



CE

490E75=2_C

EN Instructions for use (user)	3
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1 Foreword

INFORMATION

Date of last update: 2024-07-01

- ▶ 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 (visit www.ottobock.com for addresses).
- ▶ You can request this document as a PDF file at ccc@ottobock.com or from the manufacturer's service department. The PDF file can also be displayed in a larger size.

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

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

Please note the following in particular:

- All users and/or their attendants must be trained by qualified personnel in the use of the product. In particular, users and/or attendants must be informed of the residual risks with the aid of the safety notices in the instructions for use (user).
- 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.
- 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.
- Your product may differ from the models shown.
- 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.

Application class A (variant)

The wheelchair is designed for driving on level horizontal surfaces and slight inclines (class A according to EN 12184).

Application class B (standard)

The wheelchair is designed for driving on moderately uneven surfaces and moderate inclines in addition to the indications for use described for class A (class B according to EN 12184).

Front-wheel drive

The power wheelchair is equipped with front-wheel drive for excellent directional stability.

The drive system with two 12 V batteries combined with spring-mounted drive wheels allows obstacles to be crossed easily and offers safe operating performance.

Mid-wheel drive

The power wheelchair is equipped with mid-wheel drive with directional stability that can be intuitively manoeuvred.

The drive system powered by two 12 V batteries combined with spring-mounted drive wheels allows obstacles to be crossed easily and offers safe operating performance.

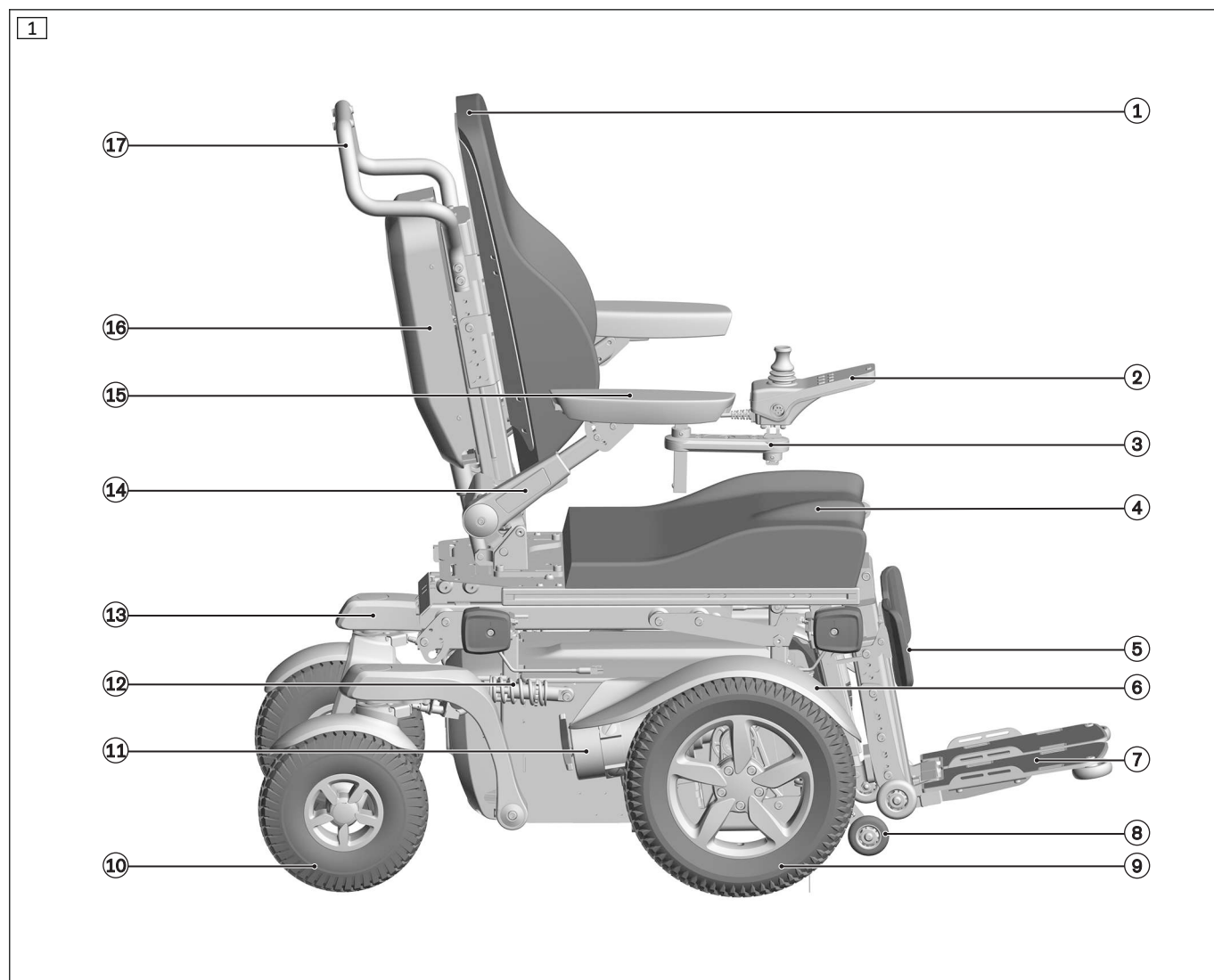
The power wheelchair is controlled by the ICON wheelchair control device (see page 25). The control device is used to enter driving commands and display the current status. The control electronics in the power module and in other integrated components make it possible to control the drive motors and other power functions based on the input data.

The special features of the power wheelchair include:

- Individual adaptation possibilities for control device using programming and options.
- Individual adaptation possibilities with options and custom fabrication using modular components (chassis, seating system, control device, accessories).
- Modular design that allows the power wheelchair to be equipped with additional modules and installed equipment in addition to the main components, such as power seat adjustments, special controls, tray.
- Serviceability due to easy, straightforward access to all components.

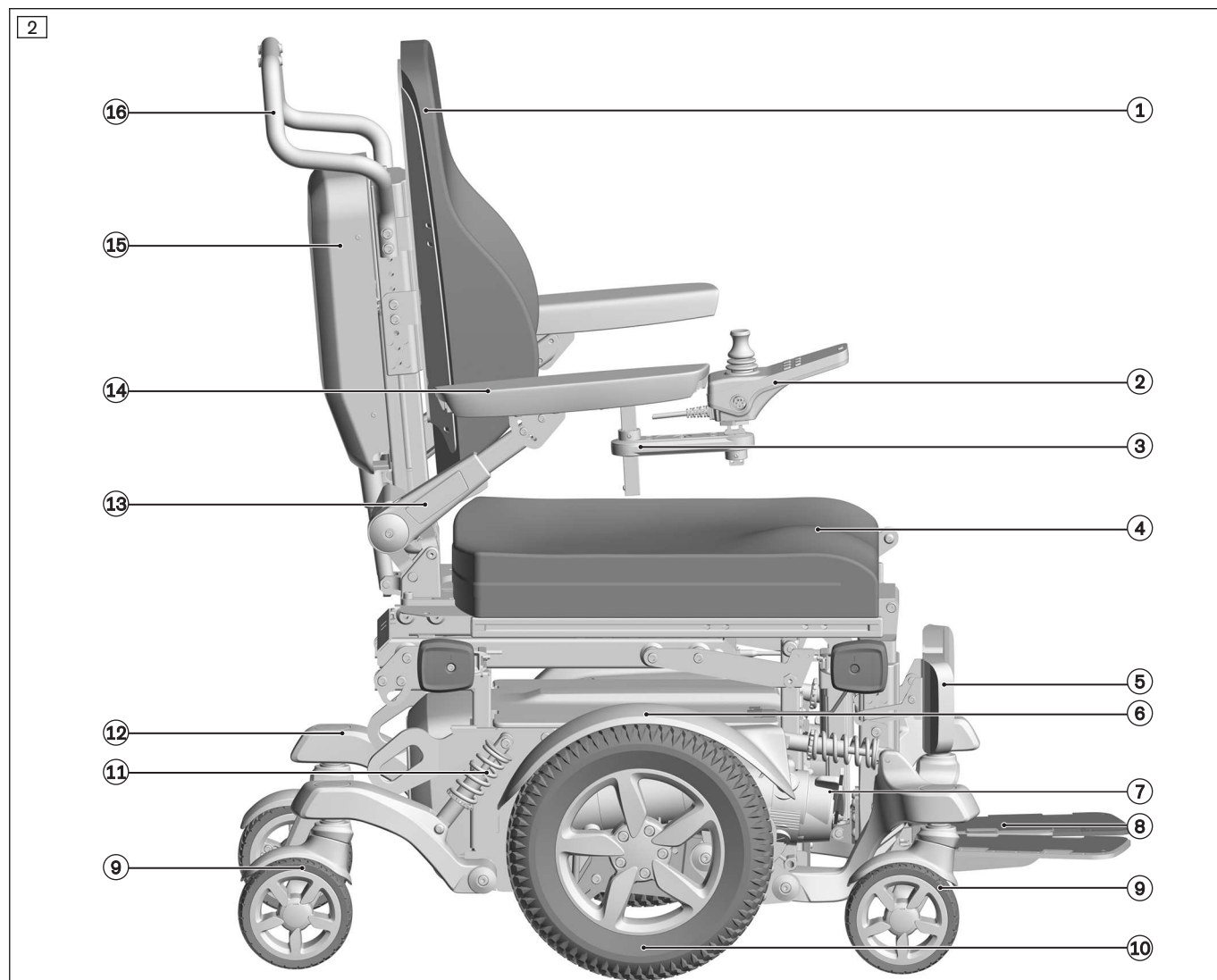
2.2 Product overview

Front-wheel drive



- | | | | |
|---|-------------------------------|----|-------------------------------|
| 1 | Back support | 10 | Caster wheel |
| 2 | ICON hand module | 11 | Motor with brake release |
| 3 | Holder, swing-away | 12 | Suspension |
| 4 | Seat cushion | 13 | Caster wheel swing arm |
| 5 | Calf pad (option) | 14 | Arm support, elevating |
| 6 | Drive wheel splash guard | 15 | Forearm support |
| 7 | Centrally mounted leg support | 16 | Back support cover |
| 8 | Anti-tipper | 17 | Back support bracket (option) |
| 9 | Drive wheel | | |

Mid-wheel drive



- | | | | |
|---|-------------------------------|----|-------------------------------|
| 1 | Back support | 9 | Caster wheel |
| 2 | ICON hand module | 10 | Drive wheel |
| 3 | Holder, swing-away | 11 | Suspension |
| 4 | Seat cushion | 12 | Caster wheel swing arm |
| 5 | Calf pad (option) | 13 | Arm support, elevating |
| 6 | Drive wheel splash guard | 14 | Forearm support |
| 7 | Motor with brake release | 15 | Back support cover |
| 8 | Centrally mounted leg support | 16 | Back support bracket (option) |

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

Application class A (variant)

The wheelchair is intended for transportation, by the user, of people with temporary or permanent limitations of the ability to walk, inability to walk or difficulty standing up in accordance with the specifications for class A wheelchairs according to DIN EN 12184 (see page 8). 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 measurements and weight) permits the intended use of the product.

Application class B (standard)

The wheelchair is intended for people with temporarily or permanently limited walking ability, inability to walk or difficulty standing up for self-transport and transport by others in accordance with the specifications for class B wheelchairs according to DIN EN 12184 (see page 8). 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 measurements and weight) permits the intended use of the product.

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

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

3.2 Indications

- Minor to pronounced or complete restrictions of mobility

3.3 Contraindications

3.3.1 Absolute Contraindications

- None known

3.3.2 Relative Contraindications

- Failure to meet physical or mental requirements

3.4 Side effects

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

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

Contact a doctor or therapist in case of problems.

4 Safety

4.1 Explanation of warning symbols

	Warning regarding possible serious risks of accident or injury.
	Warning regarding possible risks of accident or injury.
	Warning regarding possible technical damage.

4.2 General safety instructions

WARNING! Risk of severe injuries

- ▶ The product may only be used by a user or attendant who has been instructed accordingly.
- ▶ The user's physical and cognitive abilities must permit use of the product to the intended extent. Otherwise, the product may only be used under the supervision of instructed attendants.
- ▶ Observe the applicable legal regulations during operation in public areas.
- ▶ Use this product only for its original intended purpose.
- ▶ Only one person may be transported with the product at any one time.

- ▶ Note that overloading the product can result in severe injuries from the product tipping over or load-bearing components breaking.
- ▶ Do not exceed the maximum load (see the nameplate and section "Technical data").
- ▶ Please note that certain accessories and add-on components will reduce the remaining load capacity.
- ▶ Note that the product includes small parts that can be loosened and removed without tools. Your supervisory duties include ensuring that small children, for example, do not swallow them.
- ▶ Failure to observe the manufacturer's specifications and service intervals and using the product beyond the specified expected lifetime leads to increased residual risk.

CAUTION! Risk of injury and risk of product damage

- ▶ Note that, in extreme temperatures, hypothermia or burns may occur in case of unprotected contact with components.
- ▶ Do not expose the product to any extreme temperatures (e.g. prolonged direct sunlight, sauna, close proximity to heating appliances, prolonged extreme cold).
- ▶ Check your skin for intactness where it is in contact with the product before and during use of the product.
- ▶ Note that excessive strain on the skin may result in skin damage or pressure points. Pay attention to diligent skin care and pressure redistribution. If skin damage occurs, stop using the product and consult qualified personnel.
- ▶ Please note that diagnostic examinations and therapeutic treatment with medical devices may result in improper interactions between your product and the devices used. Examinations and treatments must be carried out exclusively under the prescribed conditions.

NOTICE! Danger of product damage and restricted functionality

- ▶ The product may be damaged if used at high or excessively low temperatures. Only use the product within a temperature range of **-15 °C to +40 °C (5 °F to +104 °F)**.

4.3 Interference due to electromagnetic fields

CAUTION! Risk of injury and risk of product damage

- ▶ The product complies with all applicable EMC directives and standards, and has been tested accordingly.
- ▶ Nevertheless, in certain circumstances, there may be interference with the product's control device from other electronic equipment (e.g. radio and television stations, amateur radio transmitters (HAM), two-way radios, medical equipment that emits radiation or also mobile phones). This can affect 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 less likely (e.g. cordless telephones, laptops, tablets, networked wristwatches, radios, electric shavers or electric toothbrushes).
- ▶ 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.

4.4 Further information

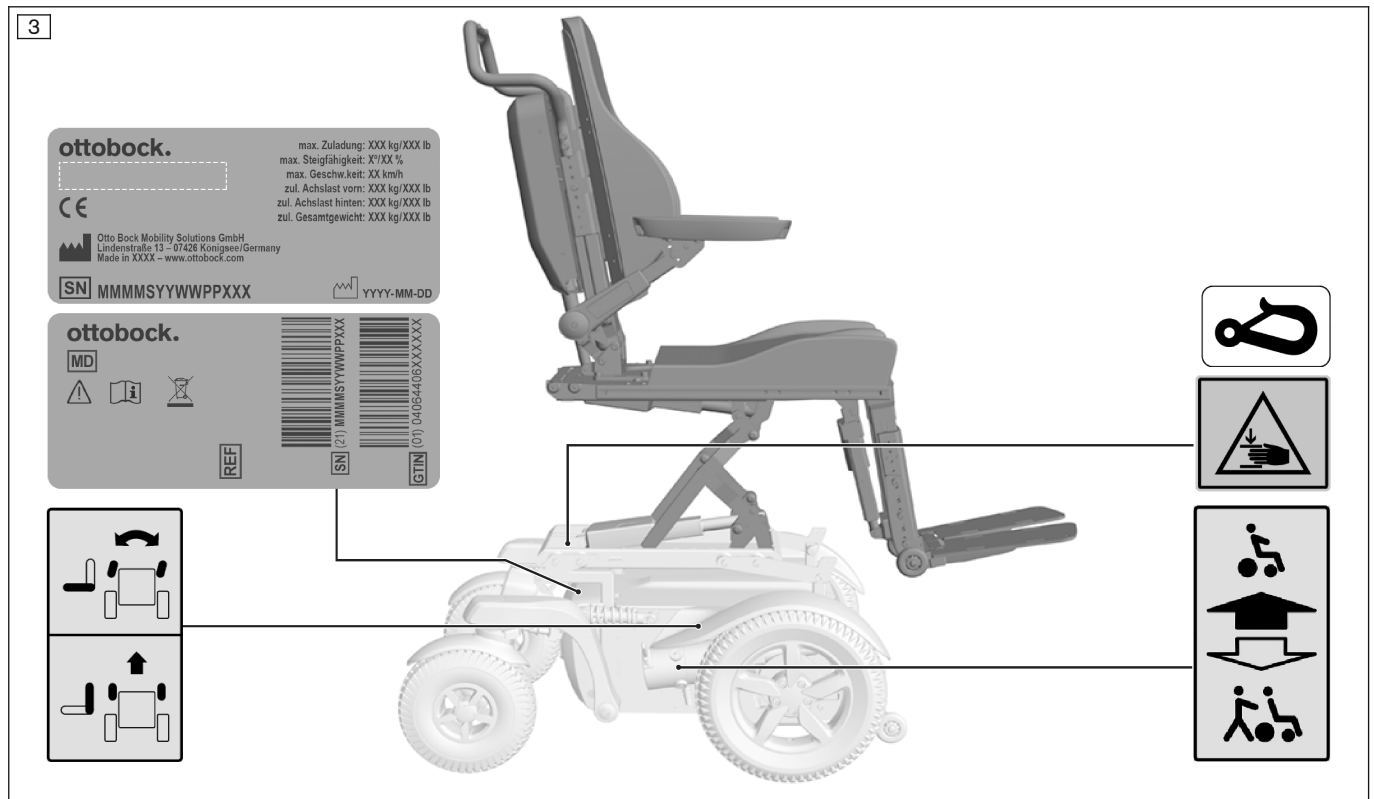
The serial number required for enquiries and ordering spare parts and accessories is found on the nameplate. For explanations of the nameplate, see the section "Nameplate" (see page 14).

