



Skippi

EN Instructions for use (user)	3
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1 Foreword

INFORMATION

Date of last update: 2021-03-10

- ▶ 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.
- Before the product is put into use, please explain all contents of the instructions for use to the child, especially the "Safety" section. This ensures that the functionality of the product for children is fully utilised.
- 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 high-performance drive system is powered by two 12-V batteries.

The power wheelchair is controlled by the VR2 wheelchair control device (see page 18). The latter includes a control panel to enter driving commands and display the current status as well as a controller that operates the drive motors and other electrical functions based on the inputs.

The special features of the power wheelchair include:

- Compact design and ease of use.
- Frame that can be disassembled, making transportation easier.
- Customisation through options and custom fabrication.
- Modular design that allows the power wheelchair to be equipped with additional modules and installed equipment in addition to the main components, such as various power seat functions (see page 32) or an attendant control (see page 38).
- Serviceability due to easy, straightforward access to all components.

2.2 Product overview



1	Push handle	7	Anti-tipper / frame protection rollers
2	Back support	8	Drive wheel
3	Side panel with forearm support	9	Caster wheel
4	Frame	10	Leg support
5	Battery (battery pack)	11	Seat cushion
6	Wheel cover	12	Control panel with joystick

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 outdoor and indoor transportation, by the user or an attendant, of children and people of short stature with temporary or permanent limitations of the ability to walk, inability to walk or difficulty standing up. Optionally, the power wheelchair can be controlled by an attendant with the help of an attendant control device.

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

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

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

- ▶ As an attendant or user, you must be trained in the use of the product by qualified personnel. Read the entire instructions for use. Please pass this information on to the user, where applicable in a child-friendly form.
- ▶ The product may only be used by a user who has been instructed accordingly.
- ▶ Never leave children unattended for extended periods of time.
- ▶ 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**

Improper product operation
 Falling, tipping over, collision due to user error

- ▶ The product may only be used 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. Physical limitations (such as poor eyesight) may temporarily or permanently exclude use of the product as well.
- ▶ Observe road traffic regulations during operation in public road traffic.

 **WARNING**

Neglecting the duty to supervise
 Risk of suffocation due to small loose parts

- ▶ Note that the product includes small parts that can be loosened and removed without tools.
- ▶ Ensure that small children, for example, do not swallow them.

⚠ 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 capacity (see the nameplate and section "Technical data").
- ▶ Please note that certain accessories and add-on components will reduce the remaining load capacity.

⚠ 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, risk of 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

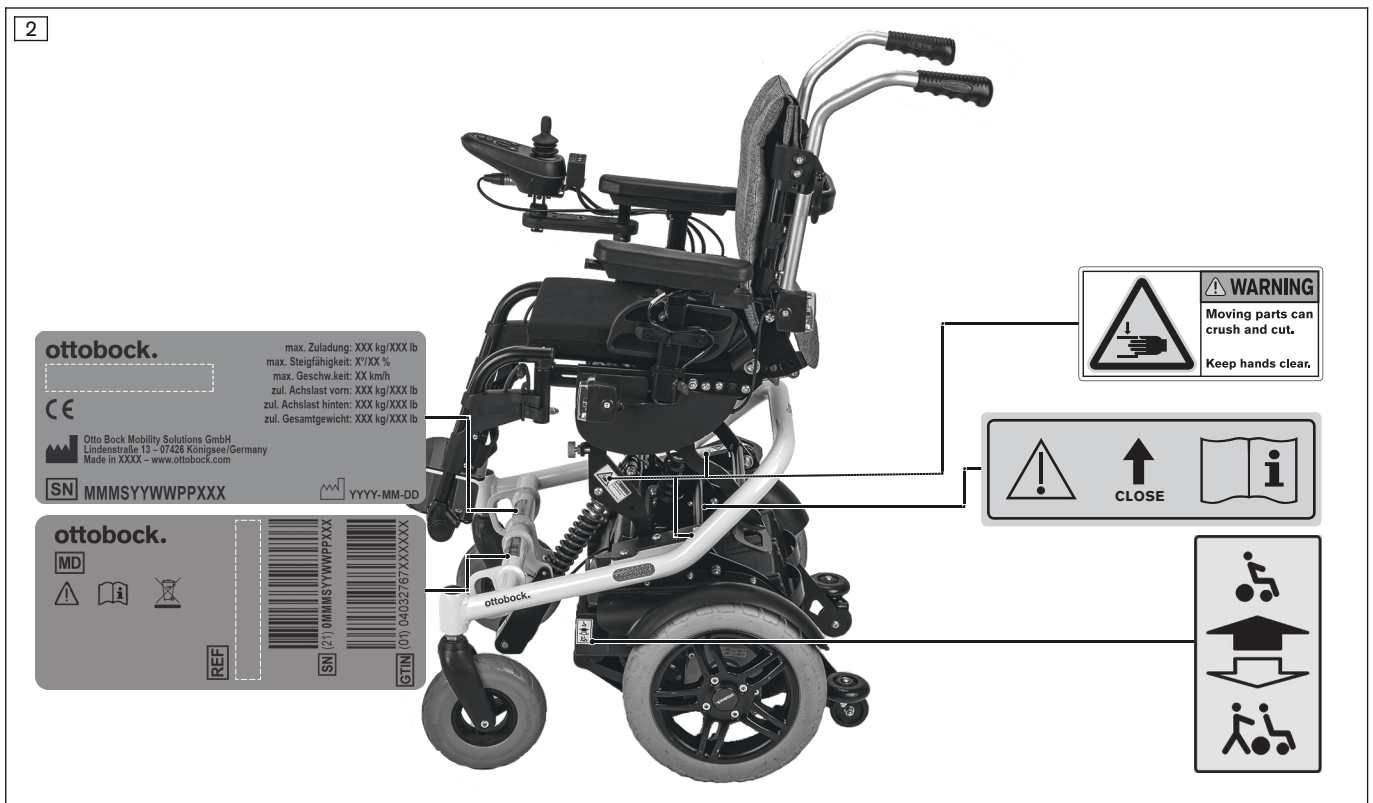
INFORMATION

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 11).

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:



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
<p>ottobock.</p> <p>max. Zuladung: XXX kg/XXX lb max. Steigfähigkeit: X%/XX % max. Geschw.keit: XX km/h Achslast vorn: XXX kg/XXX lb Achslast hinten: XXX kg/XXX lb Gesamtgewicht: XXX kg/XXX lb</p> <p>Otto Bock Mobility Solutions GmbH Lindenstraße 13 – 07426 Königsee/Germany Made in XXXX – www.ottobock.com</p> <p>SN MMMSYYWWPPXXX J K YYY-MM-DD</p>	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⁾
	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⁾	
<p>ottobock.</p> <p>MD L</p> <p>M i N</p> <p>O REF P Q</p> <p>SN (21) 0MMMSYYWWPPXXX</p> <p>GTIN (01) 04032767XXXXXX</p>	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
	Engage the locking bar before use. Note the information in the instructions for use.
	A Power driving mode: lock motor brake B Manual driving mode: unlock motor brake
	WARNING Moveable parts may crush or cut. Keep hands away.
	(Only in case of assembly of ISO sets according to ISO 7176-19) 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
- Installed options
- Battery charger
- Instructions for use (user)
- Instructions for use for accessories (depending on equipment)

5.2 Options

The standard model can be fitted to the user's personal requirements thanks to a large range of options.

A full list of the available modules and accessories is shown on the order form and in the accessories catalogue.

For use of the options, see the section "Use".

Please note that retrofitting options further reduces the maximum load capacity (user weight + luggage).

The maximum load capacity (see print on the nameplate; see page 11) is thereby respectively reduced by the weight of the retrofitted options.

5.2.1 Accessories from other manufacturers

If the power wheelchair is being combined with accessories of third-party manufacturers, observe the following notices:

- Accessories from other manufacturers must be intended for use on wheelchairs and must fulfil all currently applicable legal requirements.
- When using the accessories from other manufacturers, the instructions for use / manufacturer's instructions for the relevant accessories must be strictly observed. These are included with the instructions for use.
- Ottobock assumes no liability for combinations with medical devices and/or accessories from other manufacturers outside the Ottobock modular system.
- In case of questions or problems with the accessories of other manufacturers, please contact the qualified personnel who adjusted this product.

5.3 Storage

5.3.1 Storage during daily use

The power wheelchair should always be protected against external influences.

The control unit must be turned off.

5.3.2 Storage during extended disuse

NOTICE

Deep discharge

Battery damage due to standby current

- ▶ Remove the battery packs if the product will not be used for more than three days.

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 54.
- 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:

- Charging the battery (see page 28)
- Folding up the backrest (see page 16)

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 17)
- Adjusting the positioning belt (lap belt) (see page 30)

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.

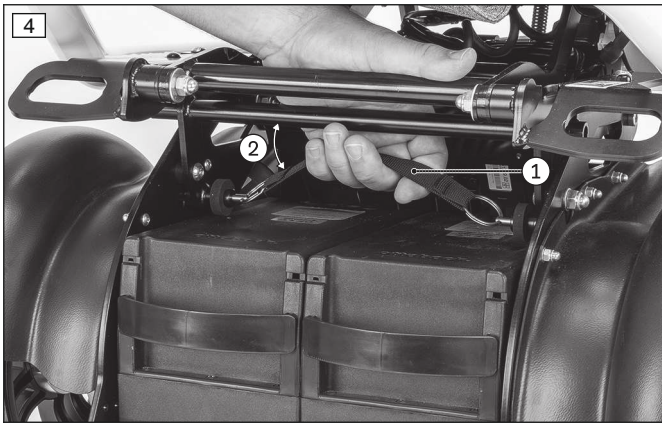
If necessary, the qualified personnel can adapt the preconfigured parameters of the wheelchair control device to the specific requirements of the user.

