution and support for the upper body.

7.4.1 Folding the back support up/down

The wheelchair may be delivered with the backrest folded down. It has to be folded up and secured prior to use.



Folding up the back support

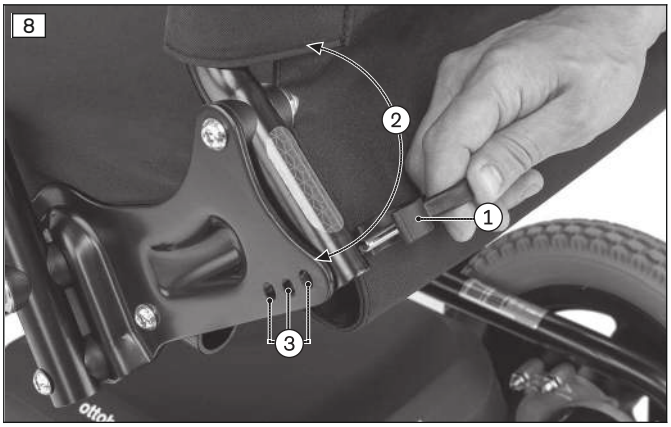
1) Swing the arm supports back (see page 14).
2) Pull out the clamping pins (clamps) of the back support on both sides by hand (see fig. 7, item 1).
3) Lift the back support and move it to the desired position (see fig. 7, item 2).
4) Check to ensure the lock is securely engaged by pulling on the back support.
5) Swing the arm supports forward (see page 14).

Folding down the back support

1) Swing the arm supports back (see page 14).
2) Pull out the clamping pins (clamps) of the back support on both sides by hand (see fig. 7, item 1).
3) Fold the back support down onto the seat surface.
4) Swing the arm supports forward (see page 14).

7.4.2 Adjusting the back support angle

The back support angle can be adapted to the particular needs of the user. The user must not be sitting on the seat during this adjustment.



1) Pull out the clamping pins (clamps) by hand on the bottom of the back support tube on the right and left sides (see fig. 8, item 1).
2) Adjust the back support forward or back to the desired position (see fig. 8, item 2).
3) Reinsert the clamping pins (clamps) into the appropriate holes on the right and left sides (see fig. 8, item 3).
4) Check to ensure the lock is securely engaged by pulling on the back support.

7.5 Getting in and transferring

⚠ CAUTION

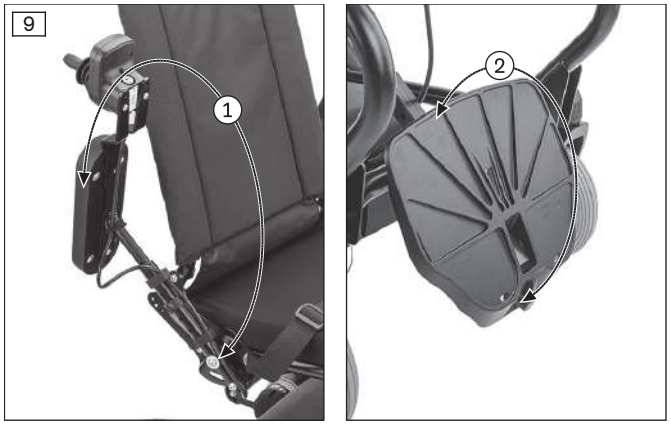
Incorrect handling when getting in

Falling, tipping over due to incorrect handling

- ► To avoid unintentional driving movements, turn the control device off before getting in and out.
- ► Please note that the arm supports are not designed to bear the full weight of the user; they should therefore not be used for getting in or out.
- ► Never step on the foot plates when getting in and out.
- ► Always put on a lap belt when driving.

Users can choose the method for getting into and out of the wheelchair which is most suitable for them.

Recommendation: Folding up the arm support and foot plate makes it easy to get in and out from and to the side.



Getting in from the side

1) Turn the control device off (see page 17).
2) Fold up the arm support (see fig. 9, item 1).
3) **If necessary:** Fold up the foot plate towards the back to the stop (see fig. 9, item 2).
4) Get into or out of the power wheelchair from the side. A transfer board makes this easier.
5) Fold down the foot plate and arm support towards the front to the stop.

7.6 Control unit

⚠ CAUTION

Uncontrolled driving behaviour

Falling, tipping, collision with persons or nearby objects due to interference from electromagnetic fields

- ► Observe the information in the section "Interference due to electromagnetic fields" (see page 9).
- ► Turn the control device off when it is not needed.

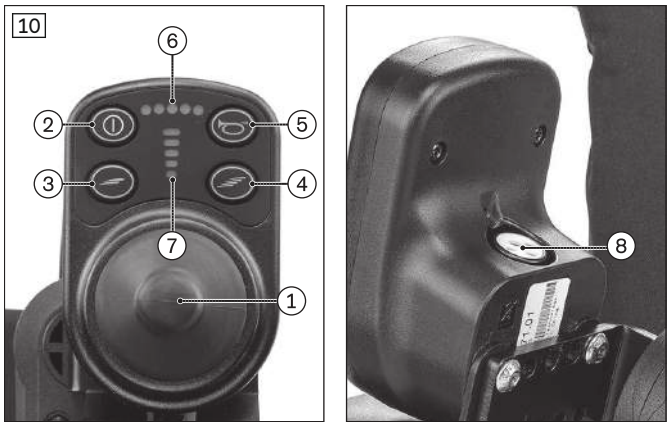
The power wheelchair is equipped with an nVR2 control device.

7.6.1 Control panel

The power wheelchair is operated using the control panel.

The control panel consists of the buttons, display and joystick. The charging receptacle is located underneath. It can also be used by qualified personnel to connect a programming device for configuring parameter settings.

The control panel is used to switch the power wheelchair on and off, enter driving commands and display the current status of certain functions and components.



1 Joystick
2 [On/off] button
3 [Decrease speed] button
4 [Increase speed] button
5 [Horn] button
6 [Charge level] LED display
7 [Selected speed level] LED display
8 Charging receptacle

7.6.2 Buttons and display functions

Joystick
The speed and driving direction are controlled with the joystick (see page 22).

[On/off] button
Pressing this button turns the power wheelchair on or off (see page 21). In combination with additional operating steps, it also activates/deactivates the drive-away lock (see page 23).

[Decrease speed] and [Increase speed] buttons
Pressing the button briefly increases/decreases the speed level (see page 21). The acoustic signal changes when the maximum speed level is reached.

[Horn] button
The horn will sound as long as the button is pressed.

[Selected speed level] LED display
The LED display shows the currently selected speed level (1–5).

[Charge level] LED display
The [Charge level] LED display is divided into five segments and serves as a proportional indicator for the current charge level:

- The accuracy of the indicator increases after driving for a short time.
- A charge of 100 per cent corresponds to five segments on the battery symbol.
- As the remaining battery charge decreases, the LED segments turn off one by one.
- When the last single LED segment flashes, the battery has to be charged immediately.
- When all five LED segments repeatedly flash once with pauses, the battery is in an undervoltage state. The battery must be charged immediately.
- When all five LED segments repeatedly flash ten times with pauses, the battery is in an overvoltage state. Please continue to drive at low speed only.
- The charging process is indicated by sequential flashing of the LEDs. The driving function is blocked when the battery is charging.

Battery indicator on the control panel

Display	Information
●●●●●	Battery is charged
●●○○○	Charge battery if possible

Display	Information
 Sequential indicator	Battery is charging
	Battery charging urgently required
 Flashing*	Battery undervoltage (see page 44)
 10x flashing	Battery overvoltage (see page 44) **Notice:** All five LEDs flash ten times briefly each. They briefly flash ten times again after a pause, etc.

* The left LED flashes.

Further LED display functions

Further LED display symbols are described in the following sections:

- Section "Selecting the speed levels" (see page 21)
- Section "Drive-away lock" (see page 23)
- Section "Troubleshooting" (see page 44)

7.7 Driving functions

7.7.1 Safety instructions

Hazards while driving

⚠ CAUTION

Lack of riding experience

Collision, falling due to errors in handling the product

► Practise using the product on level, open ground first.

⚠ CAUTION

Insufficient support of the seated person

Risk of falling out of the power wheelchair due to lack of restraint

► Always use the installed belt system when driving in public.

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

⚠ CAUTION

Uncontrolled driving behaviour, unexpected sounds or odours

Falling, tipping, collision with persons or nearby objects due to defects

► If any faults, defects or other hazards that can lead to personal injury are detected, the product must be taken out of service immediately. This includes uncontrolled movements as well as sounds that are unexpected or previously not noted or odours that deviate significantly from the state of the product at the time of delivery.

► Contact the qualified personnel.

⚠ CAUTION

Driving in the dark

Risk of collisions with other traffic participants due to lack of lighting

- ► Wear bright clothing or clothing with reflectors.
- ► Install active lighting on your product.
- ► Ensure that the reflectors on the product are clearly visible.

Hazards during use of public transportation, elevators, lifting platforms

⚠ CAUTION

Use of elevators, lifting platforms

Risk of tipping, collision with persons or nearby objects due to incorrect parking

- ► Always turn the power wheelchair control unit off when using elevators or lifting platforms.
- ► Make sure that the brake is engaged.

⚠ CAUTION

Safe positioning when using public transit

Crushing, pinching, impacts, collision with persons or objects, damage to the product due to human error

- ► Only use public transit approved for the transportation of power wheelchairs.
- ► Always observe the current applicable transportation guidelines of the transit company and/or the legal requirements in your country when using public transit.
- ► Always ensure that you are held in place securely when travelling on public transit. To do so, use the wheelchair areas, wheelchair bays and restraint systems provided. Turn the power wheelchair off before the vehicle starts to move.
- ► The transportation of a person sitting in a wheelchair in public transit constitutes a significant safety risk for all participants. We therefore recommend using the seats provided during transportation.
- ► While using public transit, you are not permitted to sit in the wheelchair without an approved personal restraint system.

Danger when carrying across obstacles

⚠ WARNING

Improper lifting by attendants

Tipping over, falling of the user due to lifting on components that come loose or are not intended for lifting

- ► Only ever lift the product with the assistance of a helper. In this case, you and the helper grasp the frame tubes underneath the seat with both hands on either side of the product.
- ► Do not lift the product on components installed with screw connections, or on add-on or plug-on components (e.g. on the back support, leg supports or forearm supports).