4.5 Nameplate and warning labels

4.5.1 Signage on the product

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

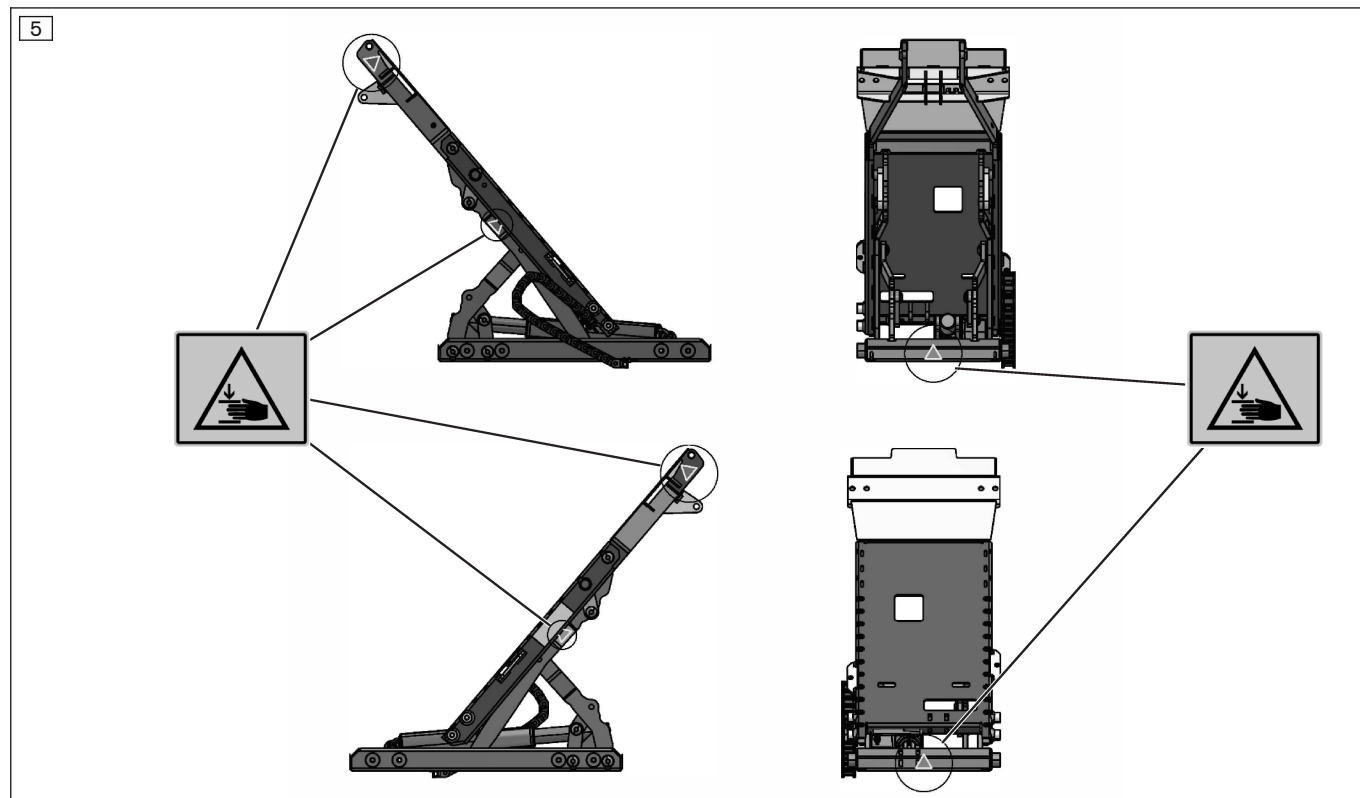
Front-wheel drive



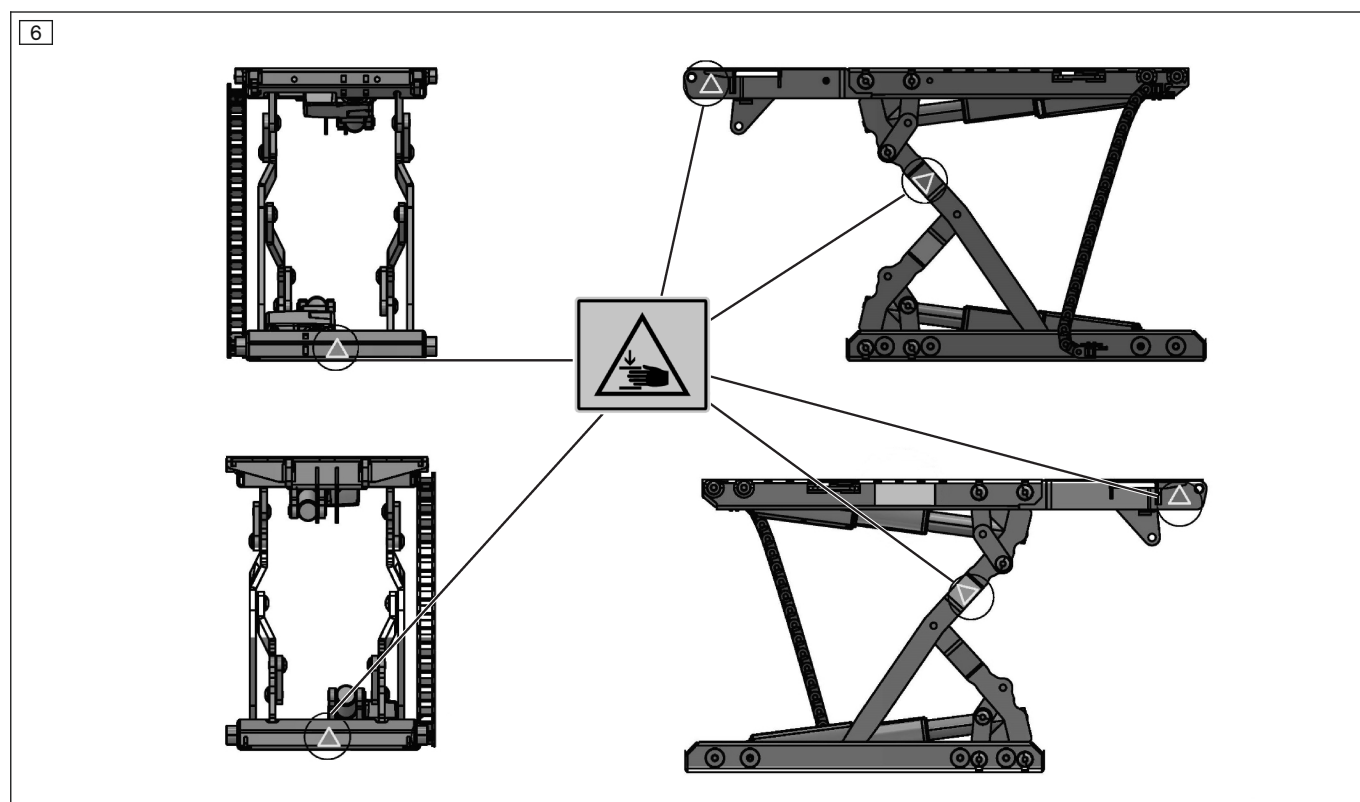
Mid-wheel drive



Seat variant with seat tilt



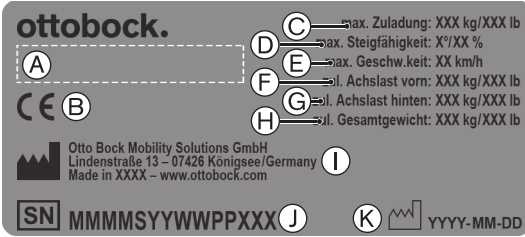
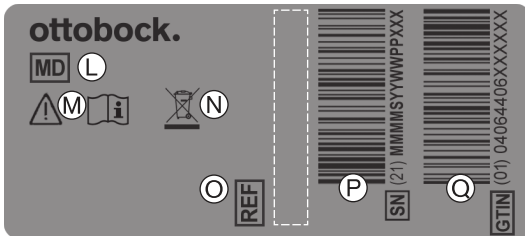
Seat variant with seat height adjustment + seat tilt



4.5.2 Nameplate

The nameplates are found on the mobility base.

Front-wheel drive

Label	Meaning
 ottobock. (A) (B) (C) max. Zuladung: XXX kg/XXX lb (D) (E) max. Steigfähigkeit: X°/XX % (F) (G) max. Geschw.keit: XX km/h (H) (I) zul. Achslast vorn: XXX kg/XXX lb (J) (K) zul. Achslast hinten: XXX kg/XXX lb (L) (M) zul. Gesamtgewicht: XXX kg/XXX lb Otto Bock Mobility Solutions GmbH Lindenstraße 13 – 07426 Königsee/Germany Made in XXXX – www.ottobock.com (SN) MMMMSYYWWPPXXX (J) (K) YYYY-MM-DD	A Reference material no. Name of the product
	B CE marking
 ottobock. (MD) (L) (N) (O) (P) (Q) (R) (1) 04064406XXXXXX	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⁾

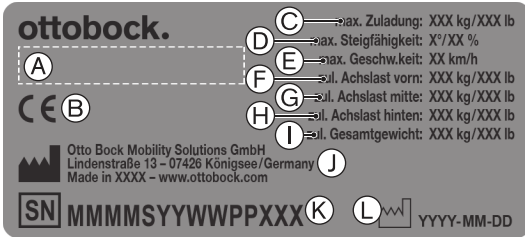
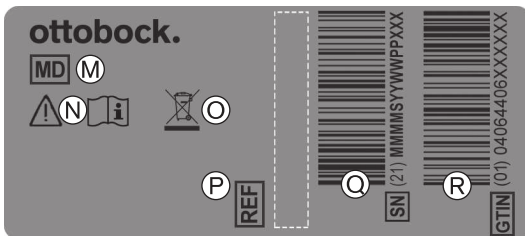
1) MMMM = model/model variant; S = speed code; YY = year of manufacture; WW = week of manufacture; PP = production site; XXX = sequential production number

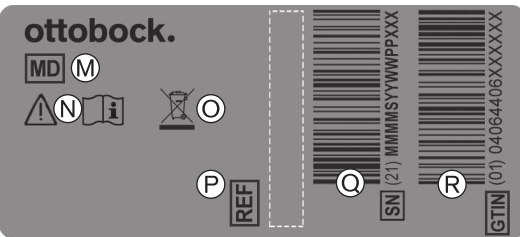
2) YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

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

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

Mid-wheel drive

Label	Meaning
 ottobock. (A) (B) (C) max. Zuladung: XXX kg/XXX lb (D) (E) max. Steigfähigkeit: X°/XX % (F) (G) max. Geschw.keit: XX km/h (H) (I) zul. Achslast vorn: XXX kg/XXX lb (J) (K) zul. Achslast mitte: XXX kg/XXX lb (L) (M) zul. Achslast hinten: XXX kg/XXX lb (N) (O) zul. Gesamtgewicht: XXX kg/XXX lb Otto Bock Mobility Solutions GmbH Lindenstraße 13 – 07426 Königsee/Germany Made in XXXX – www.ottobock.com (SN) MMMMSYYWWPPXXX (K) (L) YYYY-MM-DD	A Reference material no. Name of the product
	B CE marking
 ottobock. (MD) (M) (N) (O) (P) (Q) (R) (1) 04064406XXXXXX	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, middle
	H Allowable axle load, rear
	I Allowable overall weight
	J Manufacturer information/address
	K Serial number ¹⁾
	L Manufacturing date ²⁾
	M Symbol for medical device
	N WARNING! Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).
	O Symbol for separate collection of electrical and electronic devices. Components of the power wheelchair and batteries may not be disposed of in household waste.
	P Manufacturer's reference number for the product variant

Label	Meaning
 ottobock. (A) CE (B) Otto Bock Mobility Solutions GmbH Lindenstraße 13 – 07426 Königsee/Germany Made in XXXX – www.ottobock.com (SN) MMMMSYYWWPPXXX (K) (L) YYYY-MM-DD (C) max. Zuladung: XXX kg/XXX lb (D) max. Steigfähigkeit: X°/XX % (E) max. Geschw.keit: XX km/h (F) ul. Achslast vorn: XXX kg/XXX lb (G) ul. Achslast mitte: XXX kg/XXX lb (H) ul. Achslast hinten: XXX kg/XXX lb (I) ul. Gesamtgewicht: XXX kg/XXX lb (J)	Q Serial number (PI)^{3),1)} R Global Trade Item Number (DI)⁴⁾
 ottobock. (MD) (M) (N) (O) (P) REF (Q) (R) (SN) (21) MMMSYWWPPXXX (GTIN) (01) 04064406XXXXXX	

¹⁾ MMMM = 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 = Production Identifier

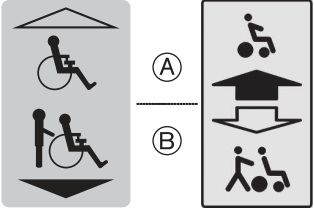
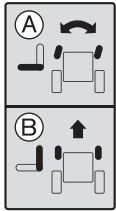
⁴⁾ UDI-DI to GS1 standard; UDI = Unique Device Identifier, DI = Device Identifier



If the adjacent symbol appears on the nameplate, this indicates the following:
The product may **not** be used as a seat in vehicles for transporting persons with reduced mobility.

4.5.3 Warning labels

Front-wheel drive

Label	Meaning
	A Power driving mode: motor brake locked (see page 54) B Manual driving mode: motor brake released (see page 54)
	A Caster wheel swivel lock: the caster wheels are unlocked and can swivel freely (when ordered) B Caster wheel swivel lock: the caster wheels are locked for driving straight ahead (when ordered)
	Risk of pinching. Do not reach into the danger area.

Mid-wheel drive

Label	Meaning	
	A	Power driving mode: motor brake locked (see page 54)
	B	Manual driving mode: motor brake released (see page 54)
		Risk of pinching. Do not reach into the danger area.

Application class A (variant)

Label	Meaning
 CS: Trída A HR: Razred A RU: Knacc A DA: Klasse A HU: Osztály A SK: Trieda A DE: Klasse A IT: Classe A SL: Razred A EN: Class A NL: Klasse A SV: Klass A ES: Categoría A NO: Klasse A TR: Sınıf A FI: Luokka A PL: Klasa A FR: Classe A PT: Classe A	Only for application class A (category A according to DIN EN 12184)

Label	Meaning
	(Only in case of installation 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**

The power wheelchair is normally shipped fully assembled and fitted to the personal requirements of the respective user.

The scope of delivery includes:

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

5.2 Accessories

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 14) is thereby respectively reduced by the weight of the retrofitted options.

5.2.1 Accessories from other manufacturers

As per the order for the power wheelchair, some components from third-party manufacturers have been installed prior to delivery. Please observe the following instructions in this regard:

- 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/matrix manufacturer's instructions for the relevant accessories must be strictly observed. They are enclosed with the product.

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

If the product is not used for extended periods of time, the following must be observed:

Storage conditions

- Fully charge the batteries before storing the product for an extended period of time.
- Charge the batteries weekly to maintain their capacity and prevent damage due to deep discharge (see page 56).
- If the product is not used for a longer period of time, deactivate the main fuse after charging (see page 19). This reduces the discharge of the batteries.
- Store the product in a closed, dry room with sufficient air circulation and protected from external influences. Specific information about storage conditions: see page 138.
- Protect the wheels from ground frost, e.g. by completely taking the weight off them using an assembly stand or by setting them onto wooden blocks.
- Maintain sufficient distance 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.
- Fill pneumatic tyres with slight overpressure.
- Rotate the wheels weekly to prevent flat spots from extended standing.
- For extended storage, store the product so the wheels are not in contact with the ground.

Information regarding wheels

- If the product is not moved for several days, permanent colour changes may develop where it comes into contact with the floor. A suitable base should therefore be used when parking it for extended periods of time.
- Black tyres contain carbon black particles. They may leave black abrasion marks where they come into contact with the floor. Therefore, the manufacturer recommends grey tyres if the product is primarily used indoors.
- 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 replaced when the tread depth 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 products with PU tyres are parked for prolonged periods of time, the tyres may become deformed (flat spots). This deformation will go away on its own over time when driving.

6 Preparing the product for use

6.1 Safety instructions

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 movements of components while 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 assistance from a helper.

⚠ 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.

6.2 Initial operation

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

The following additional tasks may be required:

- Activating the main fuse (see page 19)
- Charging the battery (see page 57)

6.3 Settings

The product is delivered preconfigured by qualified personnel. Adjustments may only be made by qualified personnel as needed.

The user or attendant may only perform the fine-tuning adjustments described in the section "Use" for the user. The user should be sitting upright in the product while making adjustments. If you want to change settings that are not described in this document, contact the qualified personnel who adapted the product.

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.

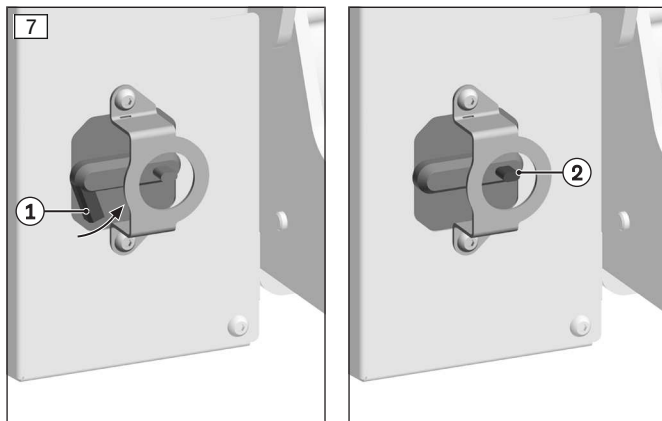
If necessary, the qualified personnel can adapt the preconfigured parameters of the wheelchair control device to the specific requirements of the user.

7 Use**7.1 Main fuse****INFORMATION**

- ▶ If the automatic circuit breaker deactivates repeatedly after activation for no discernible reason, contact the qualified personnel.
- ▶ If objects are placed on the automatic circuit breaker, movements while driving can trip the main fuse, causing it to stop abruptly. Do not place any objects on the automatic circuit breaker.
- ▶ Deactivate the automatic circuit breaker if you are not using the product for an extended period of time or if you are shipping it.

The main fuse has to be activated before the product can be switched on.

The automatic circuit breaker is located under the seat on the front of the chassis.



Activating the circuit breaker

- Close the reset lever, which is at an angle (see fig. 7, item 1).
- The reset lever engages and the circuit breaker is activated.

Deactivating the circuit breaker

- Press the pushbutton until the reset lever flips up at an angle (see fig. 7, item 2).
- The circuit breaker is deactivated.

7.2 Armrests

⚠ CAUTION

Reaching into the swivel region

Pinching or crushing of limbs (e.g. fingers) due to lack of caution in danger zones

- Do not reach into the swivel region.

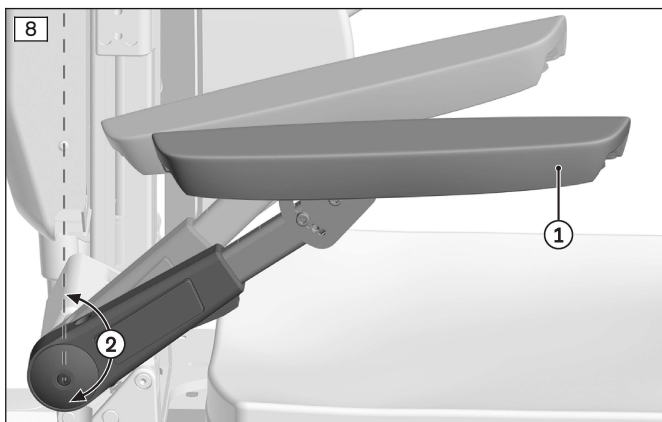
The arm supports offer the user support for the forearms.

The arm supports can be folded up if necessary to make getting in from the side easier (see page 23).

The height, width, depth and angle of the arm supports have been adapted to the requirements of the user by qualified personnel. The depth of the control modules has also been adjusted.

Contact qualified personnel if any adjustments are required.

7.2.1 Folding the arm supports up/down



Tilting the arm support

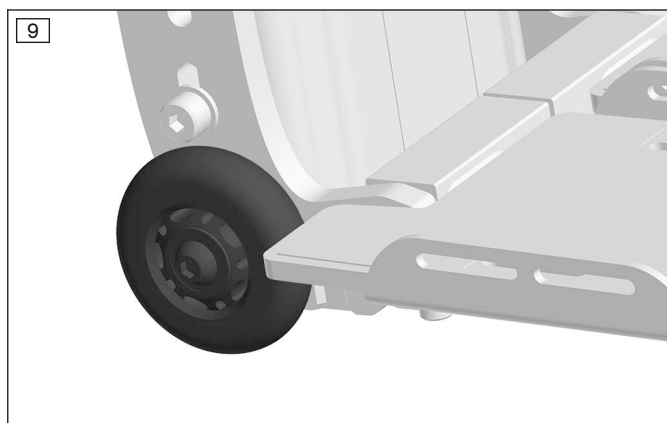
- 1) Grasp the front end of the arm support (see fig. 8, item 1).
- 2) Tilt the arm support upwards and backwards to the vertical position, or forwards and downwards (see fig. 8, item 2).

7.3 Leg support

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

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

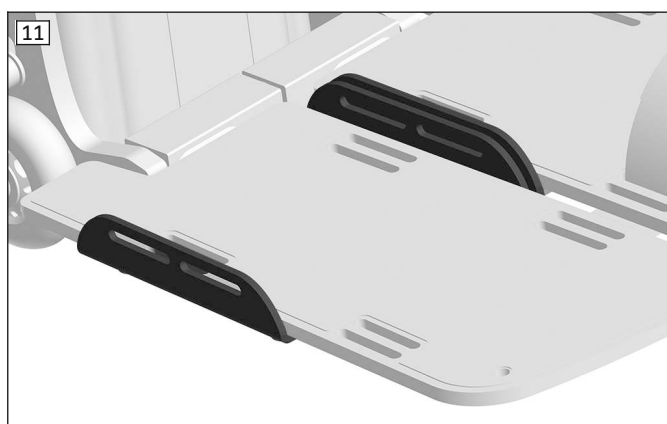
Contact qualified personnel if any adjustments are required.