7 Use

7.1 Battery packs

Notice: As a rule, the battery packs are already installed on the power wheelchair's drive unit bracket on delivery to the user.

Removing and installing the battery packs is required for the use of the power wheelchair, to install or remove the fuse and to replace the battery packs.



Removing battery packs

- > **Prerequisite:** The control device is switched off.
- 1) Pull the seat lock release strap (see fig. 4, item 1). Simultaneously fold the locking bar down (see fig. 4, item 2).
- 2) Remove the exposed battery packs (see fig. 5).
- 3) Insert the fuse if needed (see page 14).

Inserting battery packs

- > **Prerequisite:** The control device is switched off.
- 1) Lift the battery packs into the drive unit bracket. In doing so, ensure that the red arrows on the battery packs point in the driving direction and that the plug contacts engage with the battery contacts.
- 2) Fold the locking bar up to prevent the battery packs from falling out (see fig. 4, item 2).



7.2 Circuit breaker

INFORMATION

- ▶ Should the fuse burn out repeatedly after a short time for no discernible reason, contact the qualified personnel.
- ▶ For shipping or when the power wheelchair is not being used for an extended period of time, the fuse should be removed.

Note: The fuse typically comes installed in the dedicated fuse holder when the wheelchair is handed over to the user.

Before the power wheelchair can be switched on, the fuses may have to be inserted into the fuse holders provided for the purpose.

They are located on the underside of the battery packs (see fig. 6).



Installing the fuse

- 1) Remove the battery packs (see page 14).
- 2) Remove the fuse from the supplied protective cover.
- 3) Insert the fuse into the slot provided (see fig. 6).
- 4) Reinstall the battery packs (see page 14).

Removing the fuse

- > **Prerequisite:** The control device is switched off.
- 1) Remove the battery packs (see page 14).
 - 2) Take the fuse out of the slot (see fig. 6).
 - 3) Reinstall the battery packs (see page 14).

7.3 Side panels

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

7.3.1 Removing/installing the side panels

To make getting in from the side easier or for transportation, the side panels can be removed if needed.



Removing the side panel

- 1) Loosen the wing screw on the side panel holder (see fig. 7).
- 2) Pull the side panel out from the side panel holder and set it aside.
- 3) **Only for side panel with control panel:**
 - Carefully let the side panel with the control panel hang down while getting in.
 - For transporting the power wheelchair, place the side panel on the seat.

Installing the side panel

- 1) Insert the side panel into the side panel holder.
- 2) Re-tighten the wing screw on the side panel holder (see fig. 7).

7.4 Legrests

The legrests support the user's feet.

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

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

7.4.1 Removing/installing the leg supports

CAUTION

Incorrect handling when getting in

Crushing, pinching, impacts due to incorrect handling

- ▶ Do not reach into the danger area with your fingers when folding the legrest or footplates up or down.
- ▶ Never step on the footplates when getting in and out.
- ▶ Note projecting edges.

INFORMATION

For detaching/attaching the mechanically elevating leg supports: see page 37.



Removing the legrests

- 1) Unhook the calf band.
- 2) Flip the footplate up.
- 3) Push the legrest locking mechanism back and disengage it (see fig. 8).
- 4) Swing out the legrest.
- 5) Pull the legrest up and remove it.

Installing the legrest

- 1) Hook the legrest into the holder from above.
- 2) Swing the legrest forward until the legrest lock engages.
- 3) Fold down the footplate.
- 4) Hook the calf band into the holder.

7.5 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.

7.5.1 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.

Method for standard back adjustment



Folding up the backrest

- 1) Pull on the strap until the locking bolts are free (see fig. 9).
- 2) Lift the backrest and move it to the desired position.
- 3) Allow the locking bolts to engage.
- 4) Check to ensure the lock is securely engaged by pulling on the backrest.

Folding down the backrest

- 1) Pull on the strap until the locking bolts are free (see fig. 9).
- 2) Fold the backrest down onto the seat.

Method for power back angle adjustment



Folding up the backrest

- 1) Fold the backrest up.
- 2) Push the lock lever down (see fig. 10, item 1).
- 3) Place the cross bolt on the end of the gas compression spring or actuator into the bracket (see fig. 10, item 2).
- 4) Release the lock lever until the cross bolt engages.
- 5) Check to ensure the lock is securely engaged by pulling on the backrest.

Folding down the backrest

- 1) Push the lock lever down (see fig. 10, item 1).
- 2) Release the cross bolt on the end of the gas compression spring or the actuator from the bracket (see fig. 10, item 2).

- 3) Fold the backrest down onto the seat.

7.5.2 Adjusting the back support angle

The angle of the backrest can be adapted to the requirements of the user.

Adjusting the back angle using the strap

The adjustment is carried out as described in the previous section.

Power back angle adjustment

The back angle is adjusted as needed by using this seat function (see page 35).

7.6 Getting in and transferring

⚠ CAUTION

Incorrect handling when getting in

Falling, tipping over due to incorrect handling

- ▶ Turn the control unit off while getting in and out, in order to avoid accidental driving.
- ▶ Always place the seat in a horizontal position.
- ▶ Note that the armrests are not capable of bearing full body weight, and therefore must not be used for getting into or out of the wheelchair.
- ▶ Always put on a lap belt when driving.

⚠ CAUTION

Incorrect handling when getting in

Crushing, pinching, impacts due to incorrect handling

- ▶ Do not reach into the danger area with your fingers when folding the legrest or footplates up or down.
- ▶ Never step on the footplates when getting in and out.
- ▶ Note projecting edges.

The modular design of the power wheelchair and the ease with which you can remove the side panels make it easy to get into and out of the wheelchair from the side or from the front.

Getting into and out of the wheelchair can be done by the user individually in a way that suits him or her best.



Getting in from the front

- 1) Turn the control device off.
- 2) Fold the foot support up (see fig. 11, item 1).
INFORMATION: Removing the leg supports provides more space for getting in or out (see page 15).
- 3) Get into or out of the power wheelchair with the help of an attendant or transfer lifter.
- 4) Fold the foot support down again.



Getting in from the side

Depending on the chosen side, the right or left side panel has to be removed for getting in from the side.

- 1) Drive the power wheelchair as close as possible to the seat surface.
- 2) Turn the control device off.
- 3) Remove the side panel (see page 15).
INFORMATION: If possible, always get in on the side opposite the control panel.
- 4) **If necessary:** Remove the leg supports (see page 15).
- 5) Slide onto the seat surface from the side. Using a transfer board can make side transfers easier.
- 6) **If needed:** Reinstall the leg support.
- 7) Reinsert the side panel (see page 15).

7.7 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 10).
- ▶ Turn the control device off when it is not needed.

The power wheelchair is controlled by a VR2 control unit.

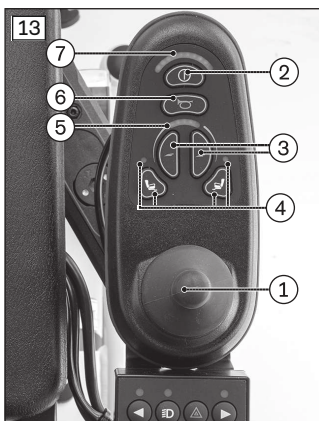
The qualified personnel can subsequently adapt some parameters of the control device to the personal requirements of the user, for example, the speed, acceleration and deceleration values.

7.7.1 Control panel

The power wheelchair is operated using the control panel.

The control panel is divided into the keypad, two LED displays and the joystick. The charging/programming receptacle is on the underside.

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 Left: [Decrease speed] button
Right: [Increase speed] button
- 4 [Select power seat function] button
Left button: [Seat function 1] + LED display
Right button: [Seat function 2] + LED display
- 5 [Selected speed level] LED display
- 6 [Horn] button
- 7 [Charge level] LED display
- 8 Charging/programming receptacle

7.7.2 Buttons and display functions

Joystick

The speed and driving direction are controlled with the joystick (see page 23).

When a power seat option is activated, the joystick adjusts this seat option (see page 35).

[On/off] button

Pressing this button turns the power wheelchair on or off (see page 23). In combination with additional operating steps, it also activates/deactivates the drive-away lock (see page 24).

[Decrease speed] and [Increase speed] buttons

Pressing the button briefly increases/decreases the speed level (see page 23). The acoustic signal changes when the maximum speed level is reached.

[Select power seat function] button

Pressing the button activates/deactivates seat function 1 or seat function 2 respectively. The selected seat function is indicated by the LED. When the LED is lit up, the joystick operates the seat functions.


[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, see page 23).

A currently active automatic speed reduction (e.g. because a seat function was activated) is also displayed here:






Display	Information
 Flashing light	Restricted speed (creep speed)

[Charge level] LED display

The [Charge level] LED display is divided into 10 segments and shows the current charge level:

- The accuracy of the indicator increases after driving for a short time.
- A charge of 100% corresponds to 10 segments on the battery icon.
- As the remaining battery charge decreases, the LED segments turn off one by one.
- If only one segment of the LED display is flashing, then the battery is in an undervoltage state. The battery must be charged immediately.
- If all 10 LED segments are flashing, this means that 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
 Sequential indicator	Battery is charging
 Flashing light	Battery undervoltage, battery charging urgently required
 Flashing light	Battery overvoltage

Further LED display functions

Further LED display icons are described in the following sections:

- Section “Selecting the speed levels” (see page 23)
- Section “Drive-away lock” (see page 24)
- Section “Power seat functions” (see page 32)
- Section “Troubleshooting” (see page 52)

7.8 Driving functions

7.8.1 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.
- ▶ Use the lights on the wheelchair.
- ▶ **If present:** Ensure that the reflectors on the rear marker plate 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 lift the product by firmly mounted components (e.g. on the main frame).
- ▶ Do not lift the product on components installed with screw connections, or on add-on or plug-on components (e.g. on the backrest of legrests, armrests).