Hazards due to defective tyres

⚠ CAUTION

Defective tyres

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

- ► Ensure that the tyres have sufficient tread depth. The tyres must be changed when the tread is less than **1 mm**.

Additional information

INFORMATION

- ► During use of the power wheelchair, electrical discharges (high voltage with low current; discharge via the user) may occur which are caused by factors such as friction. However, these do not represent a health hazard.
- ► Electrostatic discharge may also occur if the power wheelchair is equipped with puncture-proof tires.

7.7.2 Driving notes

General information:

- Prior to each use, the charge level of the batteries must be checked to avoid stalling due to drained batteries.
- Beginners should always drive at a low speed level.
- Always take curves slowly.
- On uneven ground, the driving behaviour of the wheelchair may get out of control. Therefore the speed must always be adjusted to the ground conditions.
- Driving backwards should be limited to manoeuvring and short distances on level ground.

Obstacles (steps, curbs, tracks):

- Always approach obstacles directly from the front (never at an angle with only one front wheel).
- Starting at a **maximum distance of 10 cm** from the obstacle is permissible.
- Always reduce speed to cross over obstacles (e.g. select speed level 1 or 2).
- Note the information on the critical obstacle height (see the section "Technical data"). Crossing over obstacles greater than the height difference specified there is not permitted.
- Avoid "jumping" down from higher surfaces.
- Do not lean out of the wheelchair while crossing obstacles.
- Only cross railway systems and railway tracks in the designated areas.
- Do not negotiate railroad crossings too close to the edge. Otherwise, the wheels could accidentally move off the railroad crossing.

Terrain:

- The speed must be reduced in dangerous areas (e.g. select speed level 1).
- Typical dangerous areas include:
  - Narrow paths along waterways/slopes/cliffs (e.g., quay walls, dikes, etc.)
  - Cramped rooms or areas
  - Steep downgrades (e.g., in the mountains, facing streets)
  - Unsurfaced areas (e.g., on construction sites, intersections, train crossings)
  - Snow-covered or icy areas

Inclines and gradients:

- Note the information on permitted inclines and downgrades (see the section "Technical data"). Driving on inclines or downgrades exceeding the specified values is not permitted. The wheelchair may otherwise tilt and not brake safely. The traction of the drive wheels is also reduced.
- The control device and the motors must be protected against overloading. Therefore, the continuous climbing ability depends on the overall weight (wheelchair weight + user weight + load), as well as the ground conditions, exterior temperature, battery voltage and driving style of the user. In individual cases, the continuous climbing ability may be significantly lower than the value specified.
- In order to navigate downhill gradients safely, the speed must be reduced according to the slope (e.g. select speed level 1).
- Never drive downhill backwards. Only briefly manoeuvring on ramps is permitted (for example, when exiting a vehicle for transporting persons with reduced mobility).
- The product may not be used in salt water.

Using the control device:

- The control system always has to be mounted securely and the joystick position must be correct.
- If the power wheelchair does not drive at full speed even when the battery is fully charged, the selected speed level should be checked. Contact the qualified personnel if increasing the speed level does not solve the problem.

Further instructions for use

- Attaching loads such as backpacks and the like can adversely affect stability. Therefore, suspending additional loads on the wheelchair is not permitted.
- The recommended overall width for category B power wheelchairs when ready for operation is **700 mm (27.5")**. This specification should ensure unhindered use of escape routes, for example. The dimensions of the product do not exceed the recommended value (for more information, see the section "Technical data": see page 47).
- The products in this series generally meet the minimum technical requirements for wheelchairs transportable by train (see page 49).

7.7.3 Switching on and off

⚠ WARNING

Lack of brake functionality

Falling, tipping over, collision with persons or nearby objects due to lack of inspection

► Ensure that the brake release lever is in the driving position every time before you drive (see page 24).

► Check the control unit display to ensure that the brakes are operational and functional (see page 44).

⚠ WARNING

Defective safety functions

Falling, tipping over, collision with persons or nearby objects due to lack of inspection

► Before every use, ensure that the product and its safety functions are in safe and proper condition.

► Only use the product if all safety functions, e.g. the automatic brakes, are functional.

⚠ WARNING

Unexpected emergency stop

Falling, the user may fall out due to sudden emergency braking

► In the event of communication problems in the control device bus system or a power supply defect, the system triggers an emergency stop and thus avoids uncontrolled functions.

► Note that this emergency stop in road traffic could lead to situations that are hazardous for you. Ensure that the control device is maintained regularly (see page 43).

► Note that after every emergency stop, you have to turn the power wheelchair control device on again.

► If the driving function is still not available after turning the control device on again, pushing mode can be activated by releasing the brake (see page 24).

► Consult the qualified personnel promptly if the driving function is not available after restarting.

INFORMATION

In dangerous situations, the product can be turned off at any time using the on/off button. The power wheelchair stops immediately when the button is pressed. Malfunctions such as an insufficient supply of power to the control device are recognised by the software, triggering an emergency stop or reducing the speed of the product.

- Pressing the [on/off] button (see page 16) turns the power wheelchair control unit on or off. The power wheelchair turns off automatically if the control unit has not been used for an extended period of time.
- The power wheelchair brakes automatically and comes to a stop if it is turned off with the [on/off] button while being driven.
- Each time you switch on the control unit, it will be at the previously selected speed level.

7.7.4 Selecting the speed levels

- The control device on the power wheelchair has five speed levels.
- Pressing the [Decrease speed] button lowers the speed level.
- Pressing the [Increase speed] button increases the speed level.
- The pitch of the audible signal changes once the highest or lowest speed level is reached.
- The [Selected speed level] LED display shows the speed level selected.
- Qualified personnel can replace the speed levels with up to five individual driving profiles and adjust the parameters in each driving profile (e.g. acceleration and speed values).

Display	Information
	**Example:** Selected speed level = 3

7.7.5 Driving

⚠ WARNING

Driving on unsuitable surfaces

Risk of falling or tipping over due to operator error

► Do not operate the power wheelchair on very smooth surfaces (e.g. icy surfaces) or very rough surfaces (e.g. gravel or rubble).

⚠ WARNING

Driving on slopes, over obstacles

Falling, tipping over due to user error

► Only cross obstacles or negotiate ascents or descents that are within the permitted maximums. For more information, see the section "Technical data" (see page 47).

► Do not cross over any obstacles while ascending or descending inclines.

► Avoid embarking and disembarking on inclines and slopes.

► Do not drive over stairs.

⚠ WARNING

Longer braking distance

Risk of falling, tipping over or collision due to operator error

► Note that the braking distance is much longer on downgrades than on the level.

► Also reduce speed when driving downhill (e.g. select speed level 1).

INFORMATION

The control unit of the product switches to a safe mode at elevated temperatures and after driving uphill for extended periods of time, limiting the performance of the product.

The user is able to drive the product out of a hazardous situation at any time. After a short time, the product is fully operational again.

The power wheelchair is controlled by moving the joystick:

- The further the joystick is deflected from the centre position, the faster the power wheelchair will drive in this direction.
- The maximum speed at full deflection of the joystick depends on the selected speed level.
- Releasing the joystick automatically activates the brake function, bringing the power wheelchair to a halt.

The mechanical brakes are activated automatically when the power wheelchair comes to a stop so that it cannot roll.

7.7.6 Range

The section "Technical data" contains precise information on the range of the product (see page 47).

The following factors influence the range of the product:

- Battery capacity
- Age of the batteries
- Ambient temperature
- Driving conditions (e.g. terrain profile, surface characteristics, frequently driving over obstacles)
- Charging method
- Type and number of power options
- Overall weight of the wheelchair with selected equipment
- Use of power options

- Body weight of user
- Tyres (air pressure, tyre tread depth)

7.7.7 Anti-tipper

The anti-tipper rollers stabilise the power wheelchair when braking while driving downhill.
The anti-tipper is mounted so that the ground clearance is at least **50 mm**.

7.7.8 Drive-away lock

INFORMATION

This function is enabled.

For questions regarding deactivation, please consult the qualified personnel that adapted the product or the manufacturer's service (see inside back cover or back page for addresses).

The power wheelchair control unit features an electronic drive-away lock. This function is activated/deactivated via the control panel.

Activating the drive-away lock

1) Press and hold the [On/off] switch while the control unit is turned on.
2) Release the [On/off] button after a beep sounds (approx. 1 second).
3) Push the joystick all the way forward until a beep sounds.
4) Push the joystick all the way back until a beep sounds.

→ A long beep confirms that the drive-away lock was activated.
→ The control unit turns itself off.
→ A sequential indicator on the [Selected speed level] LED display indicates that the drive-away lock is active:

Display	Information
Sequential indicator on the "Speed levels" LED display	Drive-away lock

Deactivating the drive-away lock

When the unit is turned on, the [Charge level] LED display is off and the [Selected speed level] LED indicator is in sequential indicator mode.

1) Push the joystick all the way forward until a beep sounds.
2) Push the joystick all the way back until a beep sounds.
3) Release the joystick.

→ A long beep confirms that the driving function is enabled.
→ The [Charge level] LED indicator is lit.
→ The drive-away lock is deactivated and driving is enabled.

Troubleshooting

The drive-away lock remains active if the deactivation movement is not completed correctly.

1) Turn the control device off in order to deactivate the drive-away lock again.
2) Turn the power wheelchair on.
3) Deactivate the drive-away lock again.

7.7.9 Adapting the driving characteristics

⚠ WARNING

Incorrect configuration of the control device

Falling, tipping over, collision due to incorrect parameter settings

► The parameter settings of the control device may only be changed by qualified personnel. The manufacturer of the product and the control device manufacturer are not liable in case of damage caused by parameter settings that were incorrectly configured or not adjusted properly according to the user's abilities.

Adjusting and setting the speed, acceleration and deceleration values to the individual user requirements is performed exclusively by the qualified personnel.

7.8 Enabling/disabling the brakes

⚠ WARNING

Uncontrolled rolling away

Risk of collision with persons or nearby objects due to unlocked brakes

- ► Note that there is no braking function when the brakes are unlocked. The brake function may only be unlocked in the presence of an attendant.
- ► If the user cannot reach the brake release themselves, the brakes can be unlocked by the attendant.
- ► Note that when the power wheelchair is moved on an incline, the attendant who is pushing must provide the required brake force.
- ► Ensure that the brakes are locked each time when parking the power wheelchair.