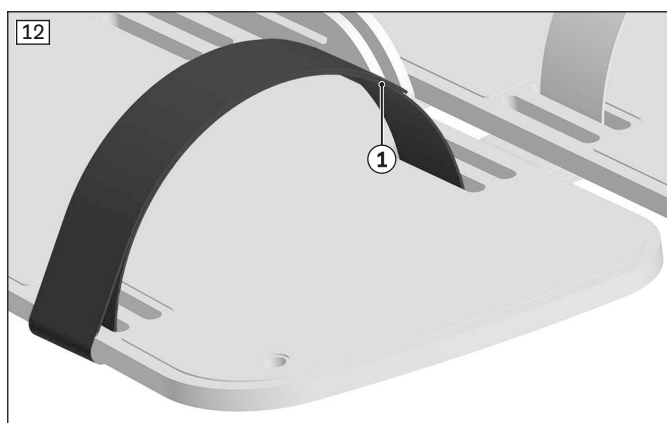
The rollers on the lower end of the leg support can prevent damage to the leg support or the ground in critical driving situations.



The calf pads (option) are used to position and support the user's legs. The position of the calf pads has been adapted to the needs of the user by qualified personnel. The calf pad covers are removable and washable. A mild, environmentally friendly detergent should be used for cleaning. The covers are to be air dried and are not suitable for a tumble dryer.



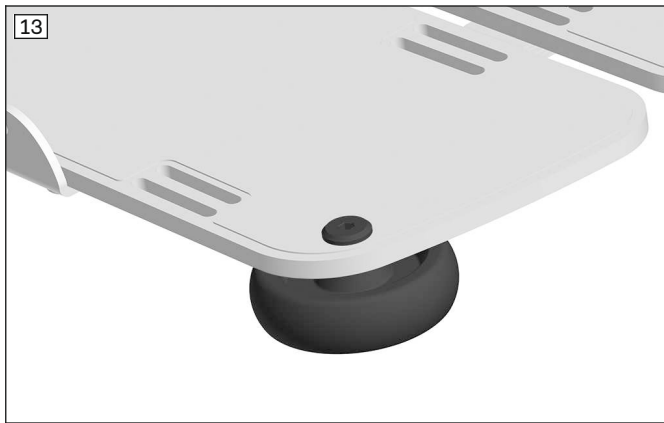
The lateral foot guide (option) has been adapted to the appropriate foot position for the user by qualified personnel.



The foot straps (option) are used to position the user's feet on the foot plates of the leg support.

The slotted holes in the foot plates can be used for attachment.

The length of the foot straps can be adjusted to prevent sliding by loosening and fastening the hook-and-loop closure (see fig. 12, item 1).



The protective rollers (option), installed in pairs, protect the edges of the foot plates in case of accidental collisions.

7.3.1 Folding the foot plate up/down

CAUTION

Improper use of the leg supports

Abrasions due to sharp edges, skin irritation

- To prevent injuries to the feet and soles of the feet, do not use the leg supports or foot plates with anti-slip coverings while barefoot.

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

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

Front-wheel drive

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

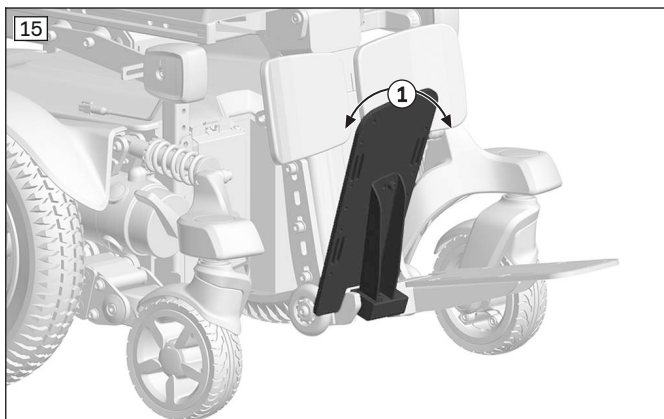


Folding the foot plates up/down

- 1) Grasp the front of the foot plates.
CAUTION! Do not reach between moveable components. Take care that limbs and parts of garments do not get caught.
- 2) Fold the foot plates up or push them down (see fig. 14, item 1).

Mid-wheel drive

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



Folding the foot plates up/down

- 1) Grasp the front of the foot plates.
CAUTION! Do not reach between moveable components. Take care that limbs and parts of garments do not get caught.
- 2) Fold the foot plates up or push them down (see fig. 15, item 1).

7.4 Backrest

CAUTION

Exposed pinch points

Crushing, pinching due to incorrect handling

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

INFORMATION

Detailed information regarding use when equipped with an ADI back support (Baxx line) can be found in the separate, enclosed instructions for use.

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

7.4.1 Adjusting the back support angle

The back support angle can be adjusted as needed using the power back angle adjustment (see page 69).

The back angle adjustment range and the range of action of the length adjustment can be changed by qualified personnel as needed.

7.5 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.

Basic seat version or seat tilt

CAUTION

Incorrect handling when getting in

Pinching, crushing, pushing of the user and tipping of the wheelchair due to incorrect handling

- ▶ Please note that the wheelchair may tip when you place your full weight on the foot plates when getting in or out. Fold up the foot plates before getting in or out.
- ▶ Watch for protruding edges.

Transfer seat or Multilift seat version

CAUTION

Incorrect handling when getting in

Pinching, crushing, pushing of the user and tipping of the wheelchair due to incorrect handling

- ▶ Note that the wheelchair may tip if the foot plates are not lowered to the ground and you place your full weight on them while getting in or out.
- ▶ Only step on the foot plates when getting in or out when the seat is in the pre-programmed "Active Access" sitting position. If the wheelchair does not have this function or the seat is in a different position, fold up the foot plates before getting in or out.
- ▶ Watch for protruding edges.

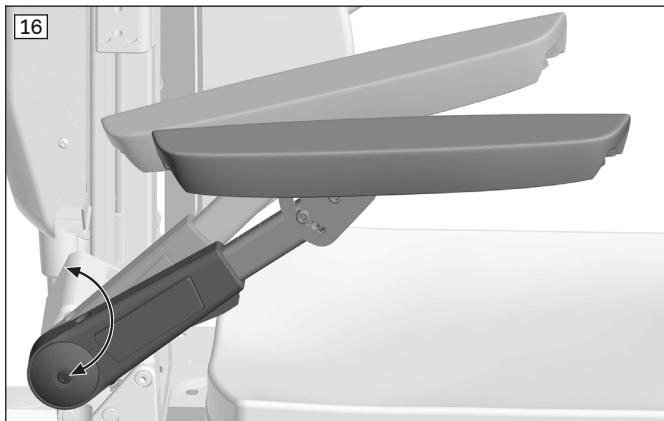
Users can choose the method for getting into and out of the wheelchair which is most suitable for them.

Recommendation: Gently swinging the forearm support away and easily pulling off the pads makes it easy to get in and out from and to the side.

To make it easier to get in, the foot plates should also be folded up until they touch the attachment.

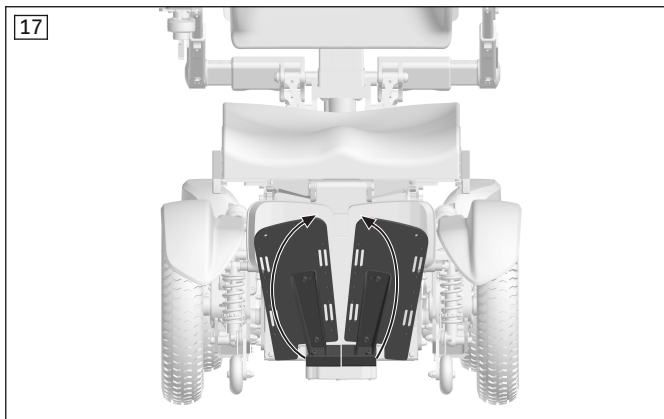
INFORMATION: If the foot plate cannot be folded easily without resistance, the mounting screws should be tightened slightly. Contact the qualified personnel if necessary.

Front-wheel drive



Getting in from the side

- 1) Drive the power wheelchair as close as possible to the seat surface.
- 2) Switch the control device off.
- 3) Swing the arm support to the rear (see fig. 16).
- 4) **If necessary:** Fold up the foot plate towards the back to the stop (see fig. 17).
- 5) Get into or out of the power wheelchair from the side. A transfer board makes this easier.
- 6) Fold down the foot plate towards the front to the stop. Fold down the arm support again.



Getting in from the front

- 1) Switch the control device off.
- 2) Fold up the foot plate towards the back to the stop (see fig. 17).
- 3) Get into or out of the power wheelchair from the front with the help of an attendant or transfer lifter.
- 4) Fold down the foot plate again.

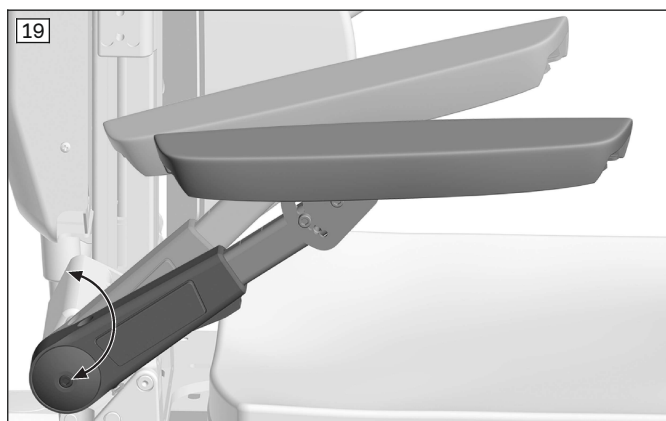


Getting in from the front (“Active Access”)

If the control device is equipped with a memory function, the pre-programmed “Active Access” seat position can be used for getting in and out of the wheelchair:

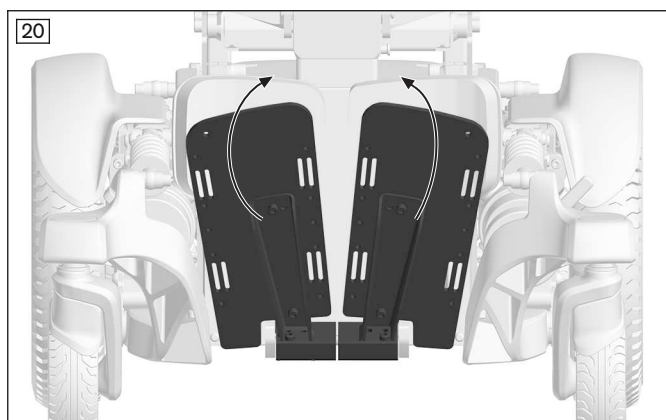
- 1) Switch on the control device.
- 2) Move the seat into the “Active Access” position using the A2 memory function. In doing so, the seat tilts forwards and lowers the foot plate to the floor (see fig. 18).
- 3) Switch off the control device to prevent accidental actuation of the input devices.
- 4) Get into or out of the power wheelchair from the front with the help of an attendant or transfer lifter.
- 5) Switch on the control device.
- 6) Return the seat to the driving position using the M1 memory function.
- 7) Switch the control device back to a driving profile.

Mid-wheel drive



Getting in from the side

- 1) Drive the power wheelchair as close as possible to the seat surface.
- 2) Switch the control device off.
- 3) Swing the arm support to the rear (see fig. 19).
- 4) **If necessary:** Fold up the foot plate towards the back to the stop (see fig. 20).
- 5) Get into or out of the power wheelchair from the side. A transfer board makes this easier.
- 6) Fold down the foot plate towards the front to the stop. Fold down the arm support again.



Getting in from the front

- 1) Switch the control device off.
- 2) Fold up the foot plate towards the back to the stop (see fig. 20).
- 3) Get into or out of the power wheelchair from the front with the help of an attendant or transfer lifter.
- 4) Fold down the foot plate again.



Getting in from the front ("Active Access")

If the control device is equipped with a memory function, the pre-programmed "Active Access" seat position can be used for getting in and out of the wheelchair:

- 1) Switch on the control device.
- 2) Move the seat into the "Active Access" position using the A2 memory function. In doing so, the seat tilts forwards and lowers the foot plate to the floor (see fig. 21).
- 3) Switch off the control device to prevent accidental actuation of the input devices.
- 4) Get into or out of the power wheelchair from the front with the help of an attendant or transfer lifter.
- 5) Switch on the control device.
- 6) Return the seat to the driving position using the M1 memory function.
- 7) Switch the control device back to a driving profile.

7.6 Control unit

CAUTION

Uncontrolled driving behaviour

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

- Observe the information in the section "Interference due to electromagnetic fields" (see page 12).
- Turn the control device off when it is not needed.

The power wheelchair is controlled by an ICON control device (manufacturer: Curtis Instruments Inc., manufacturer name: enAble X1).

The control device can be adapted to the user's needs in many different ways by qualified personnel. For this reason, only a selection of key basic principles of the control device can be provided below.

The control device can be programmed with up to four driving profiles. If necessary, qualified personnel can program four separate driving profiles for each input device (e.g. for special control functions).

Driving profiles define, for example, the maximum and minimum speeds, accelerations and decelerations at which the power wheelchair can be operated. The driving profiles are intended for different driving situations. For example, the control device could be programmed with driving profiles for slow movement indoors, moderate movement and fast movement outdoors.

7.6.1 ICON hand module

INFORMATION

For the display functions on the LCD screen: see page 30.

The power wheelchair is operated using the ICON standard hand module (HCS = Handcontrol Standard).

The top of the hand module consists of a button section, LCD screen and joystick. On the left and right side are charging ports and on the front side are external button and USB inputs.

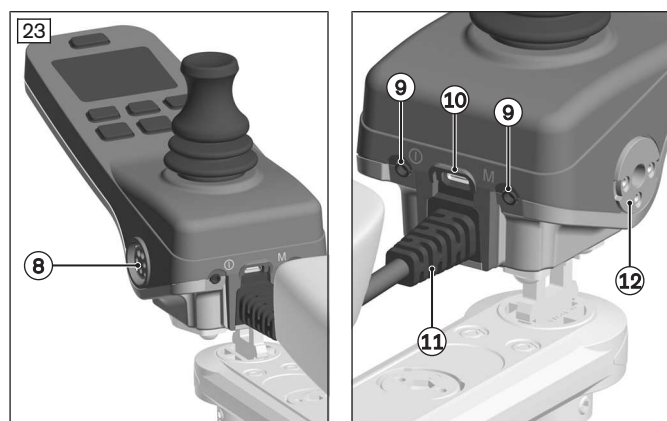
The hand module is used to switch the power wheelchair on and off, enter driving commands and display the current status of certain functions and components.

Top – ICON standard hand module



- 1 [On/off] button
- 2 Colour LCD screen
- 3 [Softkey 1–3] button
- 4 [Change softkey functions] button
- 5 [Mode] button
- 6 [Horn] button
- 7 Joystick

Left/right side; front – ICON standard hand module



- 8 XLR charging/programming receptacle
- 9 Connections for external buttons
- 10 Connection for USB-C
- 11 Cable connection
- 12 Magnetic charging receptacle

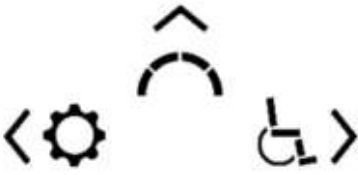
LCD screen – ICON standard hand module

INFORMATION

The displayed graphics and corresponding text descriptions can vary depending on the country and/or customer-specific configuration.

The LCD screen is the communication interface between the user and the hand module.

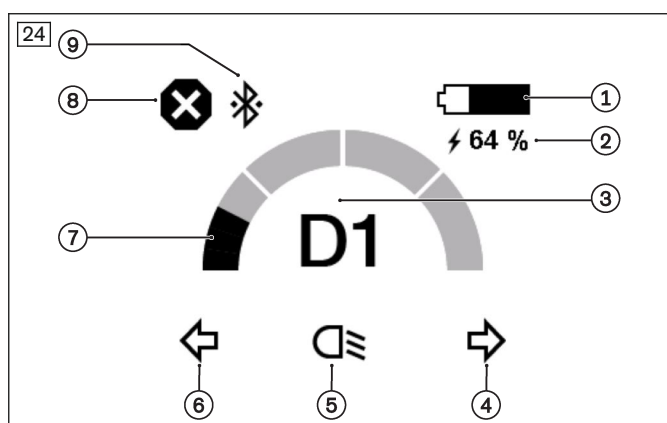
When switched on with its default programming, it shows the home screen. The sub-functions can be accessed by using the input device (e.g. joystick, Piko buttons) to select them.

Home screen	Joystick movement	Section	Screen
	Forwards	Driving functions	Driving functions (see page 50)
	To the right	Seat functions	Seat functions (see page 79)
	To the left	Auxiliary functions	Auxiliary functions (see page 35)

Display in the "Driving functions" section

With its default programming, in the "Driving functions" section the screen shows the selected driving profile, the battery charge level and any warnings and errors.

The functions for the [Softkey 1–3] buttons underneath are shown at the bottom (see next section).



- 1 Display of the battery charge level (see next section)
- 2 Right: charge level in %; left: battery is charging
- 3 Selected driving profile display (display may differ)
- 4 Right direction indicator display [on/off]
- 5 Lighting display [on/off]
- 6 Left direction indicator display [on/off]
- 7 Programmed speed level range display
- 8 Warning/error display (shown here: drives locked /drive-away lock)
- 9 With Bluetooth connection only: Bluetooth connected

7.6.1.1 Button functions

[On/off] button

Pressing this button turns the power wheelchair on or off (see page 49). In combination with additional operating steps, it also activates/deactivates the drive-away lock (see page 52).

Joystick

If the control device is in the "Driving functions" section, the speed and driving direction are controlled with the joystick in a driving profile (see page 50).

If the control device is in the "Seat functions" section, the seat options are selected by moving the joystick left/right or adjusted by moving the joystick forwards/backwards (see page 75).

If the control device is in the "Auxiliary" section, the adjustment functions available to the user are selected by moving the joystick left/right or the settings are adjusted by moving the joystick forwards/backwards (see page 35).

[Change softkey functions] button

Pressing this button retrieves the available functions for the freely programmable softkey buttons in succession (dependent on programming and connected devices, see below).

[Mode] button

Pressing this button retrieves the available driving profiles and operating modes of the control system in succession (dependent on programming and connected devices)

It first switches from one driving profile to the next driving profile. Multiple driving profiles can be saved on the control device, for which adjustments may be made by qualified personnel. After reaching the last driving profile, pressing the button again will switch to the "Seat functions" section and then to the "Auxiliary" section. Pressing it again will then switch to the first driving profile.

The joystick is used to navigate within the seat functions/adjustment functions (see above).

[Horn] button

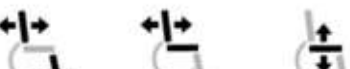
The horn will sound as long as the button is pressed.

[Softkey] button (1–3)

The softkey buttons can be used to quickly and directly access specified functions, such as switching on the lights or selected seat functions. The various functions of the softkey buttons are retrieved using the [Change softkey functions] button.

The softkey buttons are assigned to different functions depending on the programming. The specific assigned function is shown above the softkey button on the colour LCD screen. Pressing the button executes the assigned function.

The softkey button functions shown below always appear in addition to the driving profile display. The function can be changed by pressing the [Change softkey functions] button. Examples of softkey button functions (default programming):

Display	Function	Notes
	[Direction indicator left]: switch on, switch off [Light]: switch on, switch off [Direction indicator right]: switch on, switch off	Displayed only with lighting To switch on warning flashers, press [Direction indicator left] and [Direction indicator right] softkey buttons simultaneously
	[-]: reduce basic speed [HOME]: return to the home screen [+]: increase basic speed	The basic speed can only be increased or reduced in the driving profile
	[Back support angle adjustment]: up/down [Leg support angle]: up/down [Foot plate height]: up/down	Seat adjustment functions depend on equipment; each button press changes the direction of movement Further information: see page 67 ff.
	[Back support angle adjustment/leg support adjustment]: up/down [Seat tilt]: up/down [Seat height adjustment]: up/down	Seat adjustment functions depend on equipment; each button press changes the direction of movement Further information: see page 67 ff.
0.0 km/h	Speedometer	Depending on programming: display only, no softkey assignment
09:05	Time	Depending on programming: display only, no softkey assignment
905 km	Distance travelled (standard) Total distance meter (alternative)	Depending on programming: display only, no softkey assignment The distance travelled can be reset to zero in the "Auxiliary" section

External Piko buttons

Connected on the hand module (see fig. 23, item 9).