Hazards due to defective tyres**⚠ CAUTION****Defective tyres**

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

- ▶ Maintain sufficient tyre pressure. The correct air pressure is printed on the sidewall of the tyre.
- ▶ Ensure that the drive wheels have the same pressure.
- ▶ Ensure that the tyres have sufficient tread depth. The tyres must be changed when the tread depth is less than **1 mm**.

Additional information**INFORMATION**

Even in the event of compliance with all applicable guidelines and standards, alarm systems (e.g. in department stores) may respond to your product. Should this happen, remove your product from the area where the alarm was triggered.

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. Retrofitting the wheelchair with pneumatic tires can correct this problem.

7.8.2 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.

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).

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
- The product may not be used in salt water.

Using the control unit:

- The control system always has to be mounted securely and the joystick position must be correct.
- The hand or limb used to operate the joystick should be supported, for example on the side panel arm pad.
- The joystick must not be used as the sole support for the hand or limb, because wheelchair movements and bumps could cause a loss of control.
- The intelligent speed control system minimises the effects of slopes and different types of terrain.
- 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 (e.g. backpacks) can adversely affect stability. We recommend always attaching a backpack to the push handles with the shoulder straps. The load should not exceed **5 kg**.
CAUTION: If push handles are not installed on the product, suspending additional loads on the wheelchair is not permitted.
- The recommended total width for category B power wheelchairs in an operational state is **700 mm (27.5")**. The products in the series generally meet this requirement. This ensures the unhindered use of escape routes, for example.
- The products in this series generally meet the minimum technical requirements for wheelchairs transportable by train (see page 57).

7.8.3 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 25).
- ▶ Check the control unit display to ensure that the brakes are operational and functional (see page 52).

⚠ 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 49).
- ▶ 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 25).
- ▶ 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. When the button is pressed, the product brakes immediately and the electrical functions cease. Malfunctions such as an insufficient supply of power to the controls are recognised by the software, triggering an emergency stop or reducing the speed of the product. A warning signal will also sound.

- Pressing the [on/off] button (see page 18) 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.

7.8.4 Selecting the speed levels

- The power wheelchair has a programmable number of speed levels (delivery condition = 5 speed levels).
- Pressing the [Decrease Speed] button lowers the speed level.
- Pressing the [Increase Speed] button raises 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.

Display	Information
	Selected speed level = 3

7.8.5 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 54).
- ▶ 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.

7.8.6 Range

The section "Technical data" contains precise information on the range of the product (see page 54).

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)

7.8.7 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**.

7.8.8 Drive-away lock**INFORMATION**

The drive-away lock can only be activated as described below if the function was previously enabled (see inside front cover). The drive-away lock parameter is set to "Off" by default. The factory setting may also have been set to "On" by the specialist dealer or at the factory according to the order.

Please ask your specialist dealer about the setting selected for you.

The power wheelchair control unit features an electronic drive-away lock, which is disabled by default.

If the function has been ordered and enabled, the drive-away lock can be activated or deactivated as follows using 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.

7.8.9 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.

7.9 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.



Releasing/deactivating the brake

- 1) **If needed:** Turn the control device off.
- 2) Push the brake release levers down on both drive motors (see fig. 14, 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.

Enabling/activating the brake

- 1) **If needed:** Turn the control device off.
- 2) Push the brake release levers up on both drive motors (see fig. 14, item 2).
- 3) Switch on the control device.
 → The driving function is activated.

Brake deactivated: warning on control panel

Display	Information
<p>Flashing light</p>	<p>Brake released</p>

7.10 Batteries/charging process

7.10.1 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.

7.10.2 General

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



The batteries are located in two battery packs below the seat of the power wheelchair (see fig. 15).

NOTICE: Please note that driving for an extended period of time in the lower range of the battery indicator will result in deep discharge and therefore battery damage. Shortly before this occurs, the driving speed decreases and the user is warned regarding battery deep discharge (see page 52).

NOTICE: Please also observe the information for charging the battery (see the next section).

7.10.3 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 can be charged at any time, regardless of the remaining charge level.
- It takes about **10 to 12 hours** until a discharged battery (only 1 flashing segment) is fully charged. When the charging process is complete, the battery charger can remain connected to the power wheelchair with no risk of overcharging or damaging the battery. The battery charger features a programmed recharging phase that will maintain the battery capacity at the level that has been reached.
- If the power wheelchair is used every day, the battery should be charged every night.
- Never discharge the batteries completely (deep discharge).
- 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 **1 x per week** to maintain their capacity.
- After charging the batteries, the circuit breaker should be deactivated if the wheelchair is not used for more than 3 days.
- The power wheelchair control device must be switched off while the batteries are charging to allow all of the charging current to be fed into the battery.

7.10.4 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.

7.10.5 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.

INFORMATION

Note the special aspects of the charging process with a mid-tray control device (see page 38).

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Charging process via the control panel

- 1) Turn the control device on the power wheelchair off.
- 2) **Only with push-button module for lighting option:** Disconnect the power cable for the push-button module from the charging receptacle on the control panel (see fig. 33, item 1).
- 3) Plug the charger plug into the charging receptacle on the control panel.

INFORMATION: Please note that charging via the charging receptacle on the control panel may only be carried out at a current of maximum 10 A.

- 4) Connect the battery charger to the mains socket.
 - The charging process starts automatically and the charge level is indicated by the LED display function on the control panel (see page 18) and on the battery charger.
- 5) Disconnect the charging plug from the charging receptacle on the control panel after charging is complete.

INFORMATION: The power wheelchair cannot be driven while the charging plug is connected.

- 6) Disconnect the mains plug of the battery charger from the mains network after charging.
- 7) Turn the power wheelchair control device on. The power wheelchair is ready to be used.
- 8) **Only with push-button module for lighting option:** Reconnect the power cable for the push-button module to the charging receptacle on the control panel (see fig. 33, item 1).

7.11 Seat

7.11.1 Safety instructions

⚠ WARNING

Seat cushions and back support pads may ignite

Burns due to user error

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

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.

7.11.2 Seat type



The product is equipped with a standard seat.

7.11.3 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.

7.11.4 Headrest

The head support or head/neckrest stabilises and guides the user's head. It has been mounted to the mounting kit for head/neckrests by qualified personnel.

Detailed information regarding use, maintenance and repair can be found in the included instructions for use.

7.12 Positioning belt (lap belt)

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

7.12.1 Adaptation

⚠ CAUTION

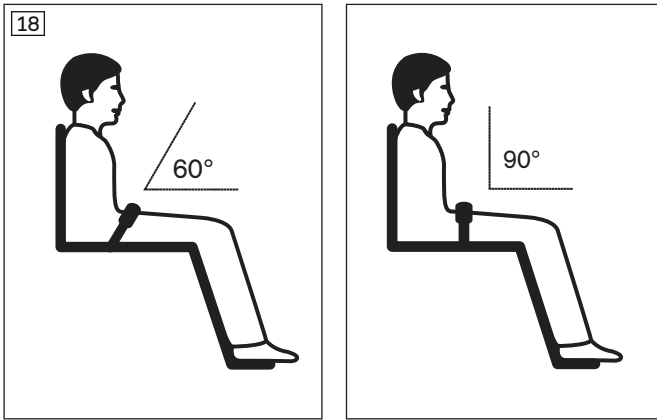
Improper adjustments

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 both sides. Excess belt length is taken up by the plastic slider.



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



Adjusting the belt length

- 1) Position the user in the seat. Follow the positioning instructions in the previous section to do so.
- 2) Close the belt.
- 3) Position the 2 halves of the buckle in front of the upper body, centred over the thighs.
- 4) Position the respective half of the buckle at a right angle (see fig. 19, item 1).
- 5) Slide the 2 halves of the closure to the desired position.
- 6) Release the respective half of the buckle.
- 7) Verify the adjustment.

WARNING! The lap belt has to fit closely but not too tightly so the user is not injured. It should be possible to slide two fingers comfortably between the strap and thigh.

7.12.2 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.

**Applying the lap belt**

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

- 1) Push the 2 halves together until the buckle engages with an audible click.

WARNING! The lap belt has to fit closely but not too tightly so the user is not injured. It should be possible to slide two fingers comfortably between the strap and thigh.

- 2) Pull to check that it is secure.

Opening the lap belt

- 1) Press the release button.
- 2) Open the belt buckle and lay the belt 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.

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

Additional cleaning instructions

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

7.13 Power seat functions

The power wheelchair can be equipped with a range of different optional power seat functions.

For more information on the specific equipment of this power wheelchair, contact the qualified personnel.

7.13.1 Safety instructions**WARNING****Driving with power seat functions**

Falling, tipping over due to driving with unallowable seat settings

- ▶ Only drive in road traffic and on inclines and downgrades with the seat tilt and seat height adjustments lowered and with a vertical backrest. Always use a belt system.
- ▶ Slightly tilt the seat to the rear when driving down obstacles in a forward direction (e.g. curbs) and reduce the speed.
- ▶ Drive with the seat raised or with the seat tilt/back angle adjustment activated only for short distances at home. Always use the speed level 1 for this. Note that the field of vision is limited when driving. Always use a belt system.
- ▶ Use the seat height adjustment and the seat tilt only on firm, level ground.
- ▶ To avoid uncontrolled driving movements, ensure that the control unit is always in "Power seat functions" mode before using the power seat functions.
- ▶ To avoid hazardous situations, note the correct deflection direction of the joystick (see page 36).

⚠ WARNING**Overloading**

Risk of falling, tipping over due to non-compliance with technical data

- ▶ Note that the maximum permitted load of the power wheelchair may be reduced when using power seat functions (see the section "Technical data").