⚠ WARNING

Improper maintenance, repairs or adjustments on the brake

Falling, tipping, collision with persons or nearby objects due to improper operation

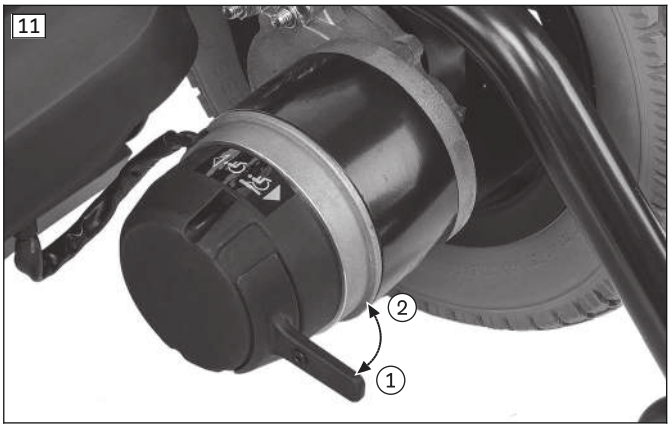
- ► Repairs and adjustments on the brakes may only be made by qualified personnel. Incorrect adjustment may lead to a loss of the braking effect.

INFORMATION

The control device outputs a signal on the control panel when the brakes are unlocked. If this is not the case, there is a malfunction that has to be promptly rectified by the qualified personnel.

In case of a control device failure or an insufficient battery charge level, the power wheelchair can be pushed.

To do so, the brakes are deactivated via the mechanical release. The brake releases are located on the right and left of the driving motors.



Unlocking/deactivating the brakes

1) Turn the control device off.
2) Push the brake release levers down on both driving motors (see fig. 11, item 1).

→ The drive motors are released and the power wheelchair has no braking function.

→ After switching the control device on: The control device recognises that the brakes are unlocked and a warning appears on the control panel. An audible warning sounds in addition.

Locking/activating the brakes

1) Turn the control device off.
2) Push the brake release levers up on both driving motors (see fig. 11, item 2).
3) Switch on the control device.

→ The driving function is activated.

Brakes deactivated: warning on control panel

Display	Information
9x flashing*	Brakes unlocked (see page 44) **Notice:** All five LEDs briefly flash nine times. They briefly flash nine times again after a pause, etc.

* A warning signal will also sound.

7.9 Batteries/charging process

7.9.1 Safety instructions

⚠ CAUTION

Failure to check the charge level before putting into operation

Injury to the user due to stopping suddenly, problems due to unplanned stalling

- ► Check the charge level of the batteries before each use.
- ► Always make sure that the charge level of the batteries is sufficient for the planned distance.
- ► Never drive with the batteries almost fully discharged.
- ► When the batteries are almost fully discharged, charge them promptly.

NOTICE

Unauthorised battery replacement

Battery damage due to unauthorised changes to the product

- ► Replacing the battery or modifying the battery installation position may only be performed by qualified personnel trained by the manufacturer.
- ► The charging profile of the battery charger established at the factory matches the batteries included in the scope of delivery and may not be altered independently.

7.9.2 General

The power wheelchair is equipped with maintenance-free batteries. See the section "Technical data" for the battery capacity.

The batteries are located under the seat of the power wheelchair, beneath the battery cover.

Prolonged driving when the battery is low results in deep discharge and battery damage. Shortly before, the driving speed decreases and the user is warned regarding battery deep discharge (see page 44.

7.9.3 Battery charging information

Batteries may only reach their full capacity after **approx. 20** charging cycles. Only if the full capacity of the batteries has been reached can the power wheelchair achieve the stated driving distance range.

At temperatures of **< 0 °C/32 °F** the battery capacity drops by up to **35 per cent** in relation to the capacity for an outside temperature of **20 °C/68 °F**. This shortens the driving distance range of the power wheelchair accordingly. Moreover, the charge level displayed on the control panel can differ from the actual rated battery capacity to a greater extent.

The following information should be observed for an optimal charging cycle:

- The batteries may be charged at any time regardless of the charge level.
- It takes about **10 to 12 hours** until a discharged battery (only one flashing segment) is fully charged. Subsequently leaving the power wheelchair connected is no cause for concern, since the battery charger has a programmed recharging phase that maintains the full battery charge level.
- If the power wheelchair is used every day, the battery should be charged every night.
- Never discharge the batteries completely (deep discharge).
- After charging the batteries, the battery cable should be disconnected from the plug connection on the controller if the wheelchair will not be used for more than three days. However, the battery cable has to be correctly reconnected each time before charging and before using the power wheelchair (see page 13).
- The batteries will gradually discharge if the wheelchair is not used for extended periods of time. If the power wheelchair is not used for an extended period, the batteries should be charged **once per week** to maintain their capacity.
- Turn the power wheelchair's control device off during charging so that all of the charging current is supplied to the battery.

7.9.4 Battery charger

NOTICE

Improper handling of the battery charger

Damage to the battery charger, damage to the battery due to user error

- ► Only use battery chargers from Ottobock, which have been verified and approved by the manufacturer for use with the respective batteries (observe information on the battery charger).
- ► Ensure that the information on the battery charger nameplate matches the country-specific voltage of the respective mains grid.
- ► Do not use the battery charger outdoors.
- ► Only use the battery charger within the specified temperature and humidity limits.
- ► Place the battery charger on a level surface.
- ► Protect the battery charger against direct sunlight when it is set up near a window.
- ► Avoid overheating of the battery charger.
- ► Switch the control device off during the charging process so that all of the charging current is fed into the battery.
- ► Avoid dust, dirt and moisture.
- ► Only clean the battery charger with a dry cloth.

The battery charger is designed for maintenance-free and low-maintenance batteries.

Please see the instructions for use supplied with the battery charger for further details on use and on the LED displays.

7.9.5 Charging the batteries

⚠ WARNING

Improper handling of the battery charger

Risk of electric shock due to contact with live components

- ► Do not touch live electrical components. The battery charger and its cables are live when the charger is on.
- ► Do not remove any insulation or protective covers.

⚠ WARNING

Improper handling of battery chargers

Risk of injury due to negligence in supervision; damage to the battery charger

- ► Battery chargers may be used only by persons who have been instructed in their proper and safe use. The user must have read and understood the corresponding instructions for use.
- ► Keep the battery charger out of reach of children.
- ► Children and persons with limited cognitive abilities may use battery chargers only under the supervision of a responsible person with the relevant knowledge.

⚠ WARNING

Discharge of explosive gases while charging the battery

Burns due to explosion after a user error

- ► Ensure sufficient ventilation in enclosed rooms.
- ► Do not smoke or light a fire.
- ► Sparks must be avoided. Switch the battery charger off and disconnect the mains plug before you disconnect the battery.
- ► Do not cover the air vents in the trim.
- ► Only use battery chargers that have been verified and approved by the manufacturer for use with the respective batteries (observe information on the battery charger). Failure to comply can result in a battery explosion and subsequent health hazards.

⚠ WARNING

Insufficient ventilation of the battery charger while charging

Burns due to the battery charger overheating/catching fire

- ► Make sure the battery charger cannot overheat during the charging process.
- ► Ensure that the cooling fins/ventilation slots on the back of the device are not covered.

NOTICE

Improper charging

Damage to the battery due to user error

- ► Please note the manufacturer's instructions for the batteries being used. Follow the battery manufacturer safety instructions.
- ► Avoid deep discharge of the battery. The manufacturer does not assume any liability for damage due to deep discharge.
- ► Charge the battery immediately when the control panel indicates a deep discharge (see section "Buttons and display functions").

INFORMATION

Charge the batteries of the power wheelchair for a longer time (over the course of 15 to 20 hours) once a week to increase the battery service life.

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Charging process via the control panel

1) Turn the control device on the power wheelchair off.
2) Connect the battery charger plug to the charging receptacle on the power wheelchair control panel (see fig. 12, item 1).
   INFORMATION: Please note that charging via the charging receptacle on the control panel may only be carried out at a current of 10 A max.
3) Connect the battery charger to the mains network.
   → The charging process starts automatically and the battery charge level is indicated by the battery indicator on the control panel (see page 17) and on the battery charger.
4) Disconnect the charging plug from the control panel after charging is complete.
   INFORMATION: The power wheelchair cannot be driven while the charging plug is connected.
5) Disconnect the charging plug of the battery charger from the mains network after charging.
6) Turn the power wheelchair control device on. The power wheelchair is ready to be used.

7.10 Seat

7.10.1 Safety instructions

⚠ WARNING

Seat cushion and back support upholstery catching fire

Burns due to user error

- ► The seat cushion and back support upholstery as well as arm pads 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.

NOTICE

Improper use

Damage to the seat surface due to user error

- ► Do not allow the seat to come into contact with sharp objects. This also applies to animals such as pet cats with sharp claws.
- ► If the seat is expected to come into contact with liquid, such as spilt drinks or episodes of incontinence, always use it in conjunction with a liquid-repellent cover.
- ► Only use the Ottobock incontinence covers for this product. Contact the qualified personnel to obtain a spare Ottobock cover.

7.10.2 Seat cushion

Wheelchair seat cushions are used for pressure redistribution while sitting. Depending on the version, the seat cushion contains a resilient foam base and possibly additional gel or air-filled inserts. The foam base is anatomically shaped in some cases.

The covers and breathable materials reduce shear forces and ensure a high level of seating comfort for the user.

The seat cushion can be removed for cleaning. Following cleaning, the seat cushion is secured to the seat by a hook-and-loop fastener to prevent sliding.

Detailed information regarding use, cleaning and maintenance can be found in the enclosed instructions for use for the seat cushion.

7.11 Positioning belt (lap belt)

The positioning belt (lap belt) prevents the user from sliding out of the seat.

7.11.1 Adaptation

⚠ CAUTION

Improper adjustments

Injuries, malpositions, user discomfort due to adjustment changes

- ► The positioning belt (lap belt) is an important part of a seating unit/seating solution. Do not modify the installation position and basic settings established by the qualified personnel.
- ► In case of problems with these adjustments (such as an unsatisfactory sitting position), promptly contact the qualified personnel who fitted the product.
- ► **Immediately** consult the qualified personnel if you detect signs of discomfort or fear when the positioning belt (lap belt) is applied.
- ► Have the basic settings of the positioning belt (lap belt) checked regularly. Adjustments may be required due to the growth of the user or because of changes in the course of the disease.