The external Piko buttons serve as alternative switches for the [On/off] and [Mode] functions. The functionality of the Piko buttons corresponds to the functionality of the [On/Off] and [Mode] buttons as described above.

7.6.2 ICON LCD module

INFORMATION

For the display functions on the LCD screen: see page 30.

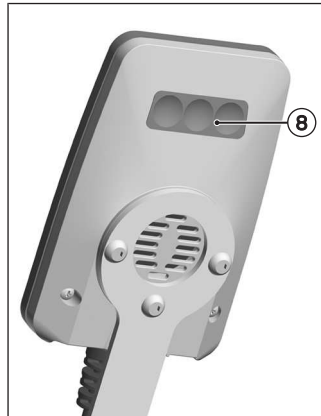
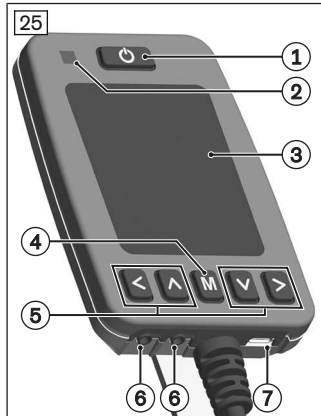
The LCD module is used to switch the power wheelchair on and off, visualise driving commands and display the current status of certain functions and components. The ICON LCD module also provides environmental control via infrared and is used to execute Bluetooth control commands.

If using the ICON LCD module without the hand module, it can be controlled from the "Auxiliary" section using user menus (see page 37). To activate various functions, the corresponding additional menu must be called up.

If using the ICON LCD module in combination with a hand module, the LCD module acts as the primary display. The LCD screen on the hand module shows a welcome screen.

The ICONLCD module, in combination with the ICON AID adapter (Specialty Control Input Module, SCIM) module for special controls, serves as the interface to one of the special control input devices. The particular input device enables control of the power wheelchair.

Basic structure – ICON LCD module



- 1 [On/off] button
- 2 Sensor for infrared signals (for learning new infrared signals)
- 3 LCD screen
- 4 [Mode] button
- 5 Navigation buttons
- 6 Connection for external buttons ([On/off] button; [Mode] button)
- 7 Connection for USB-C
- 8 Transmitter for infrared signals (for operating other devices)

LCD screen – ICON LCD module

The LCD screen is the communication interface between the user and the control device.

When switched on with its default programming, it shows the home screen. The sub-functions can be accessed by using the input device (e.g. joystick, Piko buttons) to select them.

Home screen	Input movement	Section	Screen*
	Forwards	Driving functions	Driving functions (see page 50)
	Down	Seat functions	Seat functions (see page 79)
	To the left	Auxiliary functions	Auxiliary functions (see page 35)
	To the right	Bluetooth functions	Bluetooth topic (see page 42)

* Changes are possible depending on programming

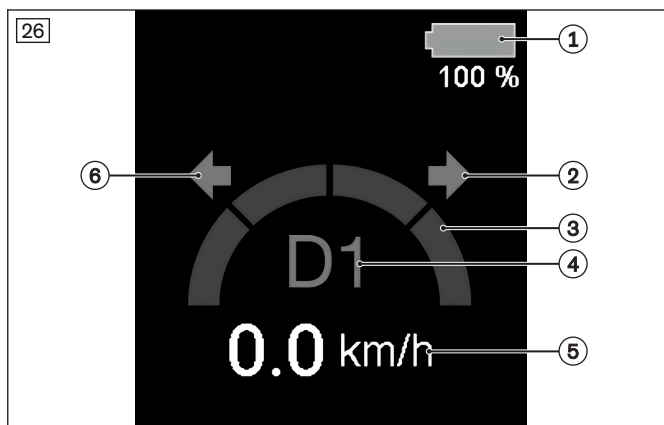
If the control device is in the "Driving functions" section, the speed and driving direction are controlled with the input device used (e.g. joystick, Piko buttons) in a driving profile (see page 50).

If the control device is in the "Seat functions" section, the seat options are selected by moving the input device used (e.g. joystick, Piko buttons) left/right or adjusted by moving it forwards/backwards (see page 75).

If the control device is in the "Auxiliary" section, the adjustment functions available to the user are selected or the settings adjusted by moving the input device used (e.g. joystick, Piko buttons) forwards/backwards and left/right (see page 35).

Display in the "Driving functions" section

With its default programming, in the "Driving functions" section the screen shows the selected driving profile, the battery charge level and any warnings and errors.



- 1 Display of the battery charge level (see next section)
- 2 Right direction indicator display [on/off]
- 3 Display of available speed levels
- 4 Selected driving profile display
- 5 Speed display in km/h
- 6 Left direction indicator display [on/off]

7.6.2.1 Button functions

[On/off] button

Pressing this button turns the power wheelchair on or off (see page 49). In combination with additional operating steps, it also activates/deactivates the drive-away lock (see page 52).

[Mode] button

Pressing this button retrieves the available driving profiles and operating modes of the control system in succession (dependent on programming and connected devices)

It first switches from one driving profile to the next driving profile. Multiple driving profiles can be saved on the control device, for which adjustments may be made by qualified personnel. After reaching the last driving profile, pressing the button again will switch to the “Seat functions” section and then to the “Auxiliary” section. Pressing it again will then switch to the first driving profile.

Navigation buttons

The user can use these buttons to navigate through the programmed menus in the “Seat functions” section and select and execute functions. Qualified personnel can use these buttons to navigate through the programmed menus in the “Auxiliary” section or adjust settings.

Button	Navigating in menus	Changing seat function	Adjusting setting
	Switches to the next menu item	Moves seat function forwards or up	Reduces the adjustment value
	Selects the highlighted menu item	Switches to the next power seat function*	If the adjustment value is a check box, the check box is toggled.
	Switches to the previous menu item	Moves seat function backwards or down	Increases the adjustment value
	Switches to the previous menu	Switches to the previous power seat function*	Not used

* Consecutively, depending on order

External Piko buttons

Connected on the LCD module (see fig. 25, item 6).

The external Piko buttons serve as alternative switches for the [On/off] and [Mode] functions. The functionality of the Piko buttons corresponds to the functionality of the [On/Off] and [Mode] buttons as described above.

The Piko buttons on the mode input can also be assigned to other functions (e.g. Bluetooth mouse, direction indicators etc.). The qualified personnel who fitted the wheelchair can provide more information on the function of the Piko buttons.

7.6.3 Display functions

INFORMATION

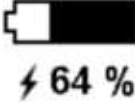
The displayed graphics and corresponding text descriptions can vary depending on the country and/or customer-specific configuration.

Battery indicator [Charge level]

The battery indicator [Charge level] shows the current charge level:

- Immediately after the power wheelchair is switched on, the battery indicator shows the battery charge level that was stored before the wheelchair was last switched off.
- After brief operation, the battery indicator shows the battery status:
 - The GREEN bar indicates a battery charge of between ~100 % and 50 %.
 - The YELLOW bar indicates a battery charge of between ~49 % and 25 %.
 - The RED bar indicates a battery charge of between ~24 % and 15 %.
 - The RED cross appears when the battery charge is between ~15 % and 0 %.
- As the battery charge level decreases, the display will continuously change. When the threshold values are reached and when programmed accordingly, the battery display appears enlarged on the screen.
- If the battery display shows a RED cross, the batteries should be charged immediately.
- If the battery is in an overvoltage state, the LCD screen also shows a warning signal because further use will result in battery damage (see page 132). Please continue to drive at low speed only.
- The charging process is indicated by the [Charge level] battery display lighting up one segment after the other. The driving function is locked when the battery is charging.

Battery indicator [Charge level]

Display	Information
	Constant illumination (green) – battery is charged
	Constant illumination (yellow) – battery partially charged
	Constant illumination (red) – battery charge is low
	Flashing (red) – charge battery immediately
 ⚡ 64 %	Charging process

Other important LCD displays – hand module/LCD module

Display	Information
	Driving profile display (D1–D4); example: D4 + maximum possible speed
	Driving profile display (D1–D4); example: D4 + programmed speed level display (driving is possible at up to approx. 65 % of the technically achievable maximum speed)
	Drive-away lock (see page 52)

Display	Information
	Connected additional input device is active (shown here: attendant control)
	Bluetooth is activated; display in the "Driving functions" section in the top left
	Bluetooth is connected; display in the "Driving functions" section in the top left
	Restricted speed (creep speed); display in the "Driving functions" and "Seat functions" sections in the top left
	Drives are locked (drive-away lock); display in the "Driving functions" section in the top left
	The control device must be restarted
	Appears together with information on the control system
	Shows that the system is saving changes
	Shows that the system is recovering parameters
	Indicates that components have been removed or added from the system and the system is reconfiguring
	Animated element; indicates that the system is working internally

Softkey functions (depending on programming) – displayed on hand module only

Display	Information
	Increases the speed in the driving profile (in increments)
	Decreases the speed in the driving profile (in increments)

Display	Information
	Lights [On/off]
	Direction indicator left [On/off]
	Direction indicator right [On/off]
 	Warning flasher [On/off] (press [Direction indicator left] and [Direction indicator right] softkey buttons simultaneously)
	Return to the start screen
	Access the "Seat functions" section
	Access the "Auxiliary" section
	Access the "Bluetooth" section

Error displays

INFORMATION

- ▶ The following error and warning messages appear together with an error number across the full display.
- ▶ Error messages are displayed as a stop sign. There is a white cross in the middle.
- ▶ Warning messages are shown as a triangle. There is a black exclamation mark in the middle.
- ▶ More information on the visual appearance of the error and warning messages and on the error and warning numbers: see page 130.

Display	Information
	Error* Indicates a malfunction that is preventing the power wheelchair from fully functioning.
	Warning Indicates status information or a malfunction that is not severe enough to bring the power wheelchair to a standstill.

* This symbol also appears in the top left of the driving functions section when the drive is locked.

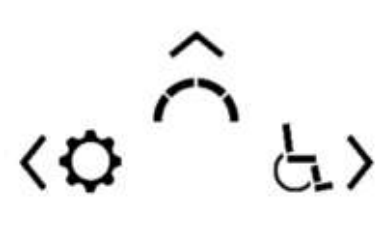
Further LCD screen functions

Further LCD screen symbols are described in the following sections:

- Section "Selecting the speed levels" (see page 50)
- Section "Drive-away lock" (see page 52)
- Section "Troubleshooting" (see page 130)

7.6.4 Day/night mode

To support different lighting conditions, the LCD display has a day and a night mode:

Display	Mode
	Example home screen: day mode
	Example home screen: night mode

The LCD display appears in black on a white background in day mode and in colour on a dark background in night mode.

The control device automatically detects the ambient light using a sensor and switches between day and night mode accordingly. Qualified personnel can set fixed switching times in the settings or deactivate the automatic switching function.

To switch between day and night mode, see the “Adjustment options” section (see page 35).

7.6.5 Self-holding mode

Self-holding mode (example)	Description
	The “Latch” (1) display indicates that self-holding mode has been activated for the selected function. This means that the input device does not need to be permanently operated in order to operate this function. For example, the driving speed can be maintained for a certain period of time without continuing to operate the input device (see page 53). You can exit the self-holding mode by actuating the input device again.

Product with memory function

Self-holding mode can also be activated for seat positions saved in the memory function. This automatically moves the seat to the saved position without having to permanently operate the input device (see page 81).

Commands to stop self-holding mode

By default, movement can be stopped in self-holding mode by repeating the command that started the movement. Alternatively, most buttons on the other input devices can be actuated to stop the movement.

Not all buttons on all input devices stop self-holding mode. The following restrictions apply:

- The function buttons on the hand module, the [Function button change] button and the [Horn] button do **not** stop self-holding mode (see page 26). The remaining buttons and the joystick on the hand module stop movement in self-holding mode.
- The navigation buttons ◀ (left) and ▶ (right) on the LCD module do **not** stop self-holding mode (see page 28). The remaining buttons on the LCD module stop movement in self-holding mode.
- If the push-button module has been set up so that a selection button can be used to scroll between several groups, this selection button does **not** stop self-holding mode (see page 93). The remaining buttons on the push-button module stop movement in self-holding mode.

7.6.6 Electronic track stabiliser

INFORMATION

The control device automatically detects acceleration acting from the outside, e.g. due to the movement of a public transport vehicle or a ship. To prevent incorrect steering corrections with the gyro module, the control device automatically switches off the track stabiliser and switches to "Rescue Mode". In this mode, it is possible to continue driving at a reduced speed.

If external influences are no longer taking effect, switch the wheelchair control device off and on again. This ends "Rescue Mode" and reactivates the track stabiliser. The wheelchair can be operated at normal speed again.

A gyro module is integrated into the control system.

The gyro module combines signals from a joystick with positional and directional information provided by a gyroscope. This allows the system to detect whether the power wheelchair is deviating from the specified straight line and automatically correct the driving path.

This not only eliminates frequent driving corrections, but also enables precise manoeuvring on various surfaces and slopes.

7.6.7 Adjustment possibilities

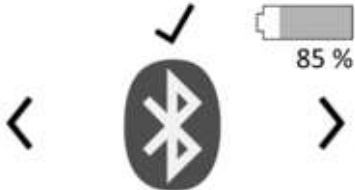
Depending on the programming, the user can adjust some settings.

7.6.7.1 ICON hand module

Procedure when using the ICON hand module

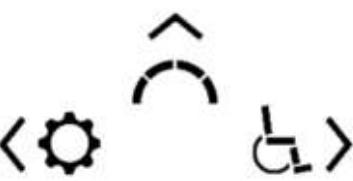
- Pressing the [Mode] button opens the "Seat functions" section and then the "Auxiliary" section. The LCD screen shows the symbol for the first adjustment function (see below).
- In the "Auxiliary" section, moving the joystick left/right switches between adjustment functions/information displays. The LCD screen shows the currently selected adjustment function/information display. The driving function is not available during this time and the speed level indicator switches off.
- Exit the "Auxiliary" section by pressing the [Mode] button again. Depending on the programming, the driving profiles can now be selected again in sequence.

"Auxiliary" section – overview

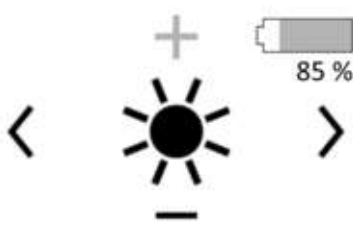
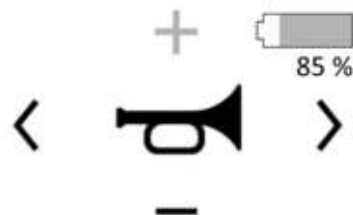
Display	Function	Meaning
	Preferences	Adjusts the brightness of the LCD screen, horn volume and audible notifications Note: See the following tables for how to proceed.
	Bluetooth	Pairs the hand module with a Bluetooth-enabled device (mobile phone, PC) for programming (by qualified personnel only)
	System information	Displays information such as serial numbers, dealer contact information and control module software versions Note: For information for qualified personnel only, no further action required.

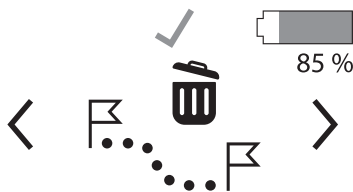
Display	Function	Meaning
	FCC information	Displays information required by the United States Federal Communications Commission (FCC) Note: For information for qualified personnel only, no further action required.

Accessing the “Auxiliary” section

Display	Action	Effect
	Joystick/input device left	Switches to the “Auxiliary” section
	Press [Mode] button multiple times	Switches to the “Auxiliary” section

Preferences – overview of sub-functions

Display	Function	Deflection using the joystick/input device ¹⁾
	Preferences input screen	Forwards: accesses the first sub-function in the “Preferences” section Left/right: accesses additional adjustment functions (e.g. Bluetooth)
	Adjusts the brightness of the LCD screen	Backwards: - (darker) Forwards: + (brighter) Left/right: accesses further sub-functions in the “Preferences” section
	Adjusts the horn volume	Backwards: - (quieter) Forwards: + (louder) Left/right: accesses further sub-functions in the “Preferences” section

Display	Function	Deflection using the joystick/input device ¹⁾
	Reset the distance travelled to zero	Forwards: Reset the counter (Again forward to confirm; backward to cancel) Left/right: accesses further sub-functions in the "Preferences" section
	Adjusts the audio volume	Backwards: - (quieter) Forwards: + (louder) Left/right: accesses further sub-functions in the "Preferences" section Note: See the next table for the "Bluetooth" sub-function

¹⁾ Direction of movement can be adjusted by qualified personnel.

The time setting on the hand module is currently not supported by the control device. The time can also be adjusted by the user or qualified personnel with the help of the ECON adjustment software.

7.6.7.2 ICON LCD module

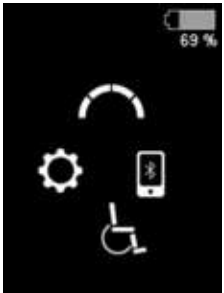
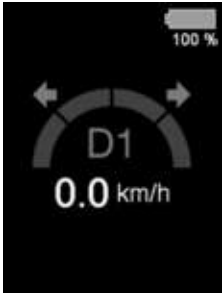
Procedure when using the ICON LCD module

- The home screen is accessed by pressing the [Mode] button. From here you can switch to the "Auxiliary" or "Bluetooth operations" section (see below).
- To switch between adjustment functions in the "Auxiliary" section, use the navigation buttons or an alternative input device (see below).

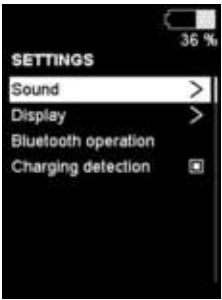
The LCD module shows the currently selected adjustment function/information display. The driving function is not available during this time and the speed level indicator switches off.

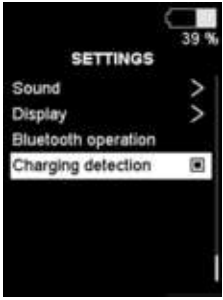
- Exit the "Auxiliary" section by pressing the [Mode] button again. Depending on the programming, the driving profiles can now be selected again in sequence.