⚠ WARNING**Lack of maintenance**

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

- ▶ Check the adjustment functions for visible signs of damage at least **1 x per month** and ensure all screw connections are tight.

⚠ WARNING**Exposed pinch points**

Pinching, crushing of limbs (e.g. fingers) due to lack of caution in danger areas, damage to the product

- ▶ Note that when seat functions are used, inherent pinch and shear points are located between the seat frame and the power wheelchair frame.
- ▶ Ensure that no body parts, such as hands or feet, are in the danger area while the seat functions are used.
- ▶ Ensure that no interfering objects, such as clothing or other obstacles, are in the danger area while the seat functions are used.

⚠ WARNING**Overloading of the actuators**

Risk of falling, tipping, pinching, crushing of limbs due to improper handling

- ▶ Avoid overloading the actuators. Overloading may cause components to break, leading to uncontrolled dropping of the seat or causing the backrest to flip back.

NOTICE**Improper use of electric seat options**

Damage to the product through user error


- ▶ When using electric seat options, note that the seat function actuators are not designed for continuous use, only for short-term use under limited loads (10% load, 90% idle time).
- ▶ Observe the following guidelines: at maximum load capacity, 10 seconds of activation time must be followed by approx. 90 seconds of idle time. The power seat functions are considered independently of the driving function for this purpose.
- ▶ Only activate the power seat functions if no fault or error is present.

7.13.2 Speed reduction

Depending on the configuration, using a seat adjustment may lead to a speed reduction.

When speed reduction is active, this is indicated on the control panel as follows:

VR 2 control device

Display	Information
	Restricted speed (creep speed) The [Selected speed level] LED display flashes: Automatic speed reduction (e.g. because a seat function was activated)

7.13.3 Power seat height adjustment

⚠ WARNING

Incorrect handling of the seat height adjustment

Falling, tipping over due to driving with improper seat settings

- ▶ Only use the seat height adjustment with the back support angle set to vertical.
- ▶ Drive in street traffic only with the seat height adjustment lowered.
- ▶ Even when driving indoors, fasten the belts and do not lean out beyond the seat surface when the seat height adjustment feature is raised.
- ▶ Ensure that creep speed is activated when the seat height adjustment function is used. If this is not the case, contact the qualified personnel immediately. Only use the power wheelchair with the seat height adjustment in its lowest position until the fault is rectified.

NOTICE

Risk of transportation damage

Damage to the product through user error

- ▶ Always lower the seat height adjustment feature fully for loading or transportation.

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 32).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 35) and "Joystick functions" (see page 36).

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The power seat height adjustment feature raises the seat bottom by up to **200 mm** using a motor drive.

The seat can be moved up continuously to the height specified.

The driving function can be used indoors even when the seat is raised. In this case, the driving speed is automatically reduced (creep speed).

7.13.4 Power seat tilt

⚠ WARNING

Incorrect seat tilt handling

Falling, tipping over due to driving with unallowable seat settings

- ▶ Use the seat tilt feature only with the backrest in the upright position.
- ▶ Drive in street traffic only with the seat tilt lowered.
- ▶ When driving with the seat tilt activated, even at home, fasten the belts and do not lean out beyond the seat surface.

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 32).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 35) and "Joystick functions" (see page 36).

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The power seat tilt allows the seat to be tilted up to **20°**, for example to relieve pressure.

The seat can be tilted back continuously to the specified angle.

Centre of gravity shifting integrated in the power wheelchair improves the tipping stability.

7.13.5 Combined seat height adjustment/seat tilt

This function allows the seat to be tilted while continuously raising the seat surface at the same time. For further information on the functions and relevant safety information, see the preceding section.

7.13.6 Power back angle adjustment

⚠ WARNING

Incorrect use of back angle adjustment

Falling, tipping over due to driving with unallowable seat settings

- ▶ Drive in street traffic only with a vertical backrest.
- ▶ When driving with the back angle adjustment activated, even at home, fasten the belts and do not lean out beyond the seat surface.

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 32).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 35) and "Joystick functions" (see page 36).

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The power back angle adjustment feature enables the backrest to be tilted up to **25°**.

The backrest can be tilted back continuously to the angle specified above.

7.13.7 Controlling power seat functions

- Power seat functions are activated and controlled via the control panel (see page 18 ff.).
- Depending on the equipment, pressing the [Select power seat function] button activates the following seat function:
 - Left button: [Seat function 1]: Power seat tilt
 - Right button: [Seat function 2]: Power seat height adjustment or power back support angle adjustment
- **INFORMATION: Power wheelchair equipped with three power seat functions: See below**
- The LED display for the activated seat function lights up when the respective [Seat function 1]/[Seat function 2] button is activated. The driving function is not available at this time, and the [Selected speed level] LED display turns off.
- Once a seat function is activated, it is extended or retracted by moving the joystick forward or backward.

- The electric motor moves the seat according to the seat function as long as the joystick is deflected and stops at the end positions.
- Pressing the [Seat function 1]/[Seat function 2] button again deactivates the seat function in the selected position. The driving function is available again, and the [Selected speed level] LED display is lit again.

Version with a toggle for a third seat function

The power wheelchair can also be equipped with three power seat functions. In this case, a toggle is mounted under the arm support on the control panel side (see fig. 24, item 1/2).



- The toggle only works when the [Seat function 2] button is activated and the LED display on the right is lit up:
 - [Seat function 2] button active > Without operation of the toggle: [Seat function 2] stays active (power seat height adjustment)
 - [Seat function 2] button active > With operation of the toggle: [Seat function 3] is active (power back support angle adjustment)
 - **INFORMATION: Each additional time the toggle is activated (see fig. 24, item 2), the function now switches between “Seat function 2” and “Seat function 3”. The LED display on the right is always lit up.**
- Operating the joystick carries out the respective active seat function (see above).

7.13.8 Joystick functions

The following power seat functions can be controlled with the joystick:

VR2 control device

Functionality	Joystick deflection (standard setting) ¹⁾
Seat height adjustment	Back: The seat moves up Forward: The seat moves down
Seat tilt	Back: Seat slowly tips back Forward: Seat slowly tips forward to a horizontal position
Back support angle adjustment	Back: Back support tilts backward Forward: Back support tilts forward
Combined seat height adjustment and seat tilt	Back: Seat moves up and tilts back at the same time Forward: Seat moves down and tilts forward to a horizontal position at the same time

¹⁾ Direction of movement can be modified by the qualified personnel.

7.14 Manual seat functions

The power wheelchair can be equipped with a range of different optional mechanical seat functions. For more information on the specific equipment of this power wheelchair, contact the qualified personnel.

7.14.1 Safety instructions

⚠ WARNING

Driving with mechanical seat functions
Risk of falling or tipping over due to operator error

- ▶ Drive in road traffic and on inclines and downgrades only with a vertical backrest. Always use a belt system.
- ▶ Drive with the back angle adjustment activated only for short distances at home. Always use the speed level 1 for this. Note that the field of vision is limited when driving. Always use a belt system.

⚠ WARNING**Lack of maintenance**

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

- ▶ Check the adjustment functions for visible signs of damage at least **1 x per month** and ensure all screw connections are tight.

⚠ WARNING**Exposed pinch points**

Pinching, crushing of limbs (e.g. fingers) due to lack of caution in danger areas, damage to the product

- ▶ Note that when seat functions are used, inherent pinch and shear points are located between the seat frame and the power wheelchair frame.
- ▶ Ensure that no body parts, such as hands or feet, are in the danger area while the seat functions are used.
- ▶ Ensure that no interfering objects, such as clothing or other obstacles, are in the danger area while the seat functions are used.

7.14.2 Mechanical seat tilt

The mechanical seat tilt function with a gas compression spring allows the seat to be tilted, for example to relieve pressure. The seat can be tilted back continuously up to an angle of **20°**.

This seat tilt adjustment is operated with a release lever at the push handles.

7.14.3 Manually elevating legrests**INFORMATION**

- ▶ Please also observe the overriding safety instructions in the section "Manual seat functions" > "Safety instructions": see page 36.

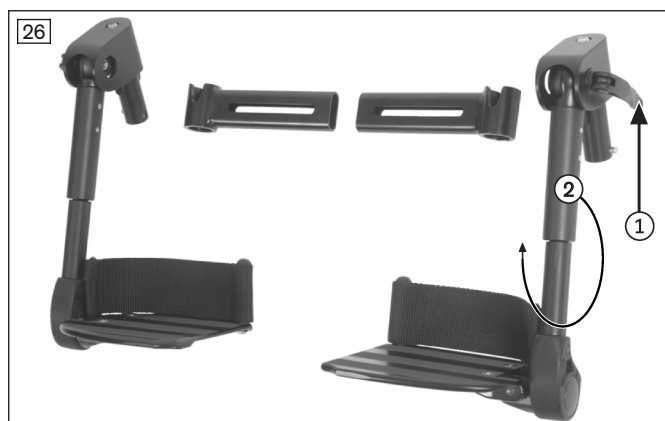
The mechanically elevating legrests with a gas compression spring let the user change the angle independently to prevent a constant pressure load or to provide anti-shock support.

**Removing the leg supports**

- 1) Flip the foot support up.
- 2) Push the leg support fixing (press button) to the inside (see fig. 25, item 1).
- 3) Pull the leg support up and remove it (see fig. 25, item 2).

Installing the leg support

- 1) Insert the leg support into the holder from above.
- 2) Push the leg support fixing (press button) to the inside (see fig. 25, item 1).
- 3) Push down the leg support until the press button locks the leg support.
- 4) Fold down the foot support.

**Pivoting the leg support**

- 1) Deactivate the release lever on the leg support (see fig. 26, item 1). This cancels the blocking provided by the gas compression spring.
- 2) Move the leg support to the desired position (see fig. 26, item 2).
- 3) Tighten the release lever (see fig. 26, item 1).
 - The gas compression spring is blocked again.
 - The leg support is adjusted.