Small length adjustments of the belt by the user or an attendant (e.g. for clothing of different thickness) are possible.

The belt length can be adjusted on one side of the positioning belt (lap belt). Excess belt length is taken up by the plastic slider.

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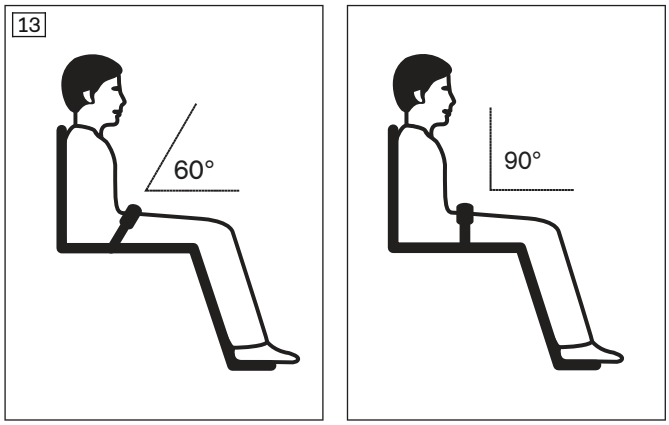

Positioning the user in the seat

- 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).
- The lap belt should be at an angle of about 60° to 90° to the seat surface and run in front of the pelvic bone.

Possible positioning errors

- The lap belt is positioned above the user's pelvis in the area of the soft tissue 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 assembly/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.

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Adjusting the belt length

1) Position the user in the seat. Follow the positioning instructions in the previous section to do so.
2) Fasten the belt (see next section).
3) Position the two halves of the buckle in front of the upper body, centred over the thighs.
4) Position the belt buckle at a right angle (see fig. 14, item 1).
5) Lengthen or shorten the belt end as needed for adjustment to the desired length (see fig. 14, item 2).
6) Release the buckle.
7) Verify the adjustment.
   WARNING! The positioning belt (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.

7.11.2 Use

⚠ WARNING

Incorrect application of the belt

Throttling, suffocation or strangulation due to sliding forwards in the product

- ► The positioning belt (lap belt) must be put on after getting into the product and used at all times while using the product.
- ► Ensure that the buckle lies in the middle of the body.
- ► Remove any objects or clothing which get caught.

⚠ CAUTION

Improper use

Falling, user falling out due to improper use

- ► Only open the positioning belt (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 belt.
- ► Information about subsequent acquisition and mounting is provided by the qualified personnel that handed the product over to you.

⚠ CAUTION

Medical risks

Injuries, pressure sores due to application errors

- ► Regular measures for pressure redistribution and skin examinations are required. Should skin irritation and/or skin reddening occur, consult the qualified personnel who adapted and adjusted the product. Do not continue using the product without consultation.

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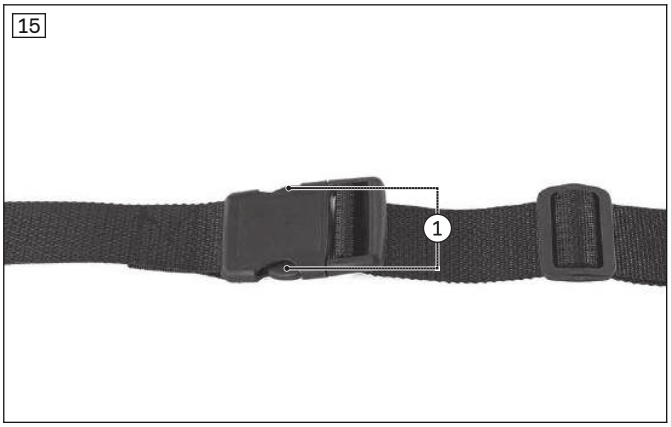

Putting on the positioning belt (lap belt)

> **Prerequisite:** Note the positioning instructions in the previous section.

1) Push the two halves together until you hear the snap buckle engage (see fig. 15, item 1).
   WARNING! The positioning belt (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.
2) Pull to check that it is secure.

Opening the positioning belt (lap belt)

1) Press the snap buckle on both sides (see fig. 15, item 1).
2) Open the belt and lay it to the side.

Cleaning the positioning belt (lap belt)

INFORMATION

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

- Depending on the model, belts/straps with plastic buckles can be washed in the washing machine between **40 °C** and **60 °C**.
- **Recommendation:** Use a laundry bag or net and mild detergent.
- Alternatively, the belt straps can be cleaned by gently dabbing them with warm soapy water (with some disinfectant) or carefully wiped 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.

7.12 Additional options

The product can be equipped with additional, optional components. The options are permanently mounted on the product by qualified personnel or the manufacturer and preconfigured by the qualified personnel during delivery.

7.12.1 Lighting

Information on replacing broken lamps: see page 43.

7.12.1.1 Lighting for road traffic

The power wheelchair can be equipped with a lighting set.

The warning flashers, the right and left direction indicators and the light are operated via the supplied lighting push-button module.

The installed lighting permits driving in road traffic during hours of darkness and is only approved for use on motorised wheelchairs.

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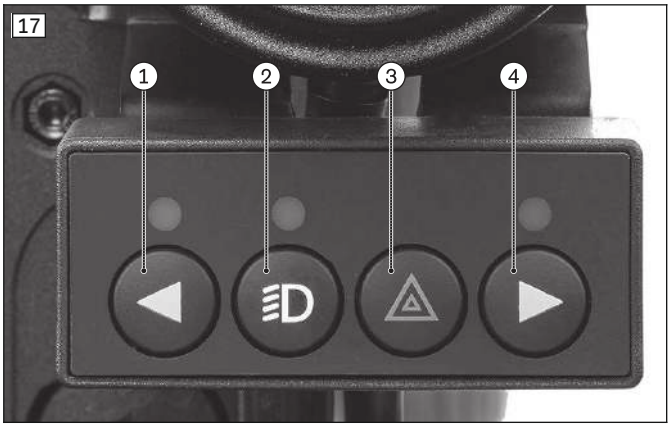
Front/rear lighting

The front lighting consists of two LED front lights with integrated LED direction indicators (see fig. 16, left).

The rear lighting consists of two LED rear lights with integrated LED direction indicators (see fig. 16, right).



Overview of the lighting push-button module

1 [Direction indicator left] button (with LED display)

2 [Lights on/off] button (with LED display)

3 [Warning flashers on/off] button

4 [Direction indicator right – on/off] button (with LED display)

[Lights on/off] button

The front and rear lights are activated/deactivated by pressing this button.
When the lighting is switched on, the LED above the button is illuminated.

[Warning flashers on/off] button

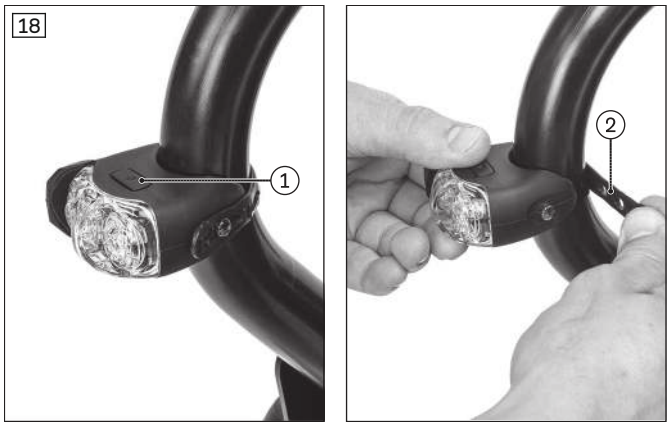
All four warning flashers are activated/deactivated when this button is pressed.

[Direction indicator right] and [Direction indicator left] buttons

Pressing these buttons activates/deactivates the respective front and rear direction indicators.
When the function is active, the respective LED above the button is illuminated.

7.12.1.2 Lighting (not intended for road traffic)

The power wheelchair can be equipped with footpath lighting. The installed lighting makes driving on footpaths easier during hours of darkness. Power wheelchairs with this equipment are not permitted for use in road traffic.



Using the lights

Pressing the [Lights on/off] button activates or deactivates the lights (see fig. 18, item 1).

The lighting can be removed by opening the rubber band (see fig. 18, item 2).

As a rule, the lighting is mounted on the front right side in the driving direction.

The integrated batteries are charged by connecting the supplied USB cable to a PC or a battery charger with a USB connection (battery charger not included in the scope of delivery).

7.12.2 Control panel holder

INFORMATION

By default, the control panel is mounted on the side specified in the order. It can also be mounted on the other side of the power wheelchair later on if the user so desires. Please contact the qualified personnel who delivered the product to you.

The power wheelchair is equipped with a fixed control panel holder as standard equipment. Alternatively, the product can be equipped with a swing-away control panel holder.

Swing-away control panel holder

The control panel holder makes it possible to drive the power wheelchair under a table or closer to an object.

The control panel holder can be rotated up to the armrest.

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Swinging away the control panel holder

1) Apply some pressure to push the control panel holder to the side.
   → The pivot element is released.
2) Swing the control panel holder away to the side.
   INFORMATION: The pivot element locks in place again when the holder is rotated back to the original position.

Removing/installing the control panel

The control panel cannot be removed from the control panel holder in standard configuration.

If the power wheelchair is supplied with a holder for attendant control (option), the control panel/push-button module can be detached from the control panel holder by loosening the thumb screws (see next section).

7.12.3 Holder for attendant control

NOTICE

Tearing of the cable when folding the back support

Damage to the cable due to incorrect positioning of the control panel/push-button module

- ► Take the control panel/push-button module for lighting off the holder for attendant control each time before folding down the back support and then place it onto the folded back support.
- ► Temporarily attach the control panel/push-button module for lighting to the control panel holder on the arm support if required.
- ► After raising the back support, you can attach the control panel/push-button module for lighting to the back support again.

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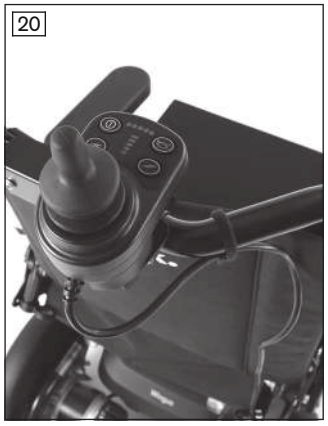

The power wheelchair can be equipped with a holder for attendant control.