Accessing the "Auxiliary" section

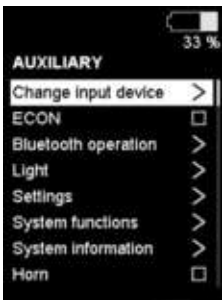
Display	Action	Effect
	Joystick/input device left	Switches to the "Auxiliary" > "Settings" section Notice: Moving the joystick/input device left again switches to the "Auxiliary" section
	Joystick/input device right	Switches to the settings to set up Bluetooth functions (see page 42)
	Press [Mode] button	Switches to the home screen, from there as described above

"Auxiliary" > "Settings" section

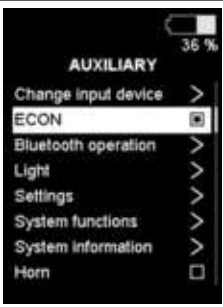
Display	Function	Deflection using the joystick/input device ¹⁾
	"Sound": allows the volume and beep settings on the control device and horn to be adjusted with the following sub-functions: "Horn Volume": adjusts the horn volume "Beep Volume": adjusts the volume of the beeps from the control device "Navigation beep type": various adjustment options for the beep type (for qualified personnel only) "Navigation beep enable": various on/off settings for the beep (for qualified personnel only) "System beeps": additional options for on/off settings for the beep (for qualified personnel only)	Right: accesses further sub-functions; for checkboxes: function on/off Forwards/backwards: scrolls through the menu Left: back to overview
	"Display": allows the display functions to be adjusted with the following sub-functions: "Language": adjusts the language of the LCD screen "Measurement system": activate display in kilometres or miles "Distance indicator": activates daily distance or total distance display; the distance travelled can be reset to zero if necessary ("Reset trip meter") "Time format": switches between 12 h and 24 h mode for displaying the time "Set time": sets the time "Brightness day": brightness setting for day mode "Brightness night": brightness setting for night mode (inactive) "Dimming delay": adjusts the dimming delay (inactive) "Day/Night": switches between day and night mode on the LCD screen "Battery life indication": on/off setting for the battery life display	Right: accesses further sub-functions; for checkboxes: function on/off Forwards/backwards: scrolls through the menu Left: back to overview
	"Bluetooth operation": allows the setting up of Bluetooth functions for pairing and operating Bluetooth devices (see page 42).	Right: accesses further sub-functions Left: back to overview

Display	Function	Deflection using the joystick/input device ¹⁾
	"Charging detection": activates/deactivates a "charging detection function" Note: This function is activated by default. This means that, if a charger is connected, the control device will detect if it is not charging, for example if it is not connected to mains power or is defective.	Right: function on/off Left: back to overview

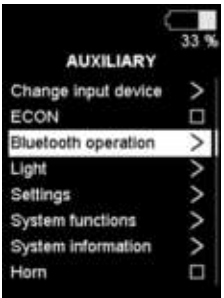
"Auxiliary" > "Change input device" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"Change input device": adjustment options for connected input devices	Right: accesses further sub-functions Forwards/backwards: scrolls through the menu Left: back to overview
	Examples of possible input devices: "Hand control": on/off setting when using a hand module "4-Switch": on/off settings when using a 4-button control	Forwards/backwards: scrolls through the menu Right: function on/off Left: back to overview

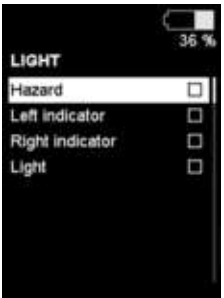
"Auxiliary" > "ECON" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"ECON": on setting enables a Bluetooth connection to the ECON adjustment software	Right: function on/off Left: back to overview

"Auxiliary" > "Bluetooth operation" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"Bluetooth operation" : allows the pairing and operation of Bluetooth devices (see page 42).	Right: accesses further sub-functions Left: back to overview

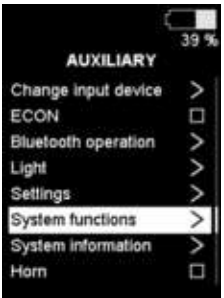
"Auxiliary" > "Light" section

Display in the menu	Function	Deflection using the joystick/input device ¹⁾
	"Light" : function for turning the lights, warning flasher and direction indicators on and off	Right: accesses further sub-functions Left: back to overview
	"Hazard" : activates/deactivates the warning flasher on the power wheelchair (all direction indicators flash) "Left indicator" : activates/deactivates the left direction indicator on the power wheelchair "Right indicator" : activates/deactivates the right direction indicator on the power wheelchair "Light" : activates/deactivates the headlights on the power wheelchair	Forwards/backwards: scrolls through the menu Right: function on/off Left: back to overview

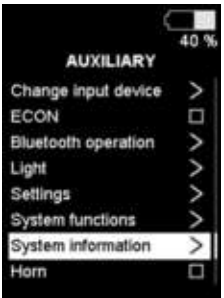
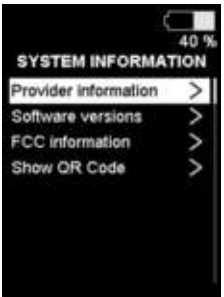
"Auxiliary" > "Settings" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"Settings" : adjustment options for beeps (horn volume, volume of audible notifications), adjustment of the LCD screen display, Bluetooth operation and charging indicator (for qualified personnel only) Notice: For contents see the first table above.	Right: accesses further sub-functions Left: back to overview

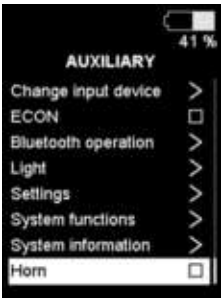
"Auxiliary" > "System functions" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"System functions" : allows additional system settings to be activated	Right: accesses further sub-functions Left: back to overview
	"Latch driving" : enables latch driving mode (see page 53)	Right: function on/off Left: back to overview

"Auxiliary" > "System information" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"System information" : displays information such as serial numbers, dealer contact information and control module software versions, as well as information required by the United States Federal Communications Commission (FCC) Note: For information for qualified personnel only, no further action required.	Right: accesses further sub-functions Left: back to overview
	"Provider information" : displays the serial number, stability class and information about the specialist dealer "Software versions" : displays the software versions of all control components of the wheelchair "FCC information" : displays information required by the United States Federal Communications Commission (FCC) "Show QR Code" : displays a QR code that links to the online user manual for the wheelchair	Forwards/backwards: scrolls through the menu Right: displays information Left: back to overview

"Auxiliary" > "Horn" section

Display	Function	Deflection using the joystick/input device ¹⁾
	"Horn": activates/deactivates the horn	Right: function on/off Left: back to overview

7.6.8 Controlling the device via Bluetooth

In the "Bluetooth" section, devices such as smartphones (iDevices; Android) or PCs/tablets can be paired with the LCD module and operated using the connected input device.

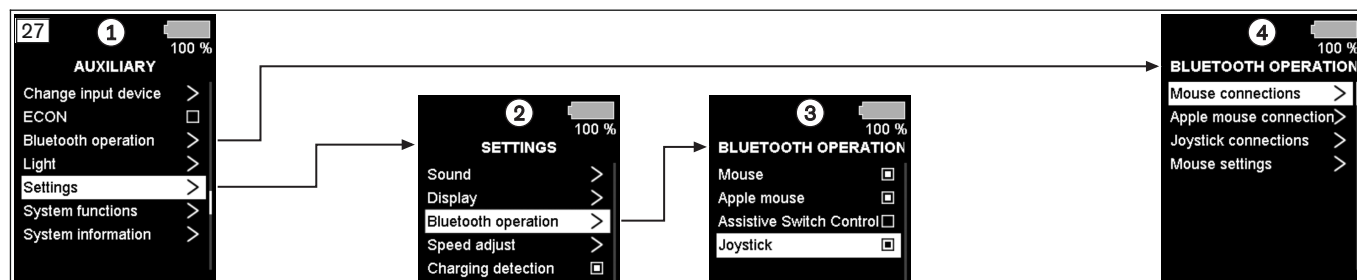
The signals from the input device (e.g. joystick signals) are used to control the device functions.

Mouse functions (mouse movements, right/left click, hold, select) can be executed using brief joystick commands or external buttons.

7.6.8.1 Selecting Bluetooth functions

Before a connection to a Bluetooth device can be established, the Bluetooth functions for which the wheelchair input device is to be used must be activated.

- Open the following menu on the LCD module (see fig. 27):
 - **"Auxiliary"** section(1) > **"Settings"** (2) > **"Bluetooth operation"** (3)
 - This menu can also be accessed directly from the home screen of the LCD module by moving the input device to the right there (towards the Bluetooth symbol).
- Select the checkboxes for the desired Bluetooth functions in the menu (3):
 - **"Mouse"**: for operating the mouse pointer (e.g. on a PC)
 - **"Apple Mouse"**: for operating the mouse pointer on Apple devices
 - **"Assistive Switch Control"**: for using Switch Control on iOS devices
 - **"Joystick"**: for using the input device as a game controller (e.g. on a PC)
- Press the input device to the left several times to leave the menu.
 - The desired functions can now be selected in the separate menu (4) and paired with Bluetooth devices (see page 42).

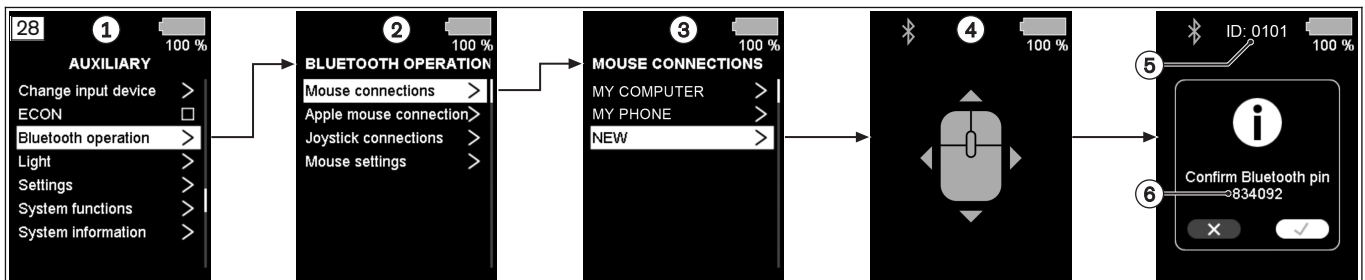


7.6.8.2 Pairing

Mutual authentication is required prior to initial Bluetooth communication between devices. This procedure, which needs to be carried out once for each device, is called "pairing".

- Open the following menu on the LCD module (see fig. 28):
 - **"Auxiliary"** section(1) > **"Bluetoothoperation"** (2)
 - Area (1) can be called up from the home screen of the LCD module by moving the input device to the left there (in the direction of the gear wheel symbol).
 - The menu (2) only displays the Bluetooth functions selected for the user (see page 42). If no Bluetooth functions have been activated, the menu (2) is not available.
- In the menu (2), select the Bluetooth function for which a Bluetooth device should be paired (e.g. "Mouse connections" or "Joystick connections").
 - The menu (3) displays the previously paired devices.

- To pair another device, **select the entry "NEW"**.
- 3) In the menu (4), press the input device forwards until an ID (5) is displayed.
→ With this ID, the LCD module is now visible to other Bluetooth devices.
- 4) Search for the Bluetooth ID of the LCD module on the device being paired.
→ The procedure for searching and pairing Bluetooth devices depends on the device being used (e.g. PC or mobile phone).
→ For more information, search for "Pairing a Bluetooth device in Windows/...Android/...iOS" online.
→ Carry out the pairing step by step.
→ A message with a Bluetooth PIN (6) appears on the LCD module during pairing. The Bluetooth PIN on the LCD module must match the display on the device to be paired.
- 5) If the Bluetooth PIN is a match, push the input device forwards to confirm the pairing. Otherwise, push the input device backwards to cancel the process.
→ If the pairing was successful, the Bluetooth device can now be operated with the wheelchair input device (see page 43).
- 6) Press the [Mode] button to exit the menu.



The ID of the devices with which Bluetooth pairing has been carried out is retained in the control device. This means that the connection can also be reestablished automatically:

- if the wheelchair control device has been switched on again after being switched off,
- if the external device has been switched off and on again,
- if the wheelchair has been outside the Bluetooth visibility of the external device and then returns to the visible range again.

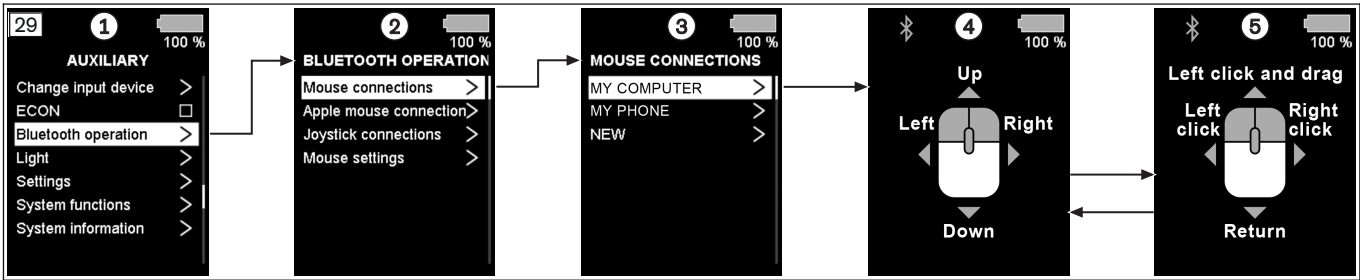
If a Bluetooth device is to be used with more than one Bluetooth function (such as a mouse and joystick), it must be paired separately for each Bluetooth function.

7.6.8.3 Operating mouse functions via Bluetooth

Once a connection has been established to the Bluetooth device, the mouse pointer can be operated with the wheelchair control input device (e.g. joystick, navigation buttons on the LCD module, special control input devices).

Accessing mouse functions

- 1) Open the following menu on the LCD module (see fig. 29):
→ **"Auxiliary"** section(1) > **"Bluetoothoperation"** (2)
→ The menu (2) only displays the Bluetooth functions selected for the user (see page 42). If no Bluetooth functions have been activated, the menu (2) is not available.
- 2) In the menu (2), select the Bluetooth function to be operated (e.g. "Mouse connections" or "Apple mouse connections").
→ The menu (3) displays the previously paired devices (see page 42).
- 3) In the menu (3), select the desired device.
→ The mouse pointer can now be operated with the input device.
→ The display switches automatically or depending on the input command between mouse movements (4) and mouse actions (5).
→ The display shows how the input commands affect the mouse. For more information on operation, see below.
- 4) Press the [Mode] button to exit the menu.



Mouse movements (see fig. 29, item 4)

While the commands for mouse movements are shown on the display, the mouse pointer moves as the input device is operated:

Input device	Mouse movement
To the left/right	To the left/right
Forwards/backwards	up/down

Mouse actions (see fig. 29, item 5)

While the commands for mouse actions are shown on the display, the following mouse actions can be carried out using the input device:

Input device	Mouse action
To the left/right	Click left/right mouse button
Forwards	Click and drag the left mouse button
Backwards	Confirm

Switching between mouse movements and mouse actions

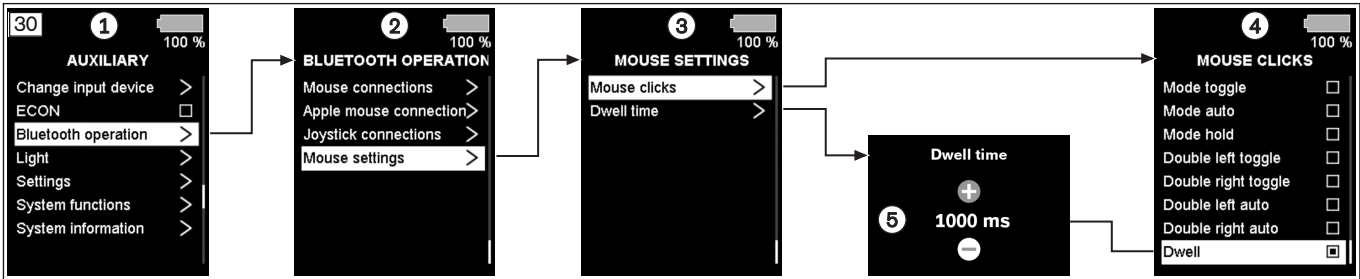
By default, the display automatically switches between mouse movements and mouse actions. Alternatively, buttons or certain movements of the input device can be used to switch between the two displays. The type of change can be adjusted (see page 44).

Qualified personnel can also assign external Piko buttons/push buttons to certain mouse clicks. This means the user can use the joystick only for mouse movement, for example, and no longer needs to switch between the two displays for mouse actions.

7.6.8.4 Configuring mouse functions

Accessing mouse settings

- 1) Open the following menu on the LCD module (see fig. 30):
→ **"Auxiliary"** section (1) > **"Bluetooth operation"** (2) > **"Mouse settings"** (3) > **"Mouse clicks"** (4)
- 2) In the menu (4), select the desired way to switch between the two displays for mouse movements and mouse actions (see page 43). For more information on these settings, see below.
- 3) If the setting "Dwell" has been selected, set the corresponding dwell time in the menu (5).
- 4) Press the input device to the left several times to leave the menu.



Adjust switching between mouse movements and mouse actions (see fig. 30, item 4)

By default, mouse movements and mouse actions are operated via 2 different displays on the LCD module. The way to switch between the two displays can be configured:

Adjustment	Function
"Switches"	Use external switches of the power module (Controller) to activate the left and right mouse buttons.
"Base toggle"	Use external left mouse button switch from the power module (Controller) to switch between mouse movements and mouse clicks.
"Base auto"	Identical to "Base toggle", but automatically returns to mouse movements after clicking.
"Base hold"	Identical to "Base toggle", but mouse clicks are only active as long as the mouse button is pressed.
"Mode toggle" **	Use mode button to toggle between mouse movements and mouse clicks.
"Mode auto"	Identical to "Mode toggle", but automatically returns to mouse movements after clicking.
"Mode hold" **	Identical to "Mode toggle", but mouse clicks are only active as long as the mouse button is pressed.
"Double left toggle" ***	Use the double-left command to switch between mouse movements and mouse clicks.
"Double right toggle" ***	Use the double-right command to switch between mouse movements and mouse clicks.
"Double left auto" ***	Identical to "Double left toggle", but automatically returns to mouse movements.
"Double right auto" ***	Identical to "Double right toggle", but automatically returns to mouse movements.
"Dwell"	After the dwell time ("dwell time"), the display automatically switches between mouse movements and mouse clicks.

* When the Mode command is used to change between mouse movements and mouse clicks, an alternative mode option must be available.

** When the double command is used to change between mouse movements and mouse clicks, an alternative mode option must be available.

7.6.8.5 Operating switch control via Bluetooth

If a connection has been established to a compatible iOS device, the Switch Control can be operated using the wheelchair's input device. All settings for the switch control are made on the iOS device. Up to 8 switches can be configured (4 short and 4 long commands). The time for long commands is set in the iOS settings.

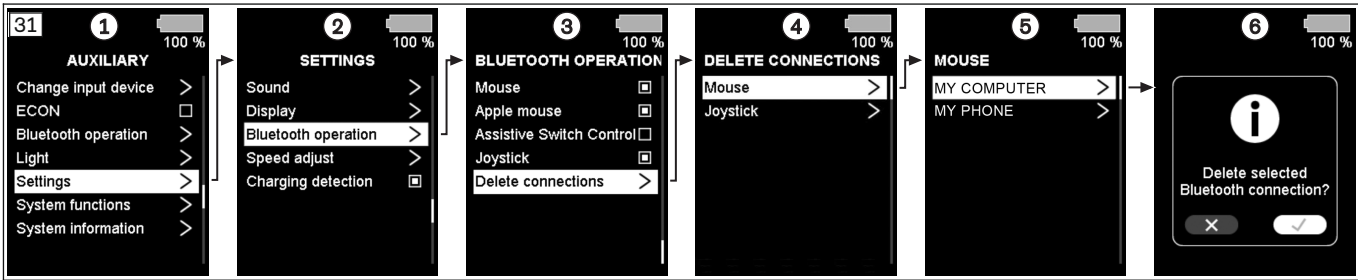
Please refer to the documentation for the iOS device for further information on operating the switch control.

7.6.8.6 Deleting Bluetooth connections (unpair)

If a device is no longer to be operated via Bluetooth, the pairing can be undone.

- 1) Open the following menu on the LCD module (see fig. 31):
 - **"Auxiliary"** section(1) > **"Settings"** (2) > **"Bluetooth operation"** (3)
 - This menu can also be accessed directly from the home screen of the LCD module by moving the input device to the right there (towards the Bluetooth symbol).
- 2) Select the item **"Delete Connections"** in the menu (3).
- 3) In the menu (4), select the connection type.
- 4) In the menu (5), select the connection to be deleted.
 - A query (6) appears asking whether the connection should really be deleted.
- 5) Push the input device forwards to delete the connection. Otherwise, push the input device backwards to cancel the process.

INFORMATION: Repeat the process if necessary for additional connections. If a device is paired with more than one Bluetooth function (such as a mouse and joystick), then each Bluetooth connection must be deleted separately.
- 6) Press the input device to the left several times to leave the menu.



7.7 Driving functions

7.7.1 Safety instructions

Hazards while driving

 **CAUTION**

Lack of riding experience
Collision, falling due to errors in handling the product

- ▶ Practise using the product on level, open ground first.

 **CAUTION**

Insufficient support of the seated person
Risk of falling out of the power wheelchair due to lack of restraint

- ▶ Always use the installed belt system when driving in public.
- ▶ Information about subsequent acquisition and mounting is provided by the qualified personnel that handed the product over to you.