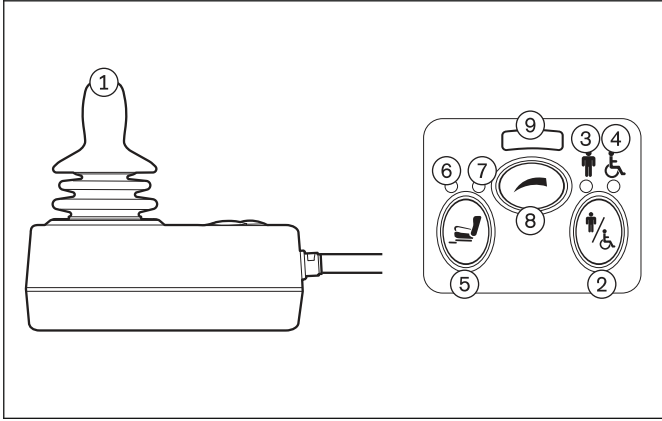
7.15 Control unit accessories

7.15.1 Attendant control

The power wheelchair can be equipped with an optional separate control panel for attendant operation. The separate control panel is angle-adjustable.

Functional overview

The attendant uses the attendant control to operate the driving function and the power seat functions. The module is connected in conjunction with the control panel or as a separate input device.



- 1 Joystick
- 2 [Activate/deactivate attendant control] button
- 3 [Attendant control active] LED display (green LED display)
- 4 [Primary control active] LED display (red LED display)
- 5 No function
- 6 No function
- 7 No function
- 8 [Select speed level] button
- 9 [Selected speed level] LED display

Joystick

The attendant uses the joystick to control the speed and driving direction. When a seat option is activated, the joystick operates this seat option.

[Activate/deactivate attendant control] button

The attendant uses this button to assume the control functions from the control panel or to return them to the control panel. The respective state is shown by an LED indicator.

[Attendant control active] LED display

The green LED lights up when the attendant control is activated and the power wheelchair control panel is deactivated.

[Primary control active] LED display

The red LED lights up when the attendant control is deactivated and the power wheelchair control panel is activated.

[Select speed level] button

Pressing the button increases/decreases the speed level. The acoustic signal changes when the maximum speed level is reached.

[Selected speed level] LED display

The LEDs show the currently selected speed level (1–5).

7.15.2 Mid-tray control

⚠ CAUTION

Improper adjustment

Crushing or pinching due to adjustments which are too tight

- ▶ Do not pinch the user when sliding in the product.

⚠ CAUTION

Collisions while driving

Crushing or pinching by the tray

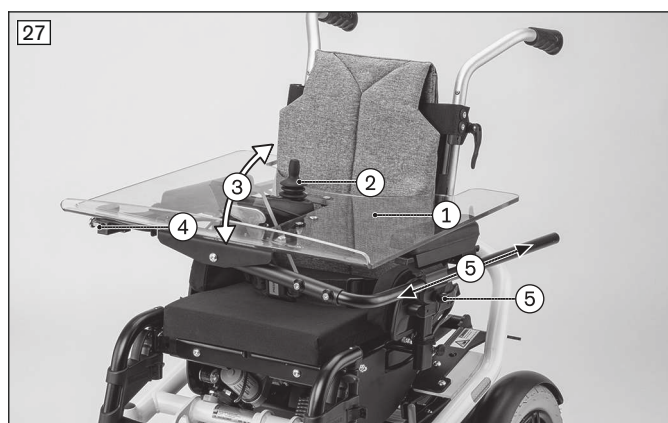
- ▶ Please note that the user may be crushed by the tray in the event of a collision. Avoid collisions.

NOTICE**Improper use**

Damage to the product caused by incorrect use

- ▶ Ensure that the user does not travel with the tray folded down to the side.
- ▶ Do not pull the product too far out from the receiver tube.
- ▶ Do not place any hot objects on the tray top.
- ▶ Do not overload the tray top. See the section "Technical Data" for the maximum permissible load capacity.

The power wheelchair may be equipped with a mid-tray control device.

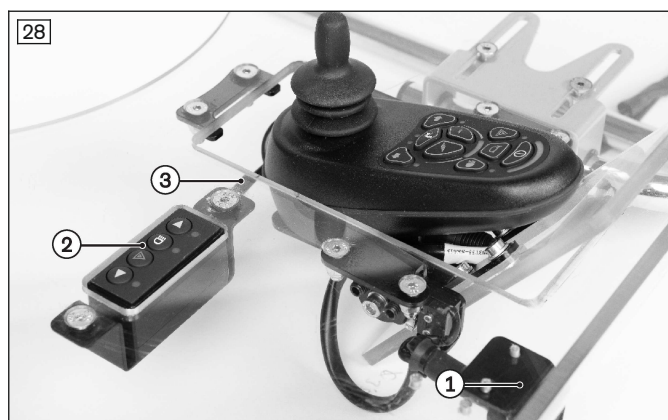


The mid-tray control device consists of a tray (see fig. 27, item 1) with a wheelchair control panel integrated in the middle (see fig. 27, item 2).

When the control panel is folded down by hand (see fig. 27, item 3), the tray surface is flat, and the top forms an unbroken surface. When it is folded down, the wheelchair control device automatically locks the drive function.

After releasing the locking mechanism, the mid-tray control device can be folded to the side for getting into the wheelchair (see fig. 27, item 4). After releasing the clamping lever, the mid-tray control device can also be adjusted in depth and removed for transport (see fig. 27, item 5).

An external charging receptacle to charge the battery packs is installed on the tray surface (see fig. 28, item 1). To charge the battery packs: see page 28.



Special aspects with a mid-tray control device in combination with a push-button module for lighting

If a lighting push-button module is installed on the tray surface (see fig. 28, item 2), a protective cover has to be placed over the push-button module before use.

To charge the battery packs, the power cable for the push-button module (see fig. 28, item 3) has to be temporarily unplugged from the external charging receptacle on the tray (see fig. 28, item 1).

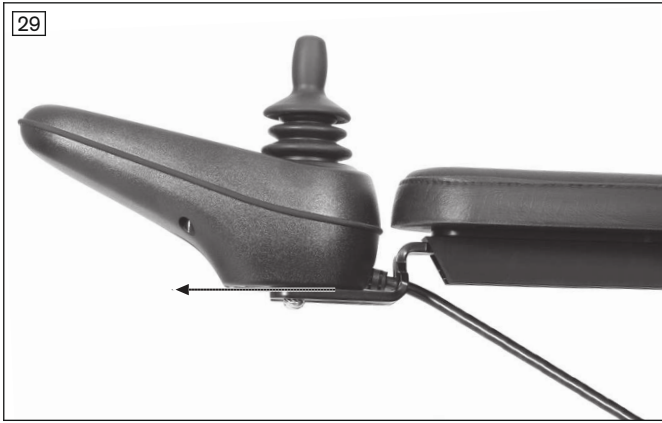
The battery packs (see page 28) can now be charged using the external charging receptacle on the tray (see fig. 28, item 1). After charging, the power cable for the push-button module has to be reconnected to the external charging receptacle on the tray (see fig. 28, item 3/1).

7.16 Additional options

7.16.1 Control panel holder

Standard control panel holder

The control panel holder can be pulled off to the front when needed.



Pulling off the control panel holder

- 1) Grasp the control panel holder on the front.
- 2) Pull the control panel holder off to the front.

Installing the control panel holder

- 1) Insert the control panel holder into the rail.
- 2) Slide the control panel holder to the rear.

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.



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 to the side around the pivot points (see fig. 30, item 1).

INFORMATION: The pivot element locks in place again when the holder is rotated back to the original position.



Removing/installing the control panel

- 1) **Removing:** Pull the control panel up and off the ball head (see fig. 31, item 1).
- 2) **Installing:** Set the control panel onto the ball head and push it down.

7.16.2 Lighting

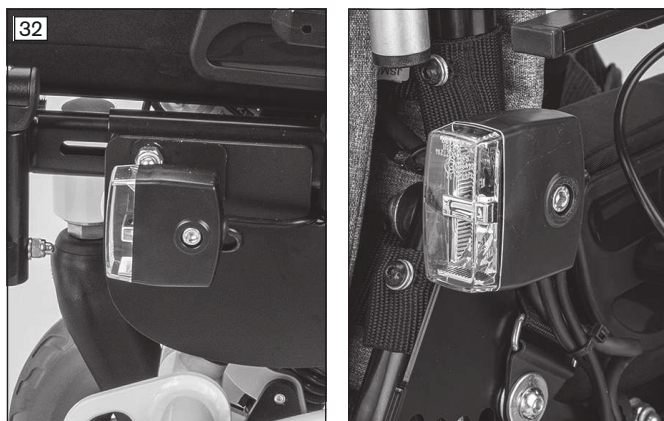
Information on replacing broken lamps: see page 52.

7.16.2.1 Quad lighting

The power wheelchair can be equipped with a lighting set (quad lighting).

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.



Front/rear lighting

The front lighting consists of two LED front lights with integrated LED direction indicators (see fig. 32, left).

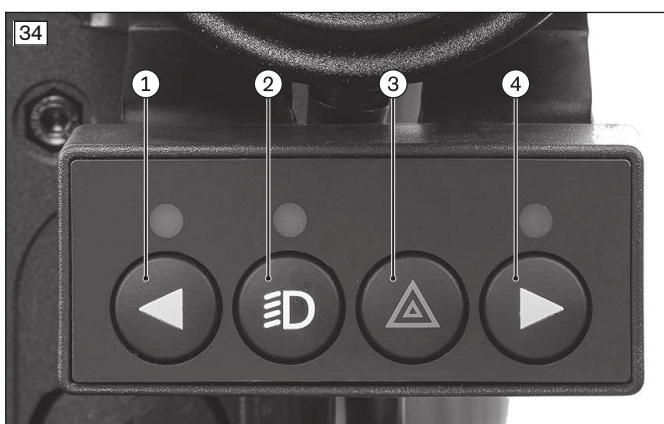
The rear lighting consists of two LED rear lights with integrated LED direction indicators (see fig. 32, right).