The holder is used to attach the power wheelchair's control panel (see fig. 20, left) and, if required, also the push-button module for lighting option (see fig. 20, right) to the push bar on the back support. This allows the power wheelchair to be controlled by an attendant.

Due to the short length of the cable, the control panel/push-button module has to be temporarily removed from the holder for attendant control before folding down the back support.

7.12.3.1 Changing the position of the control panel/push-button module

INFORMATION

- ► When needed, the attendant can independently switch the position of the control panel/push-button module between the control panel holder on the arm support and the holder for attendant control. An overview is provided below.
- ► As the attendant, you must be instructed in how to change this position.
- ► Note that the control panel/push-button module is always attached to the holder for attendant control or the control panel holder on the arm support with the supplied thumb screws.
- ► Pay particular attention to the need for proper cable attachment on the back support or the arm support tube. Learn how to route and attach the cable securely with no risk of pinching when changing the position of the control panel/push-button module.
- ► Observe the safety notice at the start of the section.

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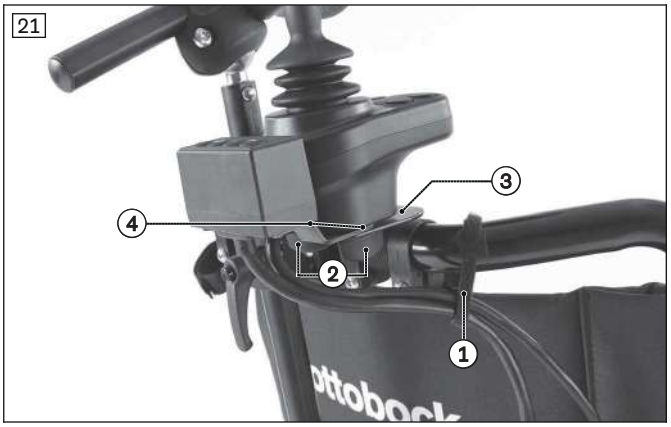

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Releasing the control panel/push-button module (option) from the holder for attendant control

1) Detach the cable from the back support tube. Open the hook-and-loop strap of the cable clamp to do so (see fig. 21, item 1).
2) Loosen the thumb screws (see fig. 21, item 2).
3) Now the control panel (see fig. 21, item 3) and, if installed, the push-button module with retaining plate (see fig. 21, item 4) can be detached from the holder for attendant control.
4) Guide the control panel/push-button module down behind the back support.
5) Pull the cable of the control panel/push-button module (see fig. 22, item 1) under the seat and pass it forward beside the arm support (see fig. 24).

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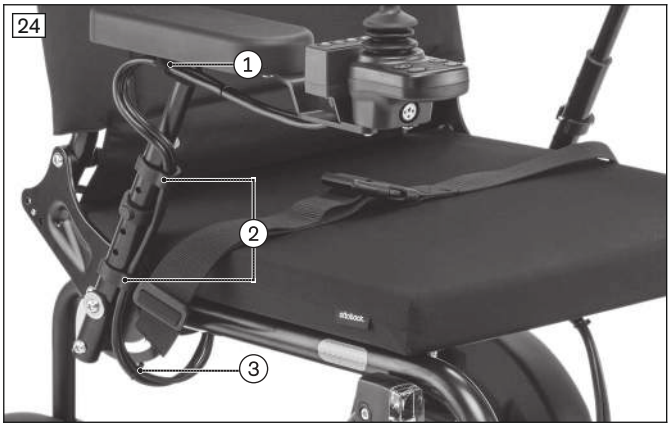
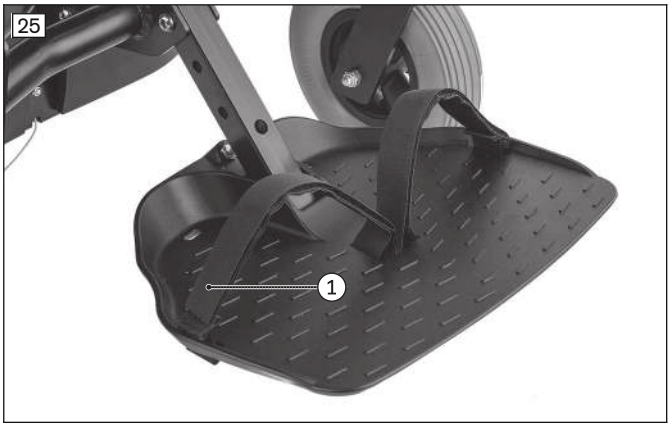


Attaching the control panel and push-button module for lighting (option) to the control panel holder

1) Attach the control panel and, if applicable, the push-button module for lighting to the control panel holder with the thumb screws. Proceed as follows:
   → Position the control panel on the control panel holder and screw it on with the thumb screws (see fig. 23, item 1/2).
   → **If installed:** Position the push-button module for lighting with the retaining plate between the control panel and the control panel holder (see fig. 23, item 3/4). Screw the retaining plate to the control panel holder with the thumb screws (see fig. 23, item 2/4).
2) Route the cable of the lighting set underneath the arm support pad. Attach with hook-and-loop strap at the first mounting point (see fig. 24, item 1).
3) Route the cable further along the arm support tube. Secure the cable with two cable clamps (see fig. 24, item 2).
4) Route the cable so it runs underneath the seat plate. Attach the cable to the control panel cable with a cable tie (see fig. 24, item 3).
5) The cables of the control panel/push-button module run close to the arm support tube (see fig. 24).

7.12.4 Foot positioning belt

The power wheelchair can be equipped with one or two positioning belts for the feet. The positioning belt secures the user's feet on the foot plate.



Using the foot strap

1) Open the hook-and-loop closure on the positioning belt (see fig. 25, item 1).
2) Place the user's foot onto the foot plate with full contact.
3) Pass the foot strap over the back of the user's foot from above (not illustrated).
4) Fasten the strap above or beside the foot with hook-and-loop (see fig. 25, item 1). Do not apply the foot strap too tightly.

7.12.5 Chest and shoulder support

The power wheelchair can be equipped with a sternum harness.

The sternum harness stabilises and positions the upper body in relation to the back support. The midsection of the pad supports the upper body and holds it in an upright position (see fig. 26, item 1).

The following information helps with the adjustment and use of the belt system.

Complete information about use, care and maintenance is found in the instructions for use included with the belt system.

7.12.5.1 Adaptation

⚠ CAUTION

Improper adjustments

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

- ► The belt system is an important part of an individual seating unit/seating solution. Do not modify the installation position and basic settings established by the qualified personnel.
- ► In case of problems with these adjustments (such as an unsatisfactory sitting position), promptly contact the qualified personnel who fitted the product.
- ► **Immediately** consult the qualified personnel if you notice signs of discomfort or fear when using a belt system.
- ► Have the basic 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.

Small length adjustments of the belt by the user or an attendant (e.g. for clothing of different thickness) are possible.

Positioning the user in the seat

- Place the user in an upright, 90° seated position.
- Ensure that the back is up against the back support pad.
- The chest belt is intended to support the area over the sternum (breastbone) from the front. This is accomplished when two fingers fit comfortably between the top of the belt and the armpit.

Possible positioning errors

- The user's hips are not secured with a separate positioning belt (lap belt) (see page 28).
- If the positioning system is too loose, the user can shift forward/slide down.

- The positioning system collides with devices, accessories or supply hoses during installation and adjustment, restricting their functionality.
- The positioning system makes contact above the user's sternum (too high) or in the area of the soft part of the stomach (too low).

Adjusting the belt length

Notes on correct adjustment are found in the instructions for use included with the belt system.

7.12.5.2 Use

⚠ WARNING

Incorrect application

Throttling, suffocation or strangulation due to sliding forward/down in the product

- ► The belt system must be used at all times while riding in the product. Always use the belt system in combination with a correctly applied and adapted positioning lap belt to stabilise the pelvis.
- ► The belt system has to fit closely but not too tightly so the user is not injured. Sliding two fingers comfortably between the positioning system and upper body should be possible.
- ► Ensure that the buckle lies in the middle of the body.
- ► Ensure that the belt system is not too close to the throat. Otherwise the upper straps have to be readjusted.
- ► Remove any objects or clothing which get caught.

⚠ CAUTION

Incorrect application

Risk of pressure points, constriction due to user error

- ► **Applies only to upper body straps/vests, chest/shoulder straps:** Follow the positioning instructions. Ensure that the belt system lies against the chest evenly on both sides and is not too tight.
- ► **Applies only to upper body straps/vests, chest/shoulder straps:** Ensure that the belt system supports the area of the upper body from the front. The belt system has to be applied/positioned so that the neck and area of the throat remain free at all times.

⚠ CAUTION

Improper use

Falls, user falling out due to improper use

- ► Only open the belt system and the applied 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 belt system.
- ► Information about subsequent acquisition and mounting is provided by the qualified personnel that handed the product over to you.

⚠ CAUTION

Medical risks

Injuries, pressure sores due to application errors

- ► Regular measures for pressure redistribution and skin examinations are required. Should skin irritation and/or skin reddening occur, consult the qualified personnel who adapted and adjusted the product. Do not continue using the product without consultation.

Applying the belt system

Notes on correct application are found in the instructions for use included with the belt system.

Cleaning the belt system

- Depending on the model, belts/straps with plastic buckles can be washed in the washing machine between **40 °C** and **60 °C**.
- **Recommendation:** Use a laundry bag or net and mild detergent.
- Alternatively, the belt straps can be cleaned by gently dabbing them with warm soapy water (with some disinfectant) or carefully wiped 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.

7.12.6 Storage bag

⚠ CAUTION

Product contains magnets

Injuries, damage due to strong magnetic field

► The storage bag has a magnetic closure. Magnets may negatively influence the functioning of electronic medical devices and other electronic equipment or appliances. Maintain a safe distance from the magnets.
Note applicable manufacturer information (e.g. for a medical implant, electronic device, magnetic stripe card).

► Magnets have a powerful attractive force and can cause crushing if handled without due care. Watch out for fingers or skin in the closure area.