 **CAUTION**

Uncontrolled driving behaviour, unexpected sounds or odours
Falling, tipping, collision with persons or nearby objects due to defects

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

 **CAUTION**

Driving in the dark
Risk of collisions with other traffic participants due to lack of lighting

- ▶ Wear bright clothing or clothing with reflectors.
- ▶ 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.

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

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

- ▶ Maintain sufficient tyre pressure. The correct tyre pressure is printed on the tyre sidewall.
- ▶ Ensure that the tyre pressure is the same for both drive wheels.
- ▶ 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**

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.

7.7.2 Driving notes**General information:**

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

Obstacles (steps, curbs, tracks):

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

Slopes and downgrades

- Note the information on permitted slopes and downgrades (see the “Technical data” section). Driving on slopes 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.
- Never drive downhill backwards. Only brief manoeuvring on ramps under supervision is permitted (e.g. when exiting a vehicle for transporting persons with reduced mobility).
- The control device monitors the wheelchair inclination and automatically adapts the driving characteristics. When driving downhill, the driving speed is automatically reduced according to the slope. This increases safety, but does not guarantee tilt-free driving. If necessary, continue to reduce the speed manually according to the slope (e.g. use a slow driving profile with a low speed level).
- Always fully lower the seat height adjustment before driving on slopes or downgrades.
- Only drive downhill with the seat in a horizontal position or slightly tilted backwards.
- The driving function can be locked automatically depending on the inclination of the wheelchair or depending on the adjustment of the individual seat functions. In these cases, the driving function can be restored by adjusting the seat tilt slightly backwards.

Terrain:

- The speed must be reduced in dangerous areas (e.g. select speed level 1).
- Typical hazards include:
 - narrow paths along waterways/slopes/precipices (e.g. quay walls, embankments etc.),
 - confined spaces or areas,
 - steep downgrades (e.g. in the mountains, towards roads),
 - unpaved terrain (construction sites, crossings, level crossings),
 - snow-covered paths.
- The product may not be used in 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.
- 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.
- The intelligent speed control system adapts the driving characteristics to the slope and inclines.

Further instructions for use

- Attaching loads such as backpacks and the like can adversely affect stability. Ottobock recommends using a luggage carrier or the “Backpack hook” option. The maximum load of **5 kg (11 lbs)** should not be exceeded.
- The recommended overall width for category B power wheelchairs when ready for operation is **700 mm (27.5")**. This specification should ensure unhindered use of escape routes, for example. Please note that the wheelchair dimensions may exceed the recommended value in variants with very large seat widths (for more information see the section “Technical data”: see page 138).
- The wheelchairs in this series comply with the minimum technical requirements for wheelchairs transportable by train. Please note, however, that due to the variety of variants and settings, not every specific power wheelchair will meet all minimum requirements (for more information see the section “Appendix” > “Threshold values for wheelchairs transportable by train”: see page 145).

7.7.3 Information on participation in road traffic

Definition:

- For the purposes of the information given here, participation in road traffic means individual driving on roads authorised for motor vehicles. This does not include driving on footpaths or using public transport.

General information:

- The local regulations in the country of use must always be observed when driving in road traffic. The manufacturer recommends undergoing training/instruction on using the product in road traffic. Qualified personnel are instructed to provide appropriate instructions upon delivery of the product.
- The following safety notices in these instructions for use must be observed when using the product in road traffic:
 - “General safety instructions” section: see page 11.
 - “Driving functions” > “Safety notices” section: see page 46.
 - “Power seat functions” > “Safety notices” section: see page 67.

Technical requirements:

- The product is generally authorised for use in road traffic.
- The product must be equipped with the following options for use in road traffic:
 - Lighting for road traffic:** this includes front lights, rear lights, direction indicators and rear and side lights (reflectors).
 - Rear marker plate:** this is mounted on the rear of the back support.
- The product must reach the minimum speed specified for use in road traffic in the country of use. The maximum speed achievable by this power wheelchair can be found on the nameplate.

7.7.4 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 54).
- ▶ Check the control unit display to ensure that the brakes are operational and functional (see page 132).

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

- ▶ Always put on a lap belt when driving. 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 128).
- ▶ 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 54).
- ▶ 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 25) turns the power wheelchair control device on or off. The power wheelchair turns off automatically if the control device 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 the control device is switched on, it shows the home screen by default.
- The qualified personnel can use the parameter settings to specify the default driving profile of the control device after it is turned on according to the user's requirements (e.g. driving profile D2).

Automatic switch-off time

If the LCD module is not operated for some time, it automatically switches to sleep mode and reduces the brightness of the display. Actuating an input device exits sleep mode and activates the display again. Sleep mode can be adjusted or deactivated by qualified personnel if required.

If the control device is not operated for some time, it automatically switches off completely. A switch-off time of **20 minutes** is set by default. The switch-off time can be adjusted by qualified personnel if required.

7.7.5 Selecting the speed levels

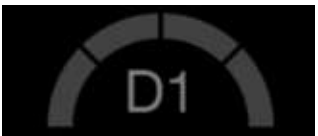
Procedure with ICON hand module

- When the control device is in the "Driving functions" section, pressing the [Mode] button brings up the driving profiles in succession.
- The power wheelchair has a programmable number of driving profiles (standard version: 4 driving profiles).
Notice: The number of driving profiles may vary depending on the country of delivery or the adjustments made by qualified personnel.
- Pressing the [Increase speed] softkey button on the right increases the speed level range by 5 % each time.
- Pressing the [Decrease speed] softkey button on the left reduces the speed level range by 5 % each time.
- The pitch of the audible signal changes once the highest or lowest speed level range is reached.
- The LCD screen shows the selected driving profile together with the selected speed level range:

Display	Information
	Selected speed level range = 2 (35 % of the maximum possible speed in this example) The initial position setting may vary on an individual basis
	Selected speed level range = 2 (50 % of the maximum possible speed in this example) Alternative setting. The initial position setting may vary on an individual basis

Procedure with ICON LCD module

- When the control device is in the "Driving functions" section, pressing the [Mode] button or an alternative input device retrieves the driving profiles in succession.
- The power wheelchair has a programmable number of driving profiles (standard version: 4 driving profiles).
- The pitch of the audible signal changes once the highest or lowest speed level range is reached.
- The LCD screen shows the selected driving profile:

Display	Information
	Selected driving profile = 1 (minimum possible speed) The initial position setting may vary on an individual basis

7.7.6 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 138).
- ▶ 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 downslopes than on level surfaces. The braking distance can be lengthened further due to user weight, luggage, installed options and condition of the tyres, and due to weather and surface conditions.
- ▶ Exercise particular caution when driving and braking on downhill slopes, even if the control device limits the speed automatically.

INFORMATION

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

Nevertheless, the user should exercise caution when driving and braking in these situations to avoid triggering a drive-away lock.

If the control device displays a drive-away lock due to excessive temperature (e.g. from driving uphill for a long period), the power wheelchair must first cool down before the control device will release the drive-away lock.

If the control device displays a drive-away lock while driving downhill, you can increase the stability by adjusting the seat settings (decreasing the seat height setting, increasing the back support angle, tilting the seat backwards, moving the leg support perpendicular to the seat surface) until the control device releases the drive-away lock.

If the control device still displays a drive-away lock even after the proposed countermeasures have been taken, it will not be possible to control the situation by technical means. Seek help or contact qualified personnel immediately.

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.

INFORMATION: Alternative input devices are also used when a special control is used.

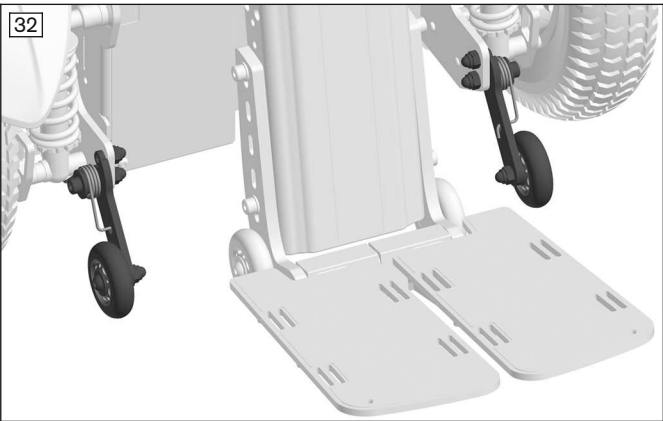
7.7.7 Range

The section "Technical data" contains precise information on the range of the product (see page 138).

The following factors influence the range of the product:

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

7.7.8 Anti-tipper



The swing-away, spring-loaded anti-tipper rollers stabilise the front-wheel drive power wheelchair when braking while driving down slopes. They swing back when driving against a curb, for example.

An anti-tipper is not required on a power wheelchair with mid-wheel drive.

7.7.9 Drive-away lock

INFORMATION

This function is enabled by default.
For questions related to switching off the drive-away lock function, please consult the qualified personnel that adapted the product or the manufacturer's service department.

The power wheelchair's control device features an electronic drive-away lock.

Activating the drive-away lock

- 1) While the control device is turned on, press and hold the [Mode] button (or an alternative input device) for at least 5 seconds.
- 2) Release the [Mode] button (or alternative input device) after a beep sounds (approx. 1 second).
 - A long beep confirms that the drive-away lock was activated.
 - The control device turns itself off.
 - The padlock symbol on the LCD screen indicates that the drive-away lock is activated:

Display	Information
	Drive-away lock activated

Deactivating the drive-away lock

- 1) Press the [On/off] button on the control panel.
 - The control device is turned on. The LCD screen indicates that the drive-away lock is activated.
- 2) Push the joystick (or alternative input device) all the way forwards until a beep sounds.
- 3) Push the joystick (or alternative input device) all the way back until a beep sounds.
- 4) Release the joystick (or alternative input device).
 - A long beep confirms that the driving function is enabled.
 - The battery indicator and speed level are shown on the LCD screen.
 - The drive-away lock is deactivated and driving is enabled.

Troubleshooting

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

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

7.7.10 Latch driving

Latch driving mode

Latch driving mode can be activated for one or more driving profiles. When it is active, the user can move and release the joystick or an alternative input device forwards, backwards or in both directions, and the power wheelchair will, for example, maintain its speed. Latch driving mode makes driving easier for people with certain physical limitations because the joystick or alternative input device does not need to be held continuously. Steering corrections can be made at any time while driving.

If latch driving mode has been activated, the word "Latch" appears on the screen:

Display	Information
	Latch driving mode display

The function is typically configured to stop the power wheelchair automatically after a programmed time interval. If the function has been activated by qualified personnel, the selected area of the rectangle around the word "Latch" shows the percentage remaining of the time.

There are three variants of latch driving mode:

Variants	Contents
"Cruise"	If the joystick is moved forwards or backwards from the neutral position, the power wheelchair will maintain the speed reached after the joystick is released. Further movements of the joystick will increase or decrease the speed. To come to a quick stop, move the joystick in the opposite direction to the direction of travel.
"1-Step"	If the joystick is moved forwards or backwards from the neutral position approximately halfway to the maximum possible end position, the power wheelchair will move at maximum speed after the joystick is released. To come to a quick stop, move the joystick in the opposite direction to the direction of travel
"3-Step"	Similar to "1-Step." When the joystick is moved as appropriate, the power wheelchair will first move at 1/3 of its maximum speed; steps 2 and 3 will cause the power wheelchair to move at 2/3 or full maximum speed. To come to a quick stop, move the joystick in the opposite direction to the direction of travel

INFORMATION

Latch driving mode can only be used for driving forwards and in reverse. Turning movements are not possible in latch driving mode.

7.7.11 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.

Limitation of driving speed by the user

If necessary, the qualified personnel can enable a user function that allows the driving speed to be adjusted for each driving profile. This function is particularly useful when the user cannot control the driving speed directly using the deflection of the input device, e.g. with a 1-button special control.

The user can set the driving speed incrementally to a value between 10 % and 100 %. The setting can be adjusted separately for each driving profile. The speed can only be increased or decreased in the driving profile.

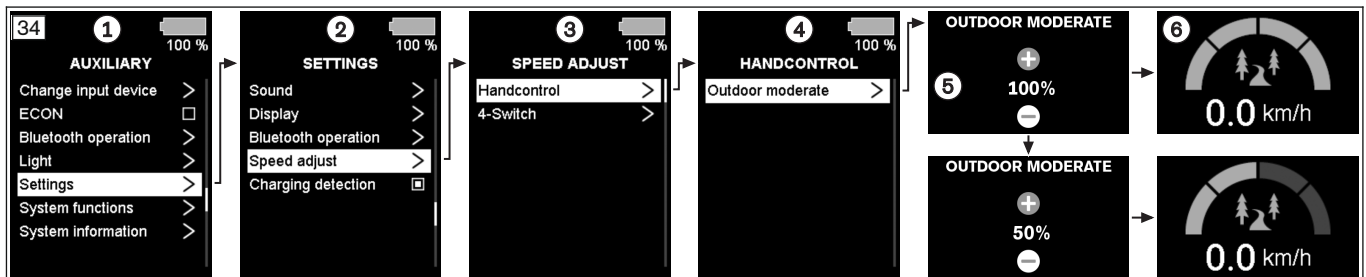


The limitation of the driving speed can be adjusted on the hand module using the [Softkey 1 - 3] buttons (see fig. 33):

- Use the [Change softkey functions] button (1) to switch sides until the [-] and [+] functions are displayed.
- The limit can be reduced [-] or increased [+] with the buttons (2).
- The light bar (3) indicates the limitation for the driving speed in the current driving profile (e.g. 75 %).

The driving speed can be set separately for different input devices on the LCD module, depending on the wheelchair's features (e.g. for special control or attendant control).

- 1) Open the following menu on the LCD module (see fig. 34):
 - **"Auxiliary"** section (1) > **"Settings"** (2) > **"Speed Adjust"** (3)
 - The menu (3) displays the input devices for which the user can adjust the speed.
- 2) Select the input device for which the speed is to be adjusted (e.g. "Hand control").
 - The menu (4) displays the driving profiles that can be adapted on the input device.
- 3) Select the driving profile for which the speed is to be adjusted.
- 4) In menu (5), the maximum speed can be changed in increments of 10 %:
 - Push the input device forwards (+) to increase the limit.
 - Push the input device backwards (-) to reduce the limit.
- 5) Press the input device to the left several times to leave the menu.
- 6) Open the "Driving functions" section, for example using the [Mode] button.
 - The light bar (6) indicates the limitation for the driving speed in the current driving profile (e.g. 100 % or 50 %).



7.8 Enabling/disabling the brakes

⚠ WARNING

Uncontrolled rolling away

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

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

⚠ WARNING**Improper maintenance, repairs or adjustments on the brake**

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

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

⚠ CAUTION**Exposed pinch points**

Crushing, pinching due to incorrect handling

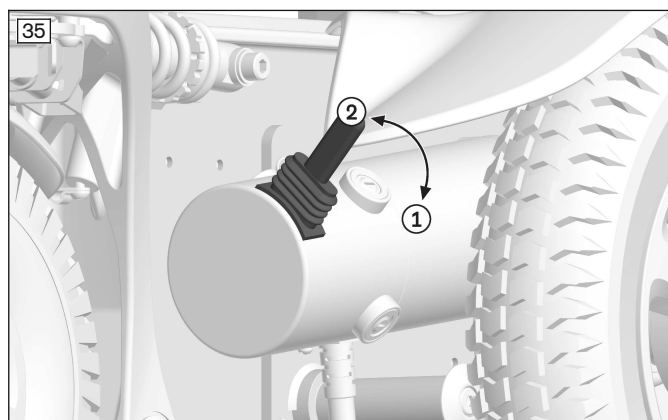
- Grasp the brake release levers as close to the outer end as possible to avoid pinching your fingers between the splash guard and brake release lever.

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.

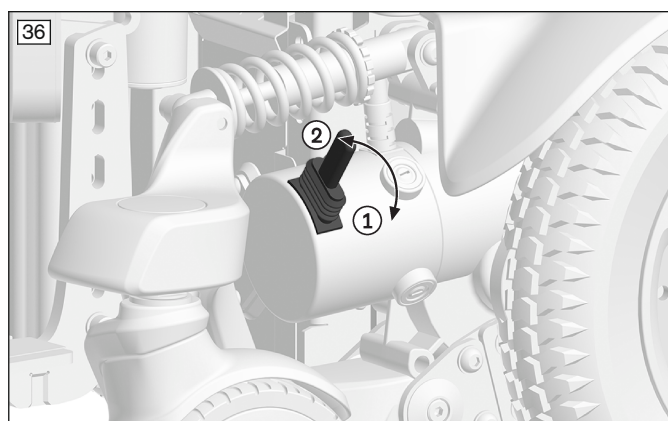
To do so, the brakes are deactivated via the mechanical release. The brake releases are located on the right and left of the driving motors.

Deactivating/activating the brake – front-wheel drive**Releasing/deactivating the brake**

- 1) If needed, turn the control device off.
- 2) Push the brake release levers down (see fig. 35, 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 brake has been released and deactivates the driving function.
 - A warning appears on the control panel.

Enabling/activating the brake

- 1) If needed, turn the control device off.
- 2) Push the brake release lever up (see fig. 35, item 2).
- 3) Switch on the control device.
 - The driving function is activated.

Deactivating/activating the brake – mid-wheel drive**Releasing/deactivating the brake**

- 1) If needed, turn the control device off.
- 2) Push the brake release levers down (see fig. 36, 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 brake has been released and deactivates the driving function.
 - A warning appears on the control panel.

Enabling/activating the brake

- 1) If needed, turn the control device off.
- 2) Push the brake release lever up (see fig. 36, item 2).
- 3) Switch on the control device.
 - The driving function is activated.

Brake deactivated: warning on ICON hand module or ICON LCD module

Display	Information
	Brake unlocked: #3 --> brake on motor 1 #4 --> brake on motor 2

7.9 Batteries/charging process**7.9.1 Safety instructions****⚠ CAUTION****Failure to check the charge level before putting into operation**

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

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

NOTICE**Unauthorised battery replacement**

Battery damage due to improper changes to the product

- ▶ Battery replacement may only be performed by the qualified personnel.
- ▶ The charging profile of the battery charger established at the factory is adapted for the batteries included in the scope of delivery and may not be altered independently.

7.9.2 General

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

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

Prolonged driving when the battery is low results in deep discharge and battery damage. Shortly before, the driving speed decreases and the user is warned regarding battery deep discharge (see page 132).

7.9.3 Battery charging information

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

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

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

- The batteries may be charged at any time regardless of the charge level.
- It takes about **10 to 12 hours** until a discharged battery (only one flashing segment) is fully charged. Subsequently leaving the power wheelchair connected is no cause for concern, since the battery charger has a programmed recharging phase that maintains the full battery charge level.
- If the power wheelchair is used every day, the battery should be charged every night.
- Never discharge the batteries completely (deep discharge).
- The batteries will gradually discharge if the wheelchair is not used for extended periods of time. If the power wheelchair is not used for an extended period, the batteries should be charged **once per week** to maintain their capacity.
- After charging the batteries, the circuit breaker should be deactivated if the wheelchair is not used for more than 3 days.
- Turn the power wheelchair's control device off during charging so that all of the charging current is supplied to the battery.

7.9.4 Battery charger

INFORMATION

- ▶ Please note that Ottobock delivered this product without a battery charger as per the order.
- ▶ Please note that you have received a battery charger which is not included in Ottobock's modular system. Ottobock assumes no liability for combinations with accessories from other manufacturers not included in Ottobock's modular system.
- ▶ Prior to using this battery charger, please read and observe the instructions for use/manufacturer's instructions from the other manufacturer. They are enclosed with the product.
- ▶ In case of questions or problems with this accessory, please contact the qualified personnel who adjusted the product.

NOTICE

Improper handling of the battery charger

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

- ▶ Use only battery chargers that have been verified and approved for use with the respective batteries.
- ▶ Ensure that the information on the battery charger nameplate matches the country-specific voltage of the respective mains grid.
- ▶ Use the battery charger only 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.
- ▶ If necessary, carefully clean the battery charger with a damp cloth and a mild cleaning solution.