Power supply for the push-button module for lighting

The push-button module required to operate the lighting is supplied with power from the charging receptacle on the control panel (see fig. 33), item 1).

INFORMATION: Please note that to charge the battery packs (see page 28), the power cable for the push-button module has to be temporarily unplugged from the charging receptacle. After charging, reconnect the power cable for the push-button module to the charging receptacle on the control panel.



Overview of the push-button module for lighting

- 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

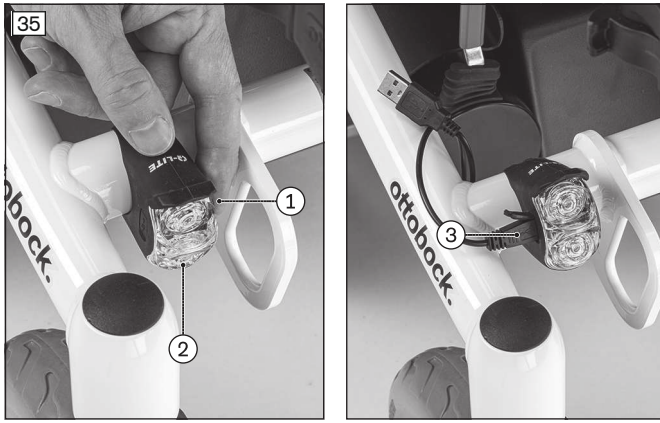
All four warning flashers are activated/deactivated when this button is pressed.

[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.

7.16.2.2 Lighting for footpaths

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 road use.



Using the lights

Pressing the [Lights on/off] button activates or deactivates the lights (see fig. 35, item 1).

The lighting can be removed by opening the rubber band on the underside of the lamp.

Please note: When fastening the rubber band, always use the last hole of the rubber band (the largest diameter).

As a rule, the lighting is mounted on the frame tube on the front right side in the driving direction (see fig. 35).

The integrated battery is charged using the supplied USB cable (see fig. 35, item 3). The USB cable is connected to a PC or a battery charger with a USB connection (battery charger not included in the scope of delivery).

7.16.3 Push handles

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



Adjusting the height

- 1) Release the clamping lever.
- 2) Adjust the push handle to the desired height.
INFORMATION: To reduce the transportation size, slide the push handles all the way down and turn them to the inside if needed.
- 3) Close the clamping lever tightly.
INFORMATION: Both push handles must be adjusted to the same height during use.

7.16.4 Tray

INFORMATION

- ▶ The position of the tray should have been adapted to the user by the qualified personnel.
- ▶ If necessary, the user or an attendant can readjust the position of the tray.

The tray serves as a supporting surface during meals, when working or when playing. Its transparency permits examination of the legs and correction of the sitting posture.

The tray can be swung away for getting in and out. It is mounted using a receiver tube under the arm support.

Detailed information on safe use, adjustment, use, cleaning and maintenance can be found in the separate instructions for use included with the tray.

7.16.5 Overview of other options

INFORMATION

You can find these and other optional add-on components on the order form and in the accessories catalogue.

The power wheelchair can be equipped with additional options:

- Armrest accessories: Special adapters for the armrests in our accessories catalogue
- Mounting kit for head/neck supports: For installation on the back support tube
- Joystick top: Tetra fork, STICK S80, softball, ball top, sponge ball
- Control panel safety bar: Metal bar for impact protection
- Bumper bar
- Manual horn
- Pennant
- Puncture-proof tyres: Solid rubber tyres

- Tool kit

These and other optional add-on components are included in the order form and in the wheelchair accessories catalogue.

7.17 Disassembly and transport

7.17.1 Safety instructions

⚠ WARNING

Improper transportation 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. To this end, the fuse must always be removed and the battery connectors must be insulated so that they are short-circuit-proof prior to check-in of the power wheelchair as luggage.
- ▶ Note that those batteries in particular which may leak or will not be transported upright must be removed and packaged so they cannot leak or short circuit.
- ▶ For more information please visit the www.iata.org website. The manufacturer recommends contacting the airline directly before every flight to obtain information regarding special transport regulations.
- ▶ 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

Lifting the power wheelchair incorrectly

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

- ▶ Hoisting devices used for transportation must have a sufficient capacity. For more information about weight, see the section "Technical data" (see page 54).
- ▶ Do **not** attach the hoisting devices on moveable or adjustable components.
- ▶ Ensure that the seat is lowered all the way and the backrest is in a vertical position prior to loading and for transporting the power wheelchair.

7.17.2 Reducing the transportation size

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

37



Preparing for transport

- 1) Turn the control device off.
- 2) Remove the side panels (see page 15) and place them on the seat.
- 3) Fold the back support forward and onto the seat surface (see page 16).
- 4) Remove the leg supports and set them aside (see page 15).
- 5) **If needed:** Slide the push handles down and turn them to the inside (see page 42).
- 6) **If needed:** Remove the battery packs (see page 14).

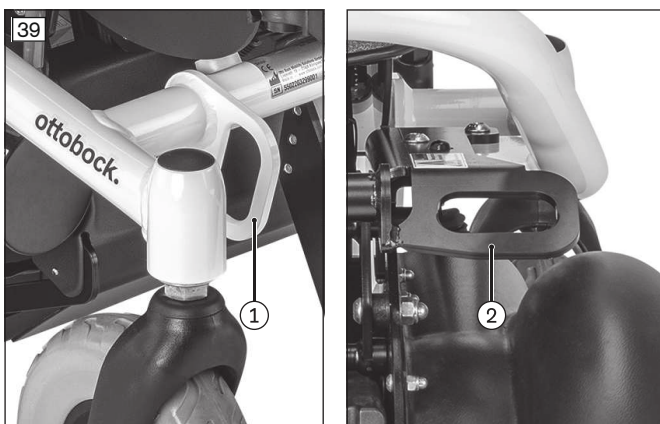


Separating the frame and drive unit bracket

To further reduce the size of the power wheelchair, the frame can be separated from the drive unit bracket:

- > **Prerequisite:** The battery packs have been removed (see page 14).
- 1) **If needed:** Pull the seat lock release strap and fold the locking bar all the way down (see fig. 4, item 1/2).
- 2) Push down on the step points (frame protection rollers) above the anti-tipper rollers on the drive unit bracket until these touch the ground (see fig. 38).
- 3) Slightly lift the frame to separate it from the drive unit bracket (see fig. 38).
- 4) Separately set aside the frame and drive unit bracket.

7.17.3 Preparing for transport



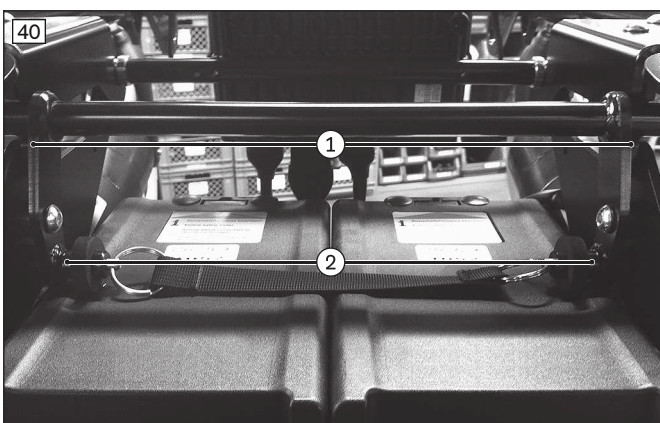
Transporting the power wheelchair

- 1) Position the power wheelchair in its transport location.
- 2) Turn the control device off (see page 18 ff.).
- 3) Verify brake locking. It should not be possible to push the power wheelchair.
If needed: Lock the brake (see page 25).
- 4) Use the eyebolts and cargo straps to attach the power wheelchair to the transport vehicle (see fig. 39, items 1/2).

7.17.4 Assembly

To reassemble the power wheelchair, the steps described above must be carried out in reverse order.

If the frame was separated from the drive unit bracket for transportation of the power wheelchair, correct locking of the frame has to be ensured during assembly:

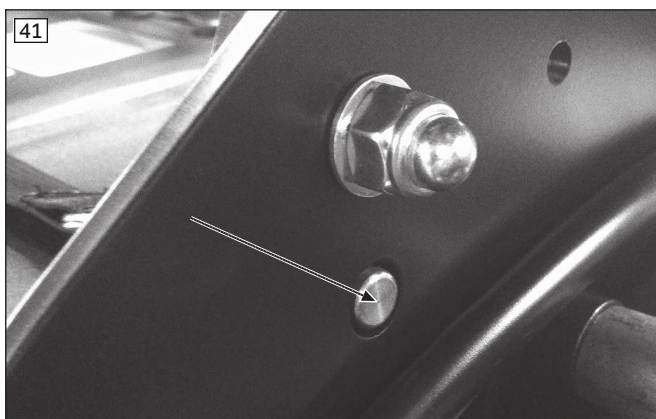


Connecting the frame to the drive unit bracket

- 1) Prepare the drive unit bracket and frame.
- 2) Pull the seat lock release strap and fold the locking bar all the way down (see fig. 4).
- 3) On the drive unit bracket, push down on the step points (frame protection rollers) above the anti-tipper rollers until these touch the ground (see fig. 38). The drive unit bracket is now at an angle.
- 4) Set the frame onto the drive unit bracket from above (see fig. 38).
- 5) Pull the seat lock release strap and fold the locking bar all the way up (see fig. 4).