NOTICE

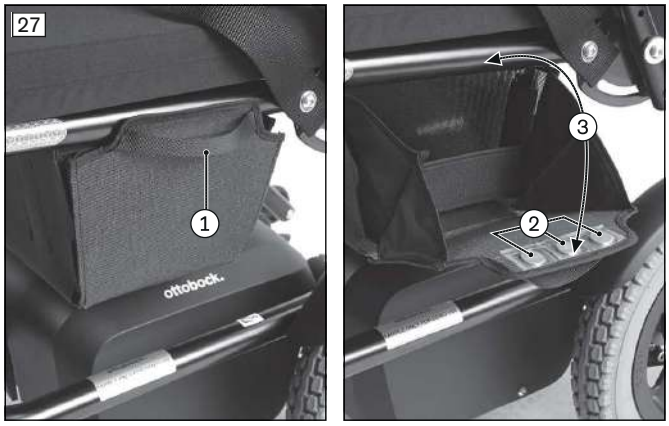
Overloading the storage bag

Damage to product due to breakage

► The maximum load for the storage bag is **3 kg**.

► Please note that the maximum load of the overall product must not be exceeded even after loading the storage bag (see page 47).

The power wheelchair can be equipped with a storage bag. It is located under the seat.



Using the storage bag

1) To open the storage bag, pull on the loop (see fig. 27, item 1) on the side until the magnetic closure is released (see fig. 27, item 2).
2) Fill the storage bag.
3) To close the magnetic closure, fold it against the tube of the base frame (see fig. 27, item 2/3).

7.12.7 Overview of additional options

INFORMATION

These and other optional add-on components are found on the corresponding order form.

The power wheelchair is equipped with additional options:

- Splash guard for drive wheels
- Gel batteries
- Beverage holder
- Mobile phone bag
- Crutch holder
- Adapter for head support mounting kit

7.13 Disassembly and transport

When unoccupied, the power wheelchair is suitable for transportation in a car or airplane.

7.13.1 Safety instructions

⚠ WARNING

Improper transport in aircraft

Burns, explosion or damage to the battery due to failure to observe the rules for transportation

- ► Follow the rules of the IATA (International Air Transport Association) and the respective airline when transporting the power wheelchair in an aircraft. Before checking the power wheelchair as luggage, the connection between the battery and control device always has to be disconnected. To do so, disconnect the plug of the battery cable from the controller and insulate the battery cable plug to prevent short circuits.
- ► Note that batteries, especially if they are not leak proof and have to be transported upright, need to be removed and packaged to exclude the possibility of leaks/short circuits.
- ► Visit www.iata.org for further information. The manufacturer recommends contacting the airline directly before every flight to obtain information regarding special transport regulations.
- ► 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.

⚠ CAUTION

Securing the power wheelchair insufficiently during transport

Crushing, pinching of body parts due to failure to observe transportation instructions

- ► During transportation in vehicles or aircraft, on lifting platforms or in lifts, turn the control unit of the power wheelchair off and lock the brake.
- ► The power wheelchair must be secured in accordance with the regulations for the transport device.
- ► During transport in a vehicle, the power wheelchair must be secured sufficiently with cargo straps. Only attach the cargo straps to the corresponding transportation eyelets and specified tie-down points.

NOTICE

Incorrect lifting of the power wheelchair

Damage to the power wheelchair due to failure to observe transportation instructions

- ► Be sure to lay the back support down onto the seat surface or place it in the vertical position before loading and for transporting the power wheelchair.
- ► Only use sufficiently large hoisting devices for loading or perform this work with the aid of a helper for support. In this case, you and the helper grasp the frame tubes underneath the seat with both hands on either side of the product. See the section "Technical data" for the weight of the power wheelchair.
- ► Do **not** attach the hoisting devices on moveable or adjustable components.

7.13.2 Reducing the transportation size

The transportation size can be reduced in a few steps to make transporting the product easier.

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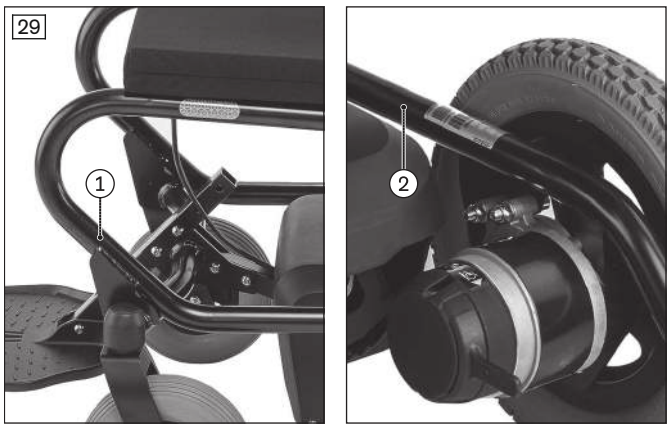
Preparing for transport

1) Fold up the foot plate on the leg support (see page 15).
2) Fold up the arm supports (see page 14).
3) Pull out the clamping pins (clamps) on the back support and fold the back support down onto the seat surface (see page 15). Reinsert the clamping pins (clamps).
4) Fold the arm supports back down (see page 14).
5) Pull out the clamping pins (clamps) on the arm support by hand and move the arm support to the lowest position (see page 14. Reinsert the clamping pins (clamps).
6) Alternatively, the arm supports can be taken off and set onto the back support (see fig. 28).

7.13.3 Preparing for transport



Transporting the power wheelchair

1) Lift the power wheelchair onto its transport location. **INFORMATION: When loading without hoisting devices, only perform the work with the aid of a helper for support. With your helper, grasp the frame tubes underneath the seat with both hands on either side of the product.**
2) Turn the control device off (see page 16 ff.).
3) Verify brake locking. **If the brake is not locked:** Lock the brake (see page 24).
4) Secure the power wheelchair on the means of transport with tension straps passed around the frame tube (see fig. 29; recommended front attachment points: item 1, recommended rear attachment points: item 2).

7.14 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.
- ► If the product is to be used as a seat in a vehicle for transporting persons with reduced mobility, the safety elements offered by the manufacturer and appropriate fastening and personal restraint systems must be used. For more information, please refer to our brochure with the order number 646D158.
- ► Never transport more than one person in the product.
- ► Note the approved climbing ability for driving on the ramp to the vehicle for transporting persons with reduced mobility (see the section "Technical data"). Also make sure that you can handle the product safely within the permissible conditions for use.
- ► Turn off the control device after positioning the power wheelchair in the vehicle for transporting persons with reduced mobility.
- ► Only use the power wheelchair in a vehicle for transporting persons with reduced mobility with the back support in a vertical position.
- ► Observe the limitations regarding installed options (see page 41).

⚠ 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.

The product has been tested by the manufacturer according 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 47).

7.14.1 Required accessories

Four belt loops are necessary in order to use the product as a transport seat in a vehicle for transporting persons with reduced mobility (tested according to ISO 10542-1 or comparable test standards). The qualified personnel who fitted the wheelchair can provide more information.

Required materials

- Four belt loops (e.g. from the manufacturers Q'STRAINT or Unwin Safety Systems, tested according to ISO 10542-1)

7.14.2 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 on your product described below.

⚠ 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:

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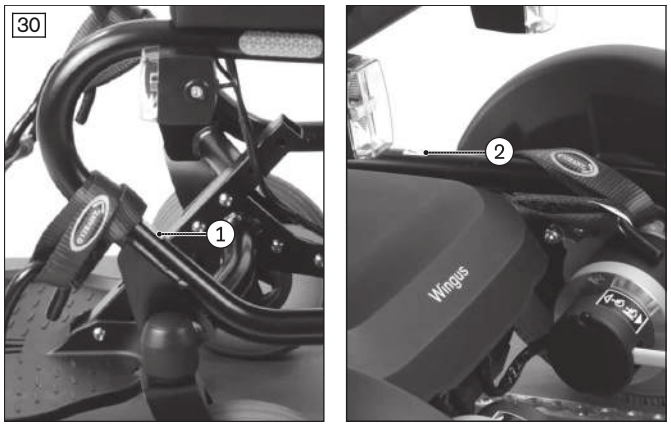

Finding fixation points

- The stickers for labeling the front fixation points are found on the front of the frame tube above the caster attachment device on each side (see fig. 30, item 1).
- The stickers for labeling the rear fixation points are found on the middle of the frame tube in line with the front of the drive wheel on each side (see fig. 30, item 2).

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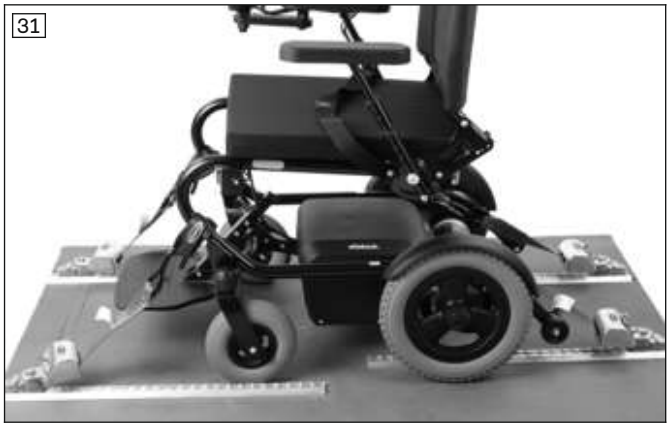

Securing the power wheelchair in the vehicle

1) Position the power wheelchair in the vehicle for transporting persons with reduced mobility. For more information, refer to section 5 in the brochure “Transporting persons with reduced mobility”, order number 646D158=*.
2) Turn the control device off (see page 21).
3) Verify brake locking. Engage the brakes if needed (see page 24).
4) Attach the vehicle side wheelchair restraint belts (see next illustration).