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

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

7.9.5 Charging the batteries

⚠ WARNING

Improper handling of the battery charger

Risk of electric shock due to contact with live components

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

⚠ WARNING

Improper handling of battery chargers

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

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

⚠ WARNING**Discharge of explosive gases while charging the battery**

Burns due to explosion after a user error

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

⚠ WARNING**Insufficient ventilation of the battery charger while charging**

Burns due to the battery charger overheating/catching fire

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

⚠ CAUTION**Product contains magnets**

Injuries, damage due to magnetic field

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

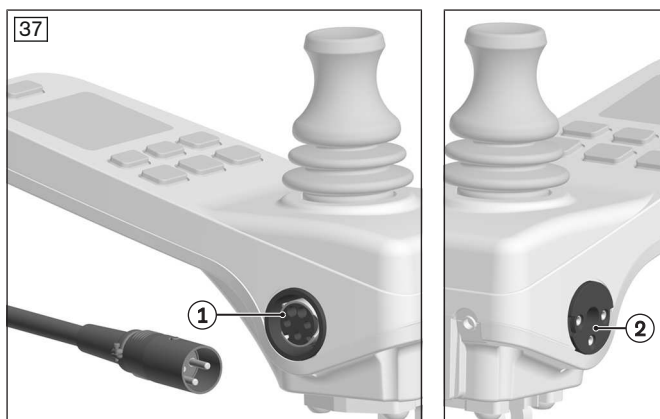
NOTICE**Improper charging**

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. You can find them online.
- ▶ 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.

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.

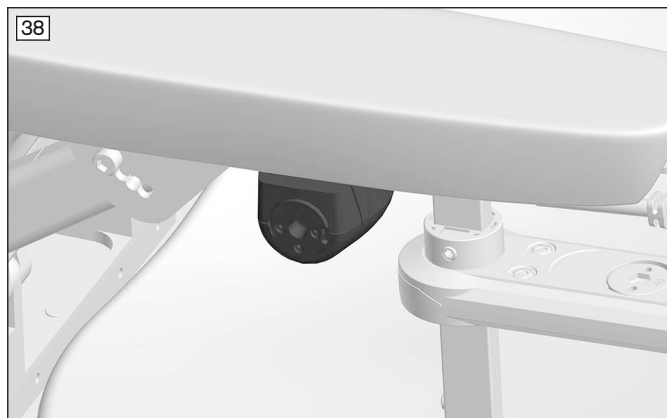
**Charging process via the hand module**

- 1) Turn the control device for the power wheelchair off.

INFORMATION: The circuit breaker must remain activated.

- 2) Connect the battery charger to the mains socket.
- 3) Connect the battery charger plug to a suitable receptacle on the hand module:
 - XLR charging/programming receptacle (see fig. 37, item 1)
 - Magnetic charging receptacle (see fig. 37, item 2)
- 4) The charging process starts automatically and the battery charge level is indicated by the LCD screen on the control panel and on the battery charger.

- 5) Turn the battery charger off and pull the plug out of the mains socket when the charging process is complete.
- 6) Disconnect the battery charger plug from the hand module.
- 7) Turn the power wheelchair control device on. The power wheelchair is ready to be used.



Charging process via the external magnetic charging receptacle

- 1) Turn the control device for the power wheelchair off.

INFORMATION: The circuit breaker must remain activated.

- 2) Open the magnetic charging receptacle (not shown).
- 3) Connect the battery charger to the mains socket.
- 4) Connect the battery charger plug to the magnetic charging receptacle (see fig. 38).

INFORMATION: Please note that charging via the external magnetic charging receptacle may be carried out with a current of up to 12 A.

- 5) The charging process starts automatically and the battery charge level is indicated by the LCD screen on the control panel and on the battery charger.
- 6) Turn the battery charger off and pull the plug out of the mains socket when the charging process is complete.
- 7) Disconnect the battery charger plug from the magnetic charging receptacle (see fig. 38, left).
- 8) Close the magnetic charging receptacle (not shown).
- 9) Turn the power wheelchair control device on. The power wheelchair is ready to be used.

7.10 Seat

7.10.1 Safety instructions

⚠ WARNING

Seat 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 includes animals with sharp claws, such as pet cats.
- ▶ 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.

7.10.2 Seat type



The product is equipped with an APS (Advanced Power Seat).

This seat type allows qualified personnel to vary the seat depth and seat and back width settings. The same applies to the individual adjustment of the arm supports (see page 20 ff.) and leg support (see page 20 ff.).

The seat is equipped with the following basic power seat functions (basic seat, see page 67):

The seat is equipped with a seat module and comprehensive power seat functions (see page 67):

- Biomechanical back support angle adjustment
- Biomechanical knee angle adjustment (leg supports)
- Seat tilt
- “Active Access” transfer seat function
- Seat height adjustment (Multilift) with additional options “Active Touch” and “Active Relax”

7.10.3 Contoured pads

The contoured pads provide the user with good sitting comfort. They are offered in the flat contoured and deep contoured versions. An incontinence cover is available in addition to the fabric cover.

For care and maintenance of the product, the pads can be removed, and the covers removed for washing.

7.10.3.1 Detaching/attaching the seat pad



Detaching the seat pad

- 1) Hold the seat pad at the front and rear (see fig. 40).
- 2) Pull the seat pad up and off the hook-and-loop strap.

Attaching the seat pad

- 1) Put on the seat pad so the front lower edge of the pad lines up with the front edge of the seat plate (right and left).
- 2) Press the seat pad onto the hook-and-loop closure to secure it against sliding.

7.10.3.2 Detaching and attaching the back support pad



Detaching the back support pad

- 1) **Optional:** If a head support is installed, remove it.
- 2) Loosen the strap of the back support pad cover at the lower end from the hook-and-loop fastener (see fig. 41, item 1).
- 3) Pull the back support pad cover down off the back plate (see fig. 41, item 2). Do this from the bottom to the top and start on one side.
- 4) Loosen the hook-and-loop fastener on the upper section of the back plate.
- 5) Remove the back support pad.

Attaching the back support pad

- 1) Slightly tension the back support pad cover at the top and pull it down over the back plate.
INFORMATION: In doing so, pull the back support pad down slightly before attaching it to the back plate with the hook-and-loop fasteners. Otherwise, it protrudes too far upwards.
- 2) Pull the back support pad cover all around over the back plate (see fig. 41, item 2).
- 3) Attach the strap of the back support pad cover in the centre of the hook-and-loop fastener (see fig. 41, item 1).
- 4) **Optional: Reinstall** the head support.

7.10.3.3 Detaching/attaching the covers

Fabric cover

The fabric cover can be taken off the seat and back support pad for general cleaning.

Before putting on the incontinence cover, the fabric cover must be taken off the seat pad.



Taking off/putting on the cover

- 1) Pull the seat or back support pad off the hook-and-loop strap.
- 2) Open the zipper of the cover and remove the foam pad.
- 3) To put on the cover, insert the foam pad into the cover again with proper alignment.
- 4) Close the zipper and secure the seat or back support pad again on the hook-and-loop strap.

Incontinence cover

The incontinence cover is positioned under the fabric cover. It protects the foam pad against wetness.



Attaching the cover

- 1) Take off the fabric cover.
- 2) Slide the foam pad into the incontinence cover (top left).
- 3) Pull the open end of the incontinence cover up and lay it onto the foam pad (top right).
- 4) Pull the overhanging end of the incontinence cover down and close it on the underside of the foam pad (bottom).
- 5) Put on the fabric cover.

7.10.3.4 Cleaning the covers

Cleaning the cloth cover

INFORMATION

- Replace the cover when it shows signs of advanced wear and tear.
- To disinfect the cover, add a standard hygiene detergent during washing.
- Use an additional incontinence cover in case of heavy incontinence. Observe the care and cleaning instructions for the incontinence cover.

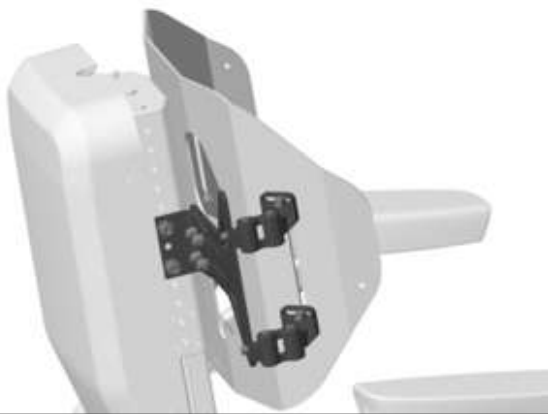
- 1) Close the zipper on the cover before washing.
- 2) Wash the cover according to the washing symbols on the care label using a mild, environmentally friendly detergent. Wash the cover using the delicate cycle to prevent excessive wear and tear.
- 3) Allow to air dry. Do not use a clothes drier.

Cleaning the foam pads

- 1) Hand wash all foam components in warm water at **40 °C [104 °F]** using a standard mild detergent. Do not use fabric softener. Rinse thoroughly.
- 2) Allow to air dry. Do not expose to direct heat sources (e.g. sunlight, stove or radiator).

7.10.4 Back support adapter for alternative back support solutions

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The back support is equipped with an Ottobock back support adapter that is suitable for installing alternative back support solutions, e.g. for a non-standard Baxx configuration or from another manufacturer. The back adapter is mounted on the length adjustment of the back support so that the biomechanical back support angle adjustment is maintained.

The individual back support solution is either installed on the back support adapter at the factory or was installed and adapted by the qualified personnel. Contact qualified personnel if any adjustments are required.

The power wheelchair is equipped with an ADI back support (Baxx line).

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With an anatomically shaped rigid back plate made of aluminium, the back system enables the best possible positioning.

Large openings in the back shells provide for a low weight and easy handling.

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

7.10.5 Seat cushion

INFORMATION

- ▶ Please note that Ottobock has delivered this power wheelchair without a seat cushion as per the order.
- ▶ Please note that you have received a seat cushion or seating system that is not included in Ottobock's modular system. Ottobock assumes no liability for combinations with accessories from other manufacturers not included in Ottobock's modular system.
- ▶ Prior to using the seat cushion or seating system, please read and observe the instructions for use / manufacturer's instructions from the other manufacturer. These are included with the instructions for use.
- ▶ In case of questions or problems with this accessory, please contact the qualified personnel who adjusted this product.

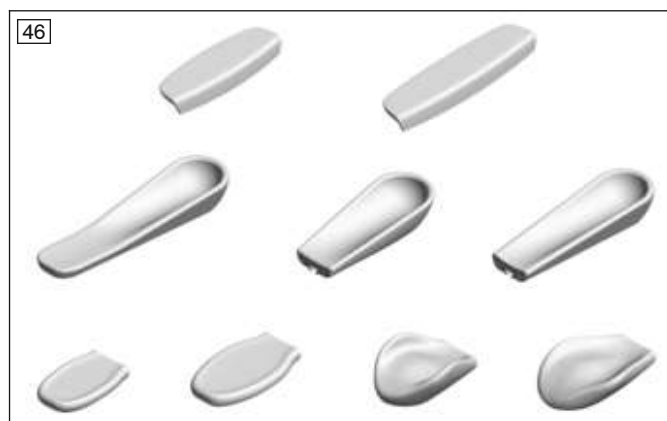
Wheelchair seat cushions are used for pressure redistribution while sitting. Depending on the version, the seat cushion contains a resilient foam base and possibly additional gel or air-filled inserts. The foam base is anatomically shaped in some cases.

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.

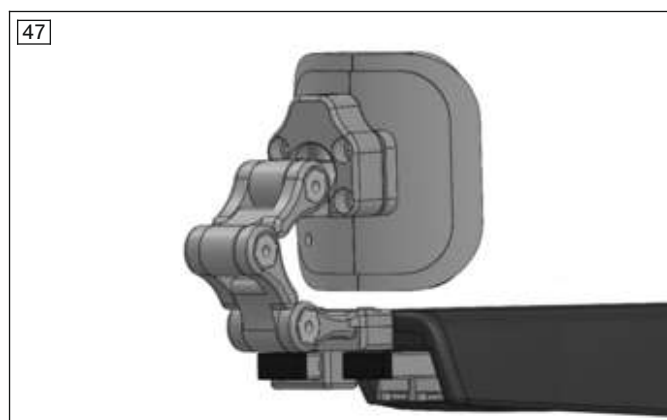
7.10.6 Channel forearm support options



Depending on the order, different channel forearm support variants are mounted on the seat to meet the needs of the user:

- Short arm pads
- Long arm pads
- Channel forearm pads
- Channel forearm pads with separate hand supports

Wipe-down padding covers are available depending on the arm support being used.



In combination with short or long arm pads, the UniLink elbow support can support arm positioning. The elbow joint support can be adapted to the requirements of the user by qualified personnel.

7.10.7 Back support bracket



The seating unit is equipped with a back support bracket. Using the back support bracket, an attendant can push the power wheelchair after releasing the brake release (see page 54).

Depending on the order, the back support bracket can also be used to hold the attendant control device and the multi bar, to which additional options can be attached (e.g. backpack hook, rear marker plate).

The options ordered are already installed on the back support bracket when the product is delivered.

7.10.8 Knee pad

CAUTION

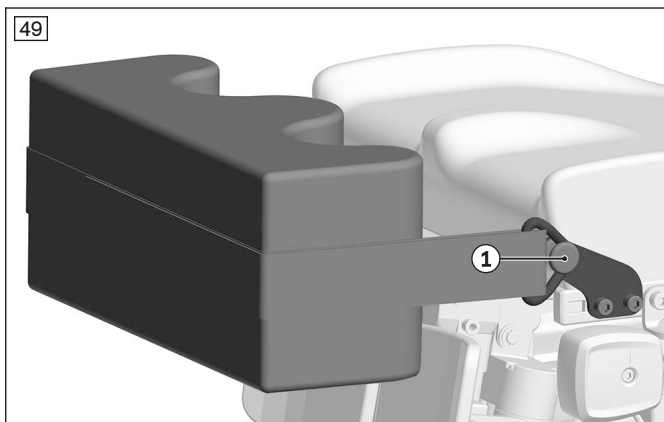
Incorrect adjustment of the knee pad

Risk of injury due to crushing

- ▶ The knee pad must be installed for the user in the extended positions of the anterior functions ("Active Touch", "Active Relax") in a way that prevents the user sliding out or being crushed.
- ▶ In the sitting position, a finger should fit between the pad and the tibia as the biomechanical adjustment presses the knee pad against the lower legs during the movement involved in standing up.

The knee pad stabilises and supports the legs.

It is possible to make small adjustments to the spacing between the knee pad and lower leg (e.g. in case of clothing of different thicknesses).



Positioning and using the knee pad

- 1) Place the user in an upright, 90° seated position.
 - The legs must be supported on the foot plates and lie straight against the posterior lower leg pad while sitting.
 - Make sure that the lower leg length is adjusted correctly.
 - The knee pad should lie flat on the lower legs below the kneecaps.
- 2) Position the knee pad with the openings on the legs.
- 3) Attach the eyelets of the knee pad belt to the knee pad brackets (see fig. 49, item 1).
- 4) Adjust the belt length if necessary (see below).
- 5) Pull to check that it is secure.

Possible positioning errors

- The lower leg length is incorrectly adjusted.



Adjusting the knee pad belt length

- 1) Use the belt buckles on the right and left sides of the knee pad to shorten or lengthen the belt (see fig. 50, item 1).
- 2) Verify that the adjustment is correct.

CAUTION! Observe the safety notice at the start of the section.

7.10.9 Thoracic supports

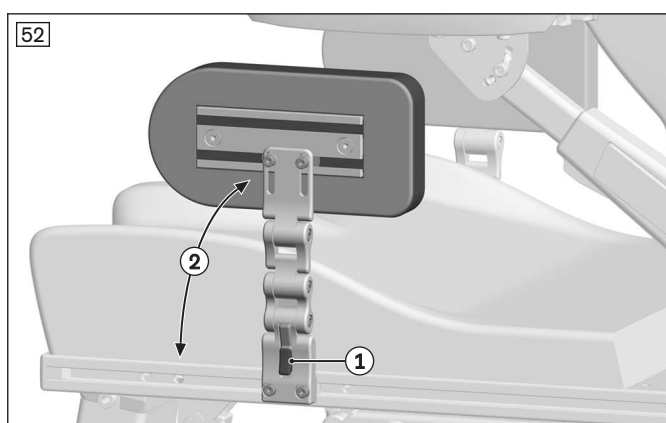


An adapter that holds a UniLink mounting kit for thoracic support is mounted on the back plate of the seat. Thoracic supports provide additional support for the upper body for certain indications.

The mounting kit can be adjusted to the needs of the user by qualified personnel. Detailed information regarding use, maintenance and repair can be found in the included instructions for use.

7.10.10 Thigh lateral supports

The thigh lateral supports can provide additional support for certain indications. The option has been preset by qualified personnel. The lateral supports can be folded away to make getting into the wheelchair easier. Detailed information regarding use, maintenance and repair can be found in the included instructions for use.



Folding away the lateral supports

- 1) Press the quick release button (see fig. 52, item 1).
- 2) Fold the pad away to the side (see fig. 52, item 2).
- 3) After getting in or out, fold the pad up again until it engages securely.

7.10.11 Multi bar



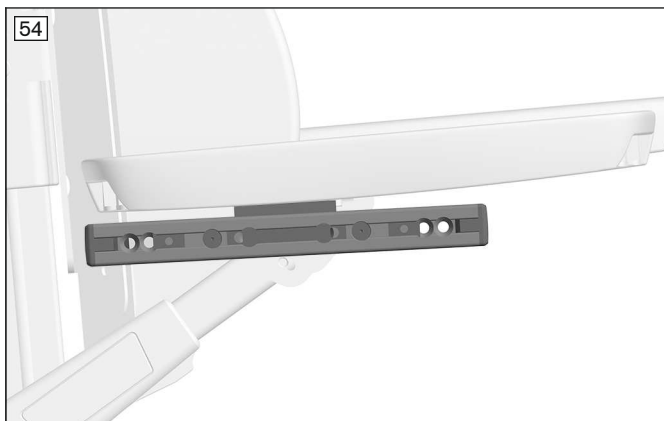
Multi bar on back support bracket

The seating unit is equipped with a multi bar attached to the back support bracket.

The multi bar can be used to attach additional options, e.g.:

- Rear marker plate
- Backpack hook
- Bag for oxygen cylinder
- Bag for respirator

If options for the multi bar have been ordered, they are already installed when the product is delivered.



Multi bar on the arm support

The seating unit is equipped with a multi bar attached to the arm support.

The multi bar can be used to attach additional options, e.g.:

- Communication aid
- Beverage holder
- Lateral guides
- Small utensil pouch

If options for the multi bar have been ordered, they are already installed when the product is delivered.



Multi bar on the back plate

The seating unit is equipped with a multi bar attached to the back plate.

The multi bar can be used to attach additional options, e.g.:

- Catheter pocket
- Hydration kit

The options ordered are already installed on the multi bar when the product is delivered.

7.10.12 Headrest

⚠ CAUTION

Incorrect mounting/adjustment of the head support

Injuries and damage to the product due to collision

- The head support must be mounted and adjusted so that it does not collide with moving components when adjusting the back support angle.

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.



UniLink mounting kit for head/neck support

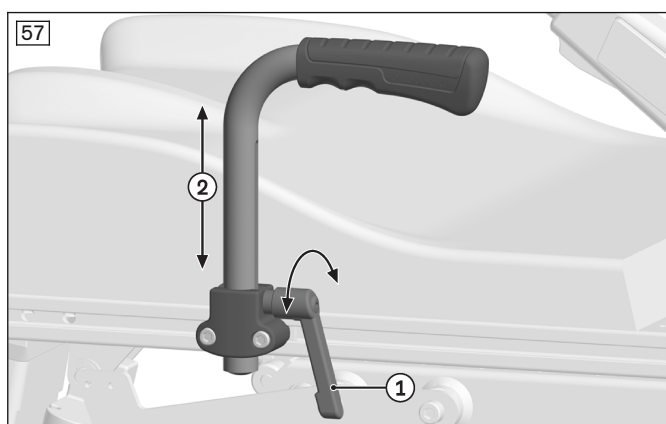
The mounting kit is mounted on the back plate of the seat with an adapter and is used to hold a head/neck support. It can be adjusted to the needs of the user by qualified personnel.