INFORMATION: In doing so, ensure that the locking bar is pushed back into its proper position (see fig. 40, item 1). Both locking bolts have to engage properly (see fig. 40, item 2).

CAUTION! Falling due to lack of frame stability. Check that the locking bolts are properly engaged at both sides on the outside of the base support. The bolts must be clearly visible so that the frame cannot disengage from the drive unit bracket (see fig. 41).



7.18 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 also refer to our brochure with the order number 646D158.
- ▶ Never transport more than one person in the power wheelchair.
- ▶ 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.
- ▶ Use the power wheelchair in a vehicle for transporting persons with reduced mobility only if the seat is all the way down and the back support is in a vertical position.
- ▶ Note the limitations regarding installed options (see page 48).

⚠ WARNING

Use of the belt system as a passenger restraint system in vehicles for transporting persons with reduced mobility is forbidden

Serious injuries due to improper handling of the product

- ▶ Under no circumstances may the belts and positioning aids offered 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 offered with the product are only intended to help support the user sitting in the product.

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

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

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

The transport weight of the person to be transported in a vehicle for transporting persons with reduced mobility corresponds to the maximum permissible user weight (see page 54).

7.18.1 Required accessories

For use as a transport seat in a vehicle for transporting persons with reduced mobility, the power wheelchair must be ordered accordingly.

7.18.2 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.

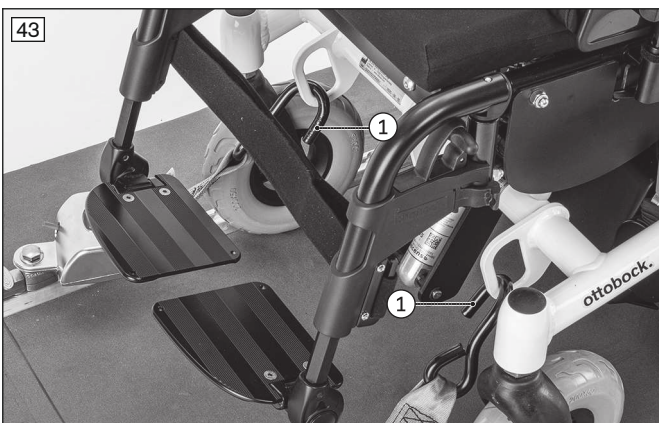
Securing the product in the vehicle for transporting persons with reduced mobility

The wheelchair is secured in the vehicle for transporting persons with reduced mobility with the help of the fixation kit. The fixation points are marked with stickers. The stickers indicate where the user has to engage the hooks of the safety belt system:



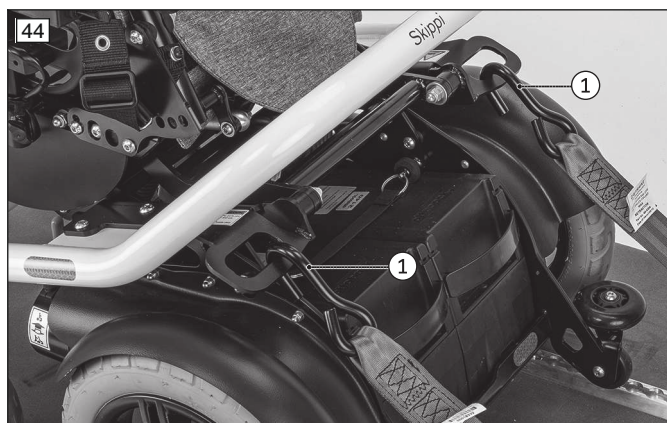
Securing the power wheelchair in the vehicle

- 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 23).
- 3) Verify brake locking. Engage the brakes if needed (see page 25).
- 4) Apply the attachment straps (see below).



Applying the front attachment straps

- 1) Hook each of the front attachment straps into its corresponding front anchor point from the outside (see fig. 43).
- 2) Tighten the front attachment straps.

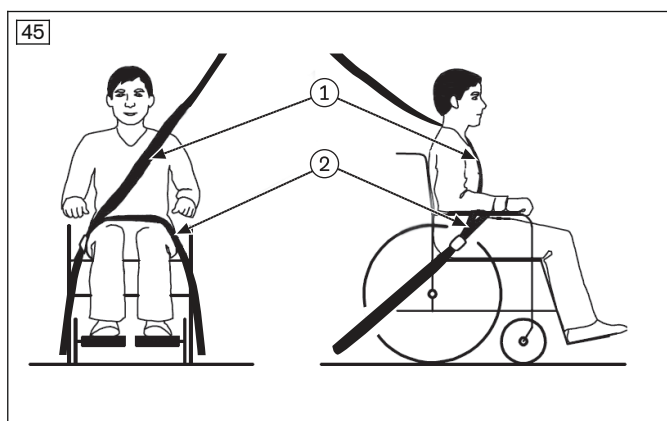


Applying the rear attachment straps

- 1) Hook each of the rear attachment straps into its corresponding rear anchor point from above (see fig. 44).
- 2) Tighten the rear attachment straps.

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

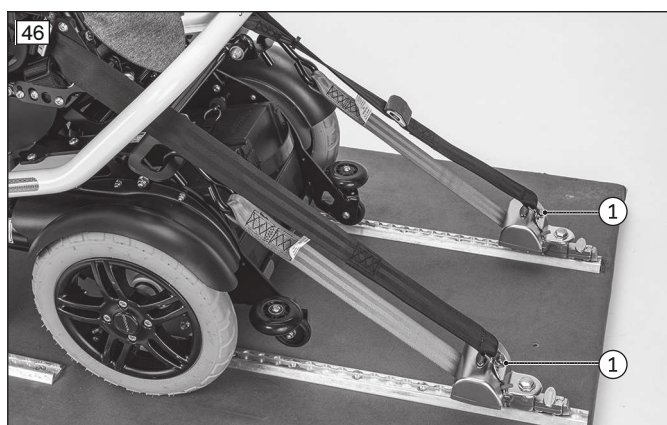
- Using the personal restraint system of the vehicle for transporting persons with reduced mobility is required. Attaching personal restraint systems of the vehicle for transporting persons with reduced mobility to the wheelchair is not permitted. The three-point restraint has to be realised entirely 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.



- 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. 45 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. 45, 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

Fastening the restraint lap belt of the vehicle for transporting persons with reduced mobility is mandatory. The power wheelchair's lap belt should be used in addition to position the passenger during transportation.



Fastening the restraint lap belt

- 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. This can be done, for example, by engaging the ends of the restraint lap belt on the existing pins (see fig. 46, item 1).

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.

7.18.3 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.

Accessories*	Transportation in a vehicle for transporting persons with reduced mobility not possible	Remove option	Secure option on product
Power back support angle adjustment	X		
Head support with mounting kit		X**	X***
Tray, swing-away to the side		X	
Lap belt with buckle			X****
Mid-tray control, swing-away to the right or left			X
Control panel holder, swing-away in parallel			X

* The following list provides an overview. Not all accessories are installed on all products.

** If the installed head support is not crash-tested, please remove the option.

*** The head support can remain on the power wheelchair if it is crash-test approved. Please refer to the order form for the approved head supports.

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

7.19 Care

7.19.1 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.

INFORMATION

Piston rods do not require lubrication. They are maintenance-free.

7.19.2 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.
- Use a dry brush to clean the seat and back upholstery as well as the seat cushion.
- 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 "Lap belt": see page 30.

7.19.3 Disinfection

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

Important information about disinfecting

- Only use colourless water-based disinfectants. Observe the instructions for use provided by the manufacturer.
- Prior to disinfection, clean the seat and back padding, control panel and armrests.

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

- ▶ Inspect the seat adjustment features for visible signs of damage at least **1 x per month** and ensure all screw connections are tight.
- ▶ Maintain sufficient air pressure in the tyres. The correct tyre pressure is printed on the tyre casing and listed in the section "Technical data".

- 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 49).
- 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 the central nut on the drive shaft is securely fastened			X
	Check that wheels rotate freely and without axial runout			X
	Check directional stability of the power wheelchair	X		
Caster wheels	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 attachment	Check that mounting screws are tight			X
Leg support	Check ratchet mechanism for functionality and firm fit			X
	Check for damage to foot supports			X
Leg support				X

Component	Activity	Prior to every use	Weekly	Monthly
	Check foot supports for adequate hold in the folded up position			
Leg support, mechanically elevating	Check ratchet mechanism for functionality and firm fit			X
	Check for damage to foot supports			X
	Visual inspection for scratches and oil leaks on the piston rod			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 air pressure (see tyre sidewall)			X
	Check for sufficient tread depth (min. 1 mm/0.04")			X
	Check for damage			X
Batteries	Check battery charge level	X		
Lighting	Check for external damage		X	
	Check 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 disengaged: check whether the indicator on the control panel is flashing	X		
	With brake engaged: check the braking function by trying to push the wheelchair			X
Power seat adjustments	Visually inspect all moving components and cabling for damage			X
	Check screw connections for tightness			X
Side panel and forearm support	Check that mounting screws are tight			X
	Check that screw connections between the forearm support and control panel are tight	X		
	Check forearm support for damage		X	
Gas compression spring or actuator	Visual inspection for scratches and oil leaks on the piston rod			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 a defective fuse

INFORMATION

When replacing, only use fuses of the same type. Note the printed rating.

To replace a fuse: see page 14.

Should the fuse burn out repeatedly after a short time for no discernible reason, contact the qualified personnel.