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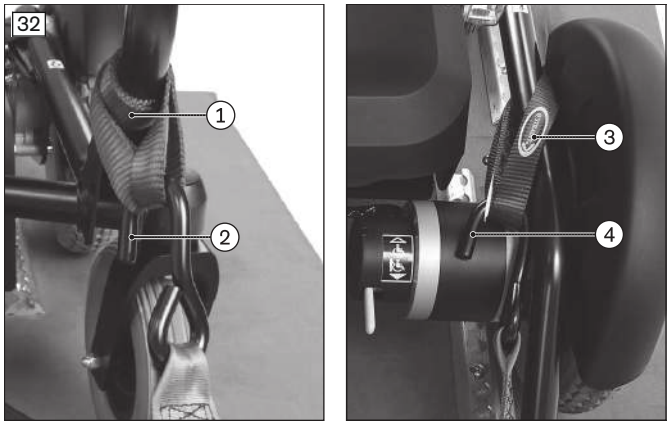

Attaching belt loops and attachment straps

1) **Front fixation points:** Attach one belt loop around each of the frame tubes on the left and right, wrapping them twice around the frame tubes at the marked position (see fig. 32, item 1).
2) Engage the hook of the vehicle side wheelchair restraint belt in both ends of the belt loop from the outside on the left and right sides respectively (see fig. 32, item 2).
3) **Rear fixation points:** Attach one belt loop around each of the frame tubes on the left and right, wrapping them once around the frame tubes at the marked position (see fig. 32, item 3).
4) Engage the hook of the vehicle side wheelchair restraint belt in both ends of the belt loop from the outside on the left and right sides respectively (see fig. 32, item 4).
5) 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. 31).

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 three-point restraint has to be realised entirely on the vehicle:
  – The lap belt of the personal restraint system is usually attached by qualified personnel on the bottom of the vehicle behind the power wheelchair.
  – The shoulder harness 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.

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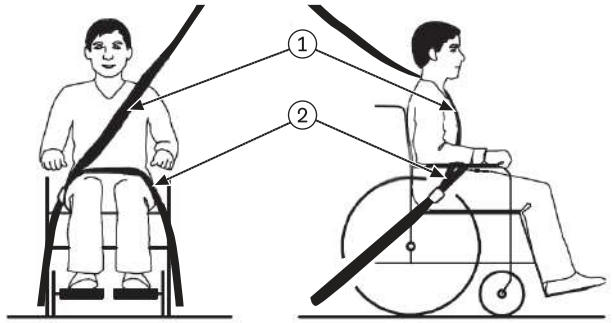


- The straps of the personal restraint system must always be routed close to the user's body. The straps must not be routed over the side panels and wheels (see fig. 33 item 2).
- The shoulder harness must always be routed over the user's shoulder. The qualified personnel must secure the shoulder harness above and behind the user (see fig. 33, item 1).
- The belt strap must not be twisted on the user's body.
- The wheelchair restraint belts secured to the vehicle floor must be stretched as taut as possible once they are attached.

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) Attach each of the ends of the restraint lap belt on the vehicle bottom in the manner described above.
   INFORMATION: The power wheelchair's lap belt should be used in addition to position the passenger during transportation.
3) Secure the shoulder harness above and behind the user.

7.14.3 Restrictions for use

⚠ WARNING

Risk of accidents and injury due to 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. Please observe the following table.
- ► Stow all dismantled components securely in the vehicle for transporting persons with reduced mobility.
- ► Please note that certain settings on the product exclude the use of the product in a vehicle for transporting persons with reduced mobility.

Accessory[1)]	Transportation in a vehicle for transporting persons with reduced mobility is not possible	Detach option	Secure option on product
Head support adapter mounting kit		X[2)]	
Storage bag under the seat			X[3)]
Crutch holder	X[4)]		
Beverage holder			X[3)]
Pocket for mobile phone			X[3)]
Control panel holder, swing-away, height-adjustable			X
Holder for attendant control		X[5)]	
Foot positioning belt			X[6)]

[1)] The following list provides an overview. Not all accessories are installed on all products.

[2)] The adapter may remain on the wheelchair; the head support must be detached.

[3)] The options may remain on the product. The storage bag must be emptied. Beverages and mobile phones are not permitted on the product.

[4)] The crutch holder interferes with securing in the vehicle for transporting persons with reduced mobility. Only qualified personnel can permanently detach the crutch holder.

[5)] The holder for attendant control may remain on the product. The control panel and the push-button module for lighting must be removed from the holder and temporarily attached to the control panel holder on the arm support.

[6)] Positioning belts for the feet may remain on the product, but must **not** be used by the user during transportation.

7.15 Care

7.15.1 Safety instructions

⚠ 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.
- ► Water must not come into direct contact with the electronics, motor or batteries under any circumstances during cleaning. Never use a water jet or high-pressure cleaning apparatus to clean the product.
- ► To avoid contamination with germs, clean seat cushions and back support upholstery whenever they get soiled.
- ► Check the driving behaviour of the product after cleaning it.

7.15.2 Cleaning

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

- Clean the control panel, battery charger, armrest and trim components with a damp cloth and mild cleaning solution.
- Clean the back support upholstery with a dry brush. For cleaning the seat cushion, observe the separate seat cushion instructions for use.
- Use a damp plastic brush to clean the wheels and frame.
- Do not use any aggressive cleaners, solvents or hard brushes etc.
- Do not spray the product with a pressure washer.
- Observe additional cleaning instructions in the section "Positioning belt (lap belt)" (see page 28) and in the section "Sternum harness" (see page 34).

7.15.3 Disinfection

- Thoroughly clean the product before disinfecting.
- Only use colourless water-based disinfectants. Observe the instructions for use provided by the manufacturer.

8 Maintenance and repair

8.1 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

Failure to inspect important product features

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

- ► Check the clamping pins (clamps) on the arm supports and back support for visible signs of damage and to ensure they are tight at least **once per month**.

- The function of the product should be checked **before each use**.
- The product may not be used if defects are noted. This applies in particular in case of instability of the product or altered driving characteristics as well as problems with the user's seating position or the stability of the seat. Inform the qualified personnel promptly for the rectification of defects.
- This also applies if loose, worn, bent or damaged components, cracks in the frame or broken frame components are identified.
- Some maintenance tasks can be carried out to a specified extent by the user at home. Further information is found in the section “Maintenance intervals” (see page 43).

- Failure to maintain the product can lead to injuries for the user of the product.

8.1.1 Maintenance intervals

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

Component	Activity	Prior to every use	Weekly	Monthly
Drive wheels	Check that wheel mounts are securely fastened			X
	Check that wheels rotate freely and without axial runout			X
	Check directional stability of the power wheelchair	X		
Caster wheels	Check the steering play of the caster wheels			X
	Check that the fork is seated in the adapter without play			X
	Check that wheels rotate freely and without axial runout			X
	Check that the mounting nuts are tight			X
Seat	Check that the seat plate is securely fastened	X		
Leg support	Check that it is securely fastened			X
	Check for damage to foot supports			X
Padding/straps	Ensure that padding is in perfect condition			X
	Check attachment straps for signs of wear			X
	Check belt buckle for functionality	X		
Tyres	Check for sufficient tread depth (min. 1 mm/0.04")			X
	Check for damage			X
Batteries	Check battery charge level	X		
Lighting (option)	Check for external damage		X	
	Verifying functionality	X		
Electronics	Check that the control device is functioning properly (inform qualified personnel of any error messages on the control panel)	X		
	Check whether the battery charger is functioning properly (inform qualified personnel of any LED error messages)		X	
	Check plug connections			X
Brake	With brake unlocked: check whether the indicator on the control panel is flashing and an audible warning is emitted	X		
	With brake engaged: check the braking function by trying to push the wheelchair			X
Arm support	Check that mounting screws are tight			X
	Check that screw connections between the forearm support and control device are tight	X		
	Check forearm support for damage		X	
Product	Check the legibility and completeness of all labels and labeling on the product			X

8.2 Repair

⚠ WARNING

Prohibited repairs

Severe user injuries, damage to the product due to adjustment and installation errors

► Only carry out the repairs described in this section. All other repairs may only be carried out by the qualified personnel.

8.2.1 Replacing defective lights

The LED lighting is maintenance-free. If repairs are required, the qualified personnel who fitted or delivered the wheelchair can help.

8.2.2 Replacing the battery

Batteries may only be replaced by qualified personnel.

8.3 Troubleshooting

INFORMATION

In the event of communication problems in the bus system of the controls, the system triggers an emergency stop and thus prevents any uncontrolled functions.

- ► Note that after every emergency stop, you have to turn the power wheelchair control unit on again.
- ► If the driving function is still not available after turning the control unit on again, activate pushing mode by releasing the brake.
- ► Inform the qualified personnel immediately.

Faults are displayed on the LED display fields on the control panel. The following table shows the individual notifications as well as the associated fault sources and possible causes and measures.

Qualified personnel should be contacted if the measures described here do not resolve the faults completely. Qualified personnel can read the exact error codes with a handheld programming device and can perform a targeted system analysis.

The control device stores all errors that have occurred in a list. The qualified personnel reads this information, for example during a general overhaul of the power wheelchair. The qualified personnel determines future service and maintenance intervals based on the saved data.

8.3.1 Types of notifications

Warning

A warning indicates a status or malfunction of one or several components of the power wheelchair. The function of components without errors is not restricted.

Error

An error impairs one or more functions of the power wheelchair. The power wheelchair and its functions are not fully operational until the error is corrected.

8.3.2 Procedure for warnings and error messages

- If a warning or error message appears, the power wheelchair can often no longer be driven. In this case, the error message must be noted and the control device has to be switched off.
- If the error message continues to appear after switching on the control device, the control device **must** be switched off again and the qualified personnel informed of the error message immediately.

8.3.3 Wheelchair control unit error overview

Battery indicator

All five LEDs on the battery indicator flash. A defined number of rapid flashes denotes a different error in each case:

Error display	Information
	**Example:** All five LEDs flash seven times – longer pause – all LEDs flash seven times ... = See table, line 7

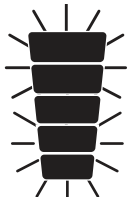
Flashing LED	Error/warning	Cause	Possible measure
 1x flash	Battery undervoltage	Battery deep discharge Battery cable malfunctioning or faulty connection to the battery	Charge as soon as possible Check the connection to the battery (charge the battery if the connection is good)
 2x flash	Left motor not connected	E.g. defective plug connection, cable break	Check plug connections and cable to left motor

Flashing LED	Error/warning	Cause	Possible measure
 3x flash	Defective cabling on the left motor	E.g. short circuit in the controller	Check cable connections to left motor If the connection is OK: Contact qualified personnel
 4x flash	Right motor not connected	E.g. defective plug connection, cable break	Check plug connections and cable to right motor
 5x flash	Defective cabling on the right motor	E.g. short circuit in the controller	Check cable connections to right motor If the connection is OK: Contact qualified personnel
 6x flash	Driving function blocked due to external factors	Battery charger may be connected	Remove the battery charger
 7x flash	Joystick fault	Joystick not in neutral position when the unit is turned on	Move the joystick to the neutral position before switching the unit on If the error recurs after restarting: Check the connection to the controller If the connection is OK: Contact qualified personnel
 8x flash	Controller fault/motor fault	Defective plug connection/defective controller/defective motor	Check all plug connections Store the product in a dry place for 24 hours and then push it for several minutes with the motors unlocked; check again If the plug connections are OK: Contact qualified personnel **Information for qualified personnel:** Read the error code and proceed according to the service manual
 9x flash*	Brake release	Brake disabled	Check motor brakes Check connections to the controller
 10x flash	Battery overvoltage	Voltage too high Loose battery contacts	Continue driving slowly Check cabling/plug contacts

* A warning signal will also sound.

Speed display

All five LEDs on the speed display flash. This indicates the following:

Flashing LED	Error/warning	Cause	Check plug connections and cables on controller Possible measure
	Communication error	E.g. defective plug connection, cable break Defective controller	Check cabling/plug contacts on controller Contact qualified personnel

8.4 Behaviour in case of breakdowns

INFORMATION

Note that the following instructions also apply for flat tyres. Independent tyre repairs by the user or an attendant are not intended.

In case of breakdowns, promptly inform the qualified personnel who adjusted the product or the manufacturer's service (see inside or outside of back cover for addresses). All relevant details have to be provided, such as the type of power wheelchair, type of breakdown (e.g. problems with the motor) and if possible, the serial number of the power wheelchair.

To get help faster, noting the address and telephone number of the qualified personnel in the field provided on the back of these instructions for use is recommended. This information should be kept on hand, especially when driving outdoors.

9 Disposal

9.1 Safety instructions

NOTICE

Disposal of batteries

Pollution due to incorrect disposal

- ► Observe the information printed on the batteries by the manufacturer.
- ► Note that the batteries may not be disposed of as household waste.

9.2 Disposal information

Return the product to the qualified personnel for disposal.

Defective batteries are taken back by the qualified personnel in exchange when new batteries are purchased.

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

10 Legal information

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

10.1 Liability

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

10.2 Warranty

Further information on the warranty terms and conditions can be obtained from the qualified personnel that has fitted this product or the manufacturer's service (see inside back cover for addresses).

10.3 Privacy notice

Some components of the product contain data storage modules that temporarily or permanently store data. These data are exclusively of a technical nature and serve the safety of the user, the identification and elimination of errors and/or optimising the functionality of the product.

Depending on the model and version, malfunctions and faults of components relevant for safety as well as status messages of individual components are recorded. The data are available in anonymised/pseudonymised form when the data storage modules are read in case of service. Ottobock stores, processes and uses the data according to the applicable data protection regulations.

For detailed questions please contact: datenschutz@ottobock.de. For questions regarding treatment, please contact the qualified personnel.

10.4 Lifetime

Expected lifetime: **3 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.

11 Technical data

INFORMATION

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

Application class (according to DIN EN 12184)
Class B

Drive type
Rear-wheel drive

Weight*	
Base model weight when empty (without options)	57 kg (126 lb)

* The weight varies depending on the installed options.

Load	
Maximum load (User weight + options + luggage)	120 kg (265 lb)

Dimensions – seat	
Effective seat depth	380/400/420/440/460/480 mm (14.9"/15.7"/16.5"/17.3"/18.1"/18.9")
Effective seat width	400–460 mm (15.7"–18.1")
Front seat height	500 mm (19.7")
Lower leg length (includes seat cushion with height of 50 mm)	380–480 mm (14.9"–18.9")
Back support height	550 mm (21.6")

Dimensions and weights	
Angle of the seat surface (seat inclination)*	4°
Angle of leg to seat (knee angle)	Minimum: 93°; maximum: 96°
Distance from arm support to seat (arm support height)	200–300 mm (7.9"–11.8")
Front position of the arm supports	92–172 mm (3.6"–6.8")
Length of the forearm support	260 mm (10.2")
Foremost point of the forearm support**	Minimum: 262 mm (10.3"); maximum: 412 mm (16.2")
Overall width	585 mm (23.3")
Overall height	1060 mm (41.7")
Overall length (with foot plate flipped up)***	893 mm (35.2")
Overall length (with foot plate flipped down)***	1050 mm (41.4")
Transport weight	See "Weight", thereof weight of removable components: arm support: approx. 700 g (1.5 lb)
Minimum turning radius	740 mm (29.1")
Turning circle****	1080 mm (42.5")
Ground clearance*****	80 mm (3.1")
Caster wheel tyre size	8"
Drive wheel tyre size	12.5"

* Cannot be changed

** Measured to back support

*** With 480 mm lower leg length

**** = Three-point turn by 180°

***** Under the battery carrier

Transportation size (storage length x storage width x storage height)	
Storage length	832 mm (32.8")
Storage width	585 mm (23.3")
Storage height	644 mm (25.4")

Seat and back support adjustment	
Back support angle	Manually in 10° increments: 0°/10°/20°
Angle of the foot plate	Manually, continuous: -5°–+5°

Tyres	
Tyre type, front/rear	PU tyres

Driving data >	
Speed*	See nameplate for precise information: 6 km/h (3.7 mph); 7.2 km/h (4.4 mph)
Climbing ability**	7° (12%)
Dynamic stability – uphill***	7° (12%)
Static stability – uphill/downhill	9° (15.8%)
Static stability – sideways	9° (15.8%)
Maximum obstacle height	50 mm (2")
Braking distance (according to DIN EN 12184:2014)****	At 6 km/h (3.7 mph): 1,000 mm (39.4") – on level surfaces At 7.2 km/h (4.4 mph): 1,200 mm (47.2") – on level surfaces

* The specified speed can deviate by ±10 per cent.

** The control device and the motors must be protected against overloading. For this reason, the continuous climbing ability depends on the overall weight (wheelchair weight + user weight + luggage) as well as the ground conditions, exterior temperature, battery voltage and user's driving style. In individual cases, the continuous climbing ability may be significantly lower than the value specified.

*** Approved climbing ability with upright back support.

**** The braking distance can be correspondingly longer due to user weight, luggage and condition of the tyres, and due to weather and surface conditions.

Driving distance range (on level surfaces)*	
All battery types	Approx. 25 km (16 miles)

* The specified driving distance range was determined under defined conditions according to ISO 7176-4. In practice, the driving distance range can be reduced by up to **50 per cent**. See the section "Driving distance range".

Battery (depending on country version)	
AGM batteries	2 x 12 V; 29.75 Ah (C5)/35 Ah (C20); maintenance-free
AGM batteries	2 x 12 V; 30 Ah (C5)/36.5 Ah (C20); maintenance-free
Gel batteries	2 x 12 V; 27 Ah (C5)/35 Ah (C20); maintenance-free
Gel batteries	2 x 12 V; 28.75 Ah (C5)/35 Ah (C20); maintenance-free

Electrical circuit*	
IP protection rating (according to DIN EN 60529)	IP44
Operating voltage	24 V DC
Motor power	See nameplate on motor for precise information: 160 watts/200 watts (depending on country version)
Lighting LED front light LED rear light	 24 V, maintenance-free 24 V, maintenance-free
Fuse	50 A fuse cable (nVR2)
Battery charger	5 – 10 A; usually supplied by Ottobock; for details, see the included battery charger instructions for use

* The product meets all requirements under ISO 7176-14.

Battery charger (not supplied by Ottobock)*	
Required minimum specifications	Minimum charging current: 5 A; maximum charging current: 10 A Input voltage: 100–240 V Isolation (class 2) according to IEC 60335-2-29; protection rating: IP21 The battery charger fulfils the normative requirements of EN 12184. This also includes the requirements according to ISO 7176-14 (battery charger with reverse polarity protection; battery charger charges batteries to at least 80 per cent within 8 hours; battery charger includes information regarding nominal capacity and the possibility of charging overnight; battery charger indicates that the battery is properly connected) The device fulfils the normative requirements of ISO 7176-21 and ISO 7176-25.

* For further details, see the instructions for use supplied with the battery charger.

Control device	
Model	nVR2
Max. output current per motor	40 A (continuous current); 50 A (peak current)
Force for operating the joystick on the standard control panel	1.6 N

Allowable environmental conditions	
Operating temperature	-15 °C to +40 °C (+5 °F to +104 °F)
Transport and storage temperature	-15 °C to +40 °C (+5 °F to +104 °F)
Relative humidity	45% to 85%; non-condensing

Corrosion protection	
Corrosion protection	Cathodic dip coating / powder coating

12 Appendices

12.1 Threshold values for wheelchairs transportable by train

INFORMATION

- ► The products in this series fully satisfy the minimum technical requirements of regulation (EU) No. 1300/2014 regarding train accessibility for people with disabilities. However, not all versions can comply with all threshold values due to different settings.
- ► With the help of the table that follows, you or the qualified personnel can take measurements and verify whether the specific product in question meets the threshold values.

Feature	Threshold value (according to regulation (EU) No. 1300/2014)
Length	1200 mm (47.2"); plus 50 mm (2") for the feet
Width	700 mm (27.6"); plus 50 mm (2") 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 accommodate a gap measuring 75 mm (3") horizontally and 50 mm (2") vertically
Height	max. 1375 mm (54.1"); including a 1.84 m (72.5") large male wheelchair user (95th percentile)
Turning radius	1500 mm (59.1")
Maximum weight	300 kg (661 lbs); for wheelchair with occupant, including baggage
Maximum obstacle height that can be overcome	50 mm (2")
Ground clearance	60 mm (2.4"); at an upward slope angle of 10°, ground clearance must measure at least 60 mm (2.4") under the foot rest for going forward at the end of the slope

Feature	Threshold value (according to regulation (EU) No. 1300/2014)
Maximum inclination angle on which the wheelchair will remain stable	6° (dynamic stability in all directions) 9° (static stability in all directions, also when wheel lock engaged)

12.2 Sound emission information

INFORMATION

- ► The products in the series were tested for compliance with maximum sound emission requirements according to the ISO 7176-14 standard.
- ► They fully meet the requirements according to the areas of application identified below.

Area of application	Maximum sound pressure level[1)]
In enclosed rooms	65 db(A)
Outside of enclosed rooms	75 db(A)

[1)] Depending on the area of application according to ISO 7176-14

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