8.2.2 Wheel replacement

⚠ CAUTION

Uncontrolled movements of the power wheelchair

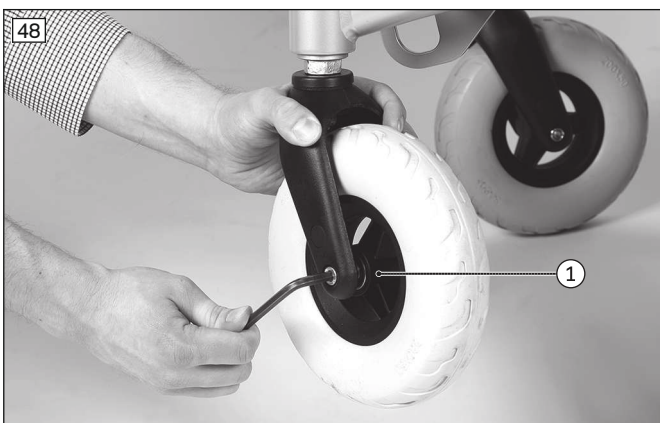
Crushing, pinching, blows due to non-observance of repair instructions

- ▶ When jacking up, secure the power wheelchair to prevent it from slipping or tilting to the side by placing a suitable base under the drive unit bracket.
- ▶ Ensure that body parts, such as hands or head, are never in the danger zone.



Replacing the drive wheel

- 1) Turn the control unit off.
- 2) Jack up the power wheelchair so that the wheel you want to replace can rotate freely.
- 3) Loosen and remove the 4 screws around the wheel hub.
- 4) Pull the drive wheel forward off the wheel hub.
- 5) Slide the new drive wheel onto the wheel hub.
- 6) Tighten all 4 screws using the torque wrench. The torque value is **25 Nm**.



Replacing the caster wheel

- 1) Turn the control unit off.
- 2) Jack up the power wheelchair so that the wheel you want to replace can rotate freely.
- 3) Loosen the axle screw using an Allen wrench and pull out the axle.
- 4) Remove the caster wheel from the caster fork.
- 5) Insert the new caster wheel into the caster fork.
- 6) Slide in the axle.
- 7) Tighten the axle screw using a torque wrench. The torque value is **10 Nm**.

8.2.3 Replacing the inner tube and tyre

The caster wheels are generally puncture-proof and can only be changed as a whole.

The rims of the drive wheels are in two parts and can be separated by removing the Allen head screws.



Making repairs

- 1) Remove the wheel in question (see previous section).
- 2) **For pneumatic tyres only:** Let all air out of the tyre and push the valve fully into the rim.
- 3) Loosen the 5 Allen head screws connecting the two parts of the rim (see fig. 49, left).
- 4) Pry back the tyre from the edges of the rim.
- 5) **For pneumatic tyres only:** Pull out the defective inner tube (see fig. 49, right).
- 6) **For pneumatic tyres only:** Repair the inner tube with a standard tyre repair kit or replace it.
- 7) Reassemble the rim. Firmly tighten the screws.
- 8) Reinstall the wheel (see previous section).

8.2.4 Replacing defective lights

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

8.2.5 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.

For example, if the connection between the control unit and seat motor is faulty, this error will only be indicated if the user attempts to activate the motor. However, the driving function is still available.

Error

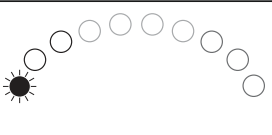

An error affects one or several functions of the power wheelchair. The power wheelchair and its functions are not fully operational until the fault is resolved.








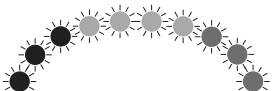
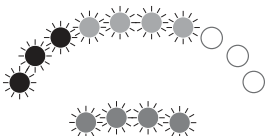
8.3.2 Procedure for warnings and error messages

- 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, the control unit switched off and the qualified personnel informed of the error message immediately.
- If the error is related to a component which is not currently being used (e.g. to an actuator for adjusting the seat function), the driving function of the power wheelchair is still theoretically usable. An error message simply appears at regular intervals.
- Nonetheless, the control unit **must** be switched off for several minutes in this case. If the error message continues to appear after switching on the control unit, the error message **must** be noted, the control unit switched off again and the qualified personnel informed of the error message immediately.

8.3.3 Wheelchair control unit error overview





VR2 control panel

Flashing LED	Error/warning	Cause	Possible corrective action
	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)
	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 corrective action
	Wiring fault on the left motor	e.g. cable break, no connection to battery	Check cable connections to left motor; check connection to battery terminal
	Right motor not connected	e.g. defective plug connection, cable break	Check plug connections and cable to right motor
	Defective cables on right motor	e.g. cable break, no connection to battery	Check cable connections to right motor; check connection to battery terminal
	Driving function blocked due to external factors	Battery charger may be connected	Disconnect battery charger
	Joystick fault	Joystick not in home position when the unit is turned on	Move the joystick to the home position before switching the unit on
	Controller fault	Defective controller	Check all connections
	Brake release	Open brake release	Check motor brakes Check connection to the controller
	Battery overvoltage	Voltage too high Loose battery contacts	Continue driving slowly Check cabling/plug contacts
	Communication error between control panel (joystick) and controller	Defective cable, loose plug connection	Check cabling/plug contacts

8.3.4 Attendant control error overview

VR2 attendant control

Flashing LED	Error/warning	Cause	Possible measure
	Control unit fault	Fault in the control unit	Read error on the control panel and take corresponding action (see "Wheelchair control unit error overview" table)
	Attendant control fault	Defective attendant control	Switch off attendant control and turn control panel off/on
	Joystick error	Attendant control joystick not in home position when the unit is turned on	Switch off attendant control and move joystick to home position before switching the unit on Switch control panel off/on
	Communication error between the attendant control (joystick) and the control panel/controller	Defective cable, loose plug connection	Check cabling / plug connections

8.4 Behaviour in case of breakdowns

In case of breakdowns, promptly inform the qualified personnel that adapted the product or the manufacturer's service (see inside back cover or back page 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 responsible specialist dealer 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: **5 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°**.

General information	
Application class (in compliance with DIN EN 12184)	Class B
Dimensions and weights	
Seat depth	280–380 mm (11"–15")
Seat width	300–380 mm (11.8"–15")
Seat width with removable lateral pads	240–320 mm (9.4"–12.6")
Seat height	445 mm (17.5")
Lower leg length*	150–380 mm (5.9"–15")

* Without seat cushion

Dimensions and weights	
Angle of the seat surface	0°–6°
Angle of leg to seat	90°–170°
Distance from arm support to seat	225–325 mm (8.9"–12.8")
Front position of the arm supports	300–580 mm (11.8"–22.8")
Forearm support height	160–230 mm (6.3"–9")
Forearm support length	235 mm (9.3")
Back support height*	350 mm (13.8"); in combination with back support extension: 460 mm (18.1")
Overall width	590 mm (23.2")
Overall height	775 mm/840 mm (30.5"/33.1")
Overall length	With leg supports: 870 mm/940 mm (34.2"/37") Without leg supports: 640 mm/710 mm (25.2"/28")
Weight when empty*	66.5 kg (146.5 lbs)
Transport weights	See weight when empty, of which: Side panel: < 1 kg (< 2.2 lbs) Leg support: approx. 1 kg (approx. 2.2 lbs) Battery, removable***: approx. 11 kg (approx. 24 lbs)
Max. load (allowable user weight)	50 kg (110 lbs)
Turning radius	680 mm (26.8")
Turning circle****	1,070 mm (42.1")
Caster wheel tyre size	8"
Drive wheel tyre size	12.1/2x2.1/4"
Air pressure	12.5" drive wheel: 2.4 bar/240 kPa/35 PSI Adjust the tyre pressure according to the specifications on the tyre sidewall to prevent injuries or damage to the product.

* Depending on version

** The specified weight varies according to the selected options and variant.

*** Each

**** = Three-point turn by 180°

Seat functions (optional)	
Back angle adjustment*	Manual on standard seat with release strap: adjustable in 10° increments (-9/1/11/21° or 0/10/20/30°) Power: continuously adjustable by up to 25°
Seat tilt*	Mechanical: adjustable by up to 20° Power: adjustable by up to 20°
Seat height adjustment*	Power: adjustable by up to 200 mm (7.9")
Combined seat height adjustment/seat tilt*	Seat height adjustment: adjustable by up to 200 mm (7.9"); seat tilt: adjustable by up to 20°; power

* Depending on order/version

Electrical system*	
IP protection rating (according to DIN EN 60529)	IP44
Operating voltage	24 V
Batteries	2 x 12 V; 28 Ah (C5) / 33 Ah (C20); AGM; maintenance-free
Lighting: LED front light Front direction indicator LED rear light (including rear direction indicator)	24 V, maintenance-free 10 W, 24 V 24 V, maintenance-free
Fuse	60 A in each battery pack
Battery charger	For more information see the included battery charger instructions for use

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

Control device	
Model	VR2
Max. output current per motor	70 A
Seat functions that can be controlled	Maximum 2 (maximum 3 in combination with switch)
Force for operating the joystick on the standard control panel	1.6 N

Driving data	
Speed*	See nameplate for precise information: 6 km/h (3.7 mph); 7.2 km/h (4.4 mph)
Climbing ability (basic model)**	7° (12%)
Dynamic stability – uphill***	7° (12%)
Static stability – uphill/downhill	9° (15.8%)
Static stability – sideways	9° (15.8%)
Maximum obstacle height	60 mm (2.4")
Driving distance range (on level surfaces)****	Approx. 25 km (15.5 miles)
Braking distance (according to DIN EN 12184:2009)*****	At 6 km/h (3.7 mph): 1000 mm (39.4") – on level surfaces; 2000 mm (78.7") – on incline At 7.2 km/h (4.4 mph): 1200 mm (47.2") – on level surfaces; 2400 mm (94.5") – on incline

* The specified speed can vary by ±10%.

** 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 specified climbing ability.

*** Approved climbing ability with lowered seat functions, upright back support and lowered leg supports.

**** 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**. For information on this, see the section "Driving distance range" in the instructions for use (user).

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

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	Dip-coated frame (KTL 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
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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