Extensions are available for the mounting kit to compensate for the distance if the user is in a kyphotic head position.

With every change to the settings, ensure that the mounting kit does not collide when the back support angle and automatic length adjustment are adjusted.

7.10.13 Transfer handles

The transfer handles (option) support the user while transferring out of or into the seat. Their height can be adjusted or they can be removed if necessary.



Adjusting or removing the transfer handle

- 1) Release the clamping lever (see fig. 57, item 1).
- 2) Pull the transfer handle up and out or adjust its height (see fig. 57, item 2).
- 3) Engage the clamping lever again (see fig. 57, item 1).

7.11 Power seat functions

INFORMATION

Below is an explanation of how to select the seat functions using the hand module. Alternatively, the seat functions, if available, can be controlled directly with an ICON push-button module (see page 93).

7.11.1 Safety instructions

⚠ WARNING

Driving with power seat functions

Falling or tilting due to driving with improper seat settings

- ▶ Always drive with the seat height adjustment and seat tilt lowered when driving in traffic and on slopes and downgrades. The back support angle may be tilted slightly backwards to improve stability when driving in traffic and on downgrades. Always use a belt system.
- ▶ For stability and comfort, it is recommended that you always use the coupled seat function when adjusting the leg support upwards, which also tilts the back support angle backwards. This reduces pressure on the knee joints.
- ▶ When driving down obstacles (e.g. curbs) in the forward direction and on downgrades, it is recommended to tilt the seat slightly backwards and drive at a reduced speed.
- ▶ Drive with the seat raised or with the seat tilt activated only for short distances at home. Always use the lowest speed level. Note that the field of vision is restricted while driving. Always use a belt system.
- ▶ Use the seat height adjustment and the forward seat tilt only on firm, level ground.
- ▶ To avoid uncontrolled driving movements, ensure that the control device 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 79).
- ▶ Depending on how the power seat functions are adjusted, the driving parameters may be reduced.

⚠ 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**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 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 back support to flip back when the control device is switched off.

⚠ WARNING**Lack of maintenance**

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

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

NOTICE**Improper use of the power seat functions**

Damage to the product due to user error

- When using the electric seat functions, note that the actuators (adjusting motors) are not designed for continuous use, only for short-term use under limited loads (10 % load, 90 % idle time).
- Observe the following guideline value: After operating for 10 seconds, rest for about 90 seconds. 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.

7.11.2 Speed reduction

Depending on the configuration, certain seat function positions may lead to a speed reduction. When speed reduction is active, this is indicated on the control device as follows:

ICON hand module control device; ICON LCD module

Display	Information
	Restricted speed (creep speed) Yellow caution symbol: automatic speed reduction (e.g. because a seat function was activated)

Pop-up screens showing a restriction and the cause of the restriction may also appear on the display. The functions causing the restriction are also indicated by the LEDs on the push-button module.

7.11.3 Power back angle adjustment

⚠ WARNING

Incorrect use of back support angle adjustment

Falling, tipping over due to driving with incorrect seat settings

- ▶ Drive in road traffic with the back support angle tilted slightly toward the rear if possible.
- ▶ When driving with the back support angle adjustment activated, even at home, fasten the belts and do not lean out beyond the seat surface.

NOTICE

Improper use of the back angle adjustment

Damage to the seat back due to collision with product components

- ▶ Note that the back support angle adjustment range may be limited if the seat tilt has already been adjusted.
- ▶ Note that the back support adjustment range is limited if a rear marker plate is installed due to the risk of collision.
- ▶ Note that the seat back may collide with the luggage carrier when the back support is fully tilted. In this case, remove the luggage carrier before using the back angle adjustment.
- ▶ Note that the seat back may collide with items on the luggage carrier even when the back support is only tilted slightly. Take the items off the luggage carrier in this case. If this is not possible, then the back support must not be adjusted too far back.

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 67).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 75) and "Joystick functions" (see page 79).

Front-wheel drive

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The power back support angle adjustment enables the back support to be tilted continuously according to the indication. Thanks to the special biomechanical design, the back support automatically moves down when the back support angle is adjusted backwards. Length adjustment thereby prevents compression and shear forces on the user's back support. When adjusting the back support angle and the length adjustment function, the sitting comfort improves the closer the user is positioned to the back support.

Technically, the back support angle can be adjusted from **85° – 165°**. Thanks to length adjustment, the back support angle adjustment is limited to a range of **110° – 165°** as standard.

The back support angle adjustment range and the range of action of the length adjustment can be changed by qualified personnel as needed.

Mid-wheel drive



The power back support angle adjustment enables the back support to be tilted continuously according to the indication. Thanks to the special biomechanical design, the back support automatically moves down when the back support angle is adjusted backwards. Length adjustment thereby prevents compression and shear forces on the user's back support. When adjusting the back support angle and the length adjustment function, the sitting comfort improves the closer the user is positioned to the back support.

Technically, the back support angle can be adjusted from **85° – 165°**. Thanks to length adjustment, the back support angle adjustment is limited to a range of **110° – 165°** as standard.

The back support angle adjustment range and the range of action of the length adjustment can be changed by qualified personnel as needed.

7.11.4 Power legrests

⚠ WARNING

Incorrect handling of the leg supports

Falling, tipping over due to driving with improper seat settings, damage to the product

- ▶ Drive in public traffic areas with the leg support retracted if possible, with a maximum angle between the leg support and seat bottom of **75° to 90°**.
- ▶ In case of short lower leg lengths, note that the leg support protrudes further below the foot plates. When the leg support is simultaneously set to vertical, this can result in a smaller ground clearance that is not directly visible to the user. In this case, lift up the leg support slightly before crossing obstacles or uneven terrain.

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 67).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 75) and "Joy-stick functions" (see page 79).

Front-wheel drive



The centrally fitted leg support prevents a constant pressure load or provides anti-shock support.

Thanks to the special biomechanical design, the length of the leg support changes when it is tilted. Biomechanical length adjustment thereby prevents pressure and shear forces on the user's legs.

The leg support can be power adjusted from vertical to near-horizontal.

To increase the entry and exit area, the foot plate can be folded up by hand or feet (see page 22).

Mid-wheel drive



The centrally fitted leg support prevents a constant pressure load or provides anti-shock support.

Thanks to the special biomechanical design, the length of the leg support changes when it is tilted. Biomechanical length adjustment thereby prevents pressure and shear forces on the user's legs.

The leg support can be power adjusted from vertical to near-horizontal.

To increase the entry and exit area, the foot plate can be folded up by hand or feet (see page 22).

The leg support adjustment range and the range of action of the length adjustment can be changed by qualified personnel as needed.

7.11.5 Power seat tilt

⚠ WARNING

Incorrect handling of the seat tilt

Falling, tipping over due to driving with improper seat settings

- ▶ Always drive in road traffic 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.

NOTICE

Improper use of the seat tilt

Damage to the seat back due to collision with product components

- ▶ Note that the seat tilt adjustment range may be limited if the back support angle has already been adjusted.
- ▶ Note that the seat tilt adjustment range is limited if a rear marker plate is installed due to the risk of collision.
- ▶ Note that the seat back may collide with the luggage carrier when the seat is fully tilted. In this case, remove the luggage carrier before using the seat tilt.
- ▶ Note that the seat back may collide with items on the luggage carrier even when the seat is only tilted slightly. Take the items off the luggage carrier in this case. If this is not possible, then the seat must not be adjusted too far back.

Front-wheel drive



The power seat tilt function allows the seat to be tilted by up to **45°**, for example to relieve pressure (with centre of gravity shift).

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

Mid-wheel drive

63



The power seat tilt function allows the seat to be tilted by up to **45°**, for example to relieve pressure (with centre of gravity shift).

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

7.11.6 Power seat tilt with transfer seat function

WARNING

Incorrect handling of the seat tilt

Falling, tipping over due to driving with improper seat settings

- ▶ Always drive in road traffic 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.

NOTICE

Improper use of the seat tilt

Damage to the seat back due to collision with product components

- ▶ Note that the seat tilt adjustment range may be limited if the back support angle has already been adjusted.
- ▶ Note that the seat tilt adjustment range is limited if a rear marker plate is installed due to the risk of collision.
- ▶ Note that the seat back may collide with the luggage carrier when the seat is fully tilted. In this case, remove the luggage carrier before using the seat tilt.
- ▶ Note that the seat back may collide with items on the luggage carrier even when the seat is only tilted slightly. Take the items off the luggage carrier in this case. If this is not possible, then the seat must not be adjusted too far back.

Front-wheel drive

64



The power seat tilt function allows the seat to be tilted towards the rear up to **45°**, for example to relieve pressure (with centre of gravity shift).

The "Active Access" transfer seat function also allows the seat to be tilted forwards up to **15°** by lowering the foot plate to the floor. This makes it easier to get into the product (see fig. 18).

Mid-wheel drive

65



The power seat tilt function allows the seat to be tilted by up to **45°**, for example to relieve pressure (with centre of gravity shift).

The "Active Access" transfer seat function also allows the seat to be tilted forwards up to **15°** by lowering the foot plate to the floor. This makes it easier to get into the product (see fig. 21).

Information on the "Active Access" transfer seat function can be found in the "Programmable seat positions" section (see page 81).

7.11.7 Seat tilt/seat height adjustment combination (Multilift)

INFORMATION

- ▶ Please also observe the generally applicable safety instructions in the section "Power seat functions" > "Safety instructions" (see page 67).
- ▶ Observe the instructions for use in the sections "Controlling power seat functions" (see page 75) and "Joy-stick functions" (see page 79).

Safety instructions for the seat tilt function

⚠ WARNING

Incorrect handling of the seat tilt

Falling, tipping over due to driving with improper seat settings

- ▶ Always drive in road traffic 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.

NOTICE

Improper use of the seat tilt

Damage to the seat back due to collision with product components

- ▶ Note that the seat tilt adjustment range may be limited if the back support angle has already been adjusted.
- ▶ Note that the seat tilt adjustment range is limited if a rear marker plate is installed due to the risk of collision.
- ▶ Note that the seat back may collide with the luggage carrier when the seat is fully tilted. In this case, remove the luggage carrier before using the seat tilt.
- ▶ Note that the seat back may collide with items on the luggage carrier even when the seat is only tilted slightly. Take the items off the luggage carrier in this case. If this is not possible, then the seat must not be adjusted too far back.

Safety instructions for the seat height adjustment function

⚠ WARNING

Incorrect handling of the seat height adjustment

Falling, tipping over due to driving with improper seat settings

- ▶ Use the seat height adjustment only 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 from a specified height when the seat height adjustment function is used. If this is not the case, move the seat height adjustment all the way up to check it. If the creep speed indicator still does not appear, contact qualified personnel immediately. Use the power wheelchair only with the seat height adjustment in its lowest position until the error 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.

Front-wheel drive

66



The power wheelchair is equipped with a combination of power seat tilt and seat height adjustment.

For pressure redistribution, the seat can be tilted back continuously up to an angle of **45°** (with centre of gravity shift).

The seat bottom can be raised continuously up to a height of **300 mm**.

The driving function can be used indoors even when the seat is raised. The speed is decreased as soon as the seat is raised above a specified height (see page 68).

The seat is moved by 2 separate actuators (adjustment motors). An actuator is moved for the seat tilt, and both actuators for the seat height adjustment. This also enables anterior positioning, for example, to make it easier to get in and out ("Active Access", see fig. 18).

The further the seat tilt or seat height adjustment moves, the less the respective seat function can be adjusted. If, for example, the seat height adjustment has moved all the way up, further tilting is not possible at this height.

67



Mid-wheel drive

68



69



The power wheelchair is equipped with a combination of power seat tilt and seat height adjustment.

For pressure redistribution, the seat can be tilted back continuously up to an angle of **45°** (with centre of gravity shift).

The seat bottom can be raised continuously up to a height of **300 mm**.

The driving function can be used indoors even when the seat is raised. The speed is decreased as soon as the seat is raised above a specified height (see page 68).

The seat is moved by 2 separate actuators (adjustment motors). An actuator is moved for the seat tilt, and both actuators for the seat height adjustment. This also enables anterior positioning, for example, to make it easier to get in and out ("Active Access", see fig. 21).

The further the seat tilt or seat height adjustment moves, the less the respective seat function can be adjusted. If, for example, the seat height adjustment has moved all the way up, further tilting is not possible at this height.

The seat tilt/seat height adjustment combination (Multilift) is also equipped with "Active Touch" and "Active Relax" options. Information can be found in the "Programmable seat positions" section (see page 81).

7.11.8 Controlling power seat functions

INFORMATION

If your power wheelchair is equipped with a push-button module, you can select and control the power seat functions directly when they are programmed accordingly (see page 93).

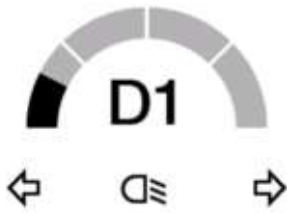
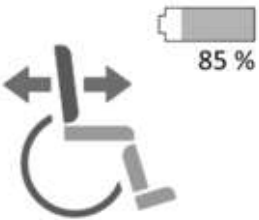
7.11.8.1 ICON hand module

Procedure when using the ICON hand module (standard configuration)*

- The "Seat functions" section is accessed by pressing the [Mode] button (see fig. 22). The LCD screen shows the symbol for the first seat function (see page 79).
- Moving the joystick to the left/right switches between the seat functions in the "Seat functions" section. The LCD screen indicates the currently selected seat function (see page 79). The driving function is not available during this time and the speed level indicator switches off.
- Once a seat function is activated, it is adjusted by moving the joystick forwards or backwards. An arrow indicates the active direction of movement.
- The electric motor adjusts the seat function while the joystick is deflected, and stops at the end positions. The activation of the power drives for the seat functions is proportional to the deflection of the joystick.
- Exit the "Seat functions" section by pressing the [Mode] button again. Depending on the programming, the driving profiles can now be selected again in sequence.

* If special control options are equipped, control takes place as appropriate.

Selecting a seat function from the “Driving functions” section

Step	Display	Action	Effect
1		Press [Mode] button twice	Control device switches to the first seat function in the “Seat functions” section When the [Mode] button is pressed briefly and in a slow sequence, the control device first switches through all driving profiles before the “Seat functions” section is displayed.
2		Joystick right/left	Switches between seat functions (example: back support angle adjustment)
3		Joystick backwards	Seat function is adjusted as appropriate
4		Joystick forwards	Seat function is adjusted as appropriate
5	--	Press [Mode] button multiple times	Control device uses settings to switch back to the first activated driving profile (e.g. D1)
6		--	The power wheelchair is ready to be used again.

Selecting a seat function from the home screen

The home screen can be accessed, for example, by pressing and holding the [Mode] button. The seat functions can be accessed directly from the home screen:

Step	Display	Action	Effect
1		Joystick right	Switches to the “Seat functions” section

Step	Display	Action	Effect
2 – 6	See above		

Selecting a seat function using the softkey buttons

Step	Display	Action	Effect
1		Press the [Change softkey functions] button multiple times	Switches to the "Seat functions" softkey section
2		Press a [Softkey] button	Accesses the assigned seat function
3 – 6	See above		

7.11.8.2 ICON LCD module

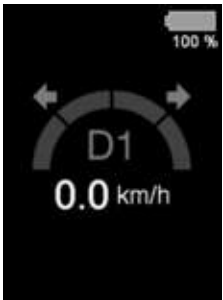
Procedure when using the ICON LCD module

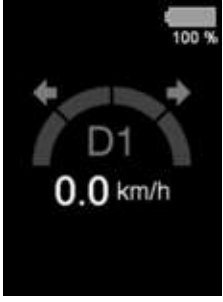
- The "Seat functions" section is accessed by pressing the [Mode] button multiple times. The LCD module shows the symbol for the first seat function (see page 79). Depending on programming, the [Mode] button may need to be pressed a number of times.
- To switch between the seat functions in the "Seat functions" section, either move the joystick left/right or press the [➤]/[➤] buttons. The LCD module indicates the currently selected seat function (see page 79). The driving function is not available during this time and the speed level indicator switches off.
- Once a seat function is selected, it is adjusted by moving the joystick forwards or backwards or pressing the [Λ]/[V] buttons.
- The electric motor adjusts the seat function while the joystick is deflected, and stops at the end positions.
- Exit the "Seat functions" section by pressing the [Mode] button. From the home screen, moving the joystick forwards or pressing the [Λ] button switches back to the "Driving functions" section.

INFORMATION

As a rule, the LCD module acts as a display for the hand module. Some model variants (special control) do not require the hand module. In such cases, proceed as described below.

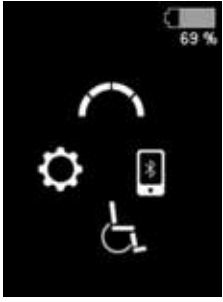
Selecting a seat function from the "Driving functions" section

Step	Display	Action	Effect
1		Press [Mode] button twice	Control device switches to the "Seat functions" section When the [Mode] button is pressed briefly and in a slow sequence, the control device first switches through all driving profiles before the "Seat functions" section is displayed.

Step	Display	Action	Effect
2		Move joystick right/left or press the [v]/[<] buttons.	Switches between seat functions (example: seat tilt)
3		Move joystick backwards or press the [v] button	Seat function is adjusted as appropriate
4		Move joystick forwards or press the [v] button	Seat function is adjusted as appropriate
5	--	Press [Mode] button multiple times	Control device uses settings to switch back to the first activated driving profile (e.g. D1)
6		--	The power wheelchair is ready to be used again.

Selecting a seat function from the home screen

The home screen can be accessed, for example, by pressing and holding the [Mode] button. The seat functions can be accessed directly from the home screen:

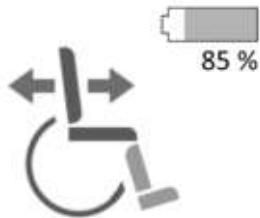
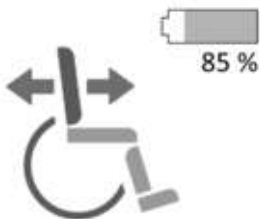
Step	Display	Action	Effect
1		Move joystick backwards or press the [v] button	Switches to the "Seat functions" section
2 – 6	See above		

7.11.9 Joystick functions

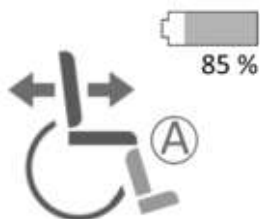
The following power seat functions can be controlled with the input device (e.g. joystick):

Display on the hand module

Seat functions – seat symbols depending on equipment

Display	Function	Deflection using the input device ¹⁾
	Power seat tilt	Backwards: seat slowly tips backwards Forwards: seat slowly tips forwards to a horizontal position
	Power back support angle adjustment	Backwards: back support tilts backwards Forwards: back support tilts forwards
	Power leg support adjustment – leg support angle	Backwards: the leg support moves up Forwards: the leg support moves down
	Power seat height adjustment	Backwards: seat moves up Forwards: seat moves down
	Connected seat functions (example shown: power back support angle adjustment + power leg support adjustment) ²⁾	Forwards: seat functions move forwards Backwards: seat functions move backwards

Seat functions – further information

Display	Function	Meaning
	Additional indicator, anterior power seat tilt: If the letter "A" is displayed, this informs the user that the seat tilt is anterior (seat tilted forwards beyond horizontal position).	The anterior position can lead to restrictions in driving mode or when adjusting seat functions or functions from the ECON adjustment software. By deflecting the input device backwards, the seat exits the anterior seat tilt and automatically stops in the initial position.

Display	Function	Meaning
	Additional setting for latch driving mode	In this mode, only a single short forward/backward movement of the joystick is required for the seat adjustment to continue to extend (see page 53).

¹⁾ The deflection direction can be adjusted by qualified personnel. When special controls are used, actuation is done with alternative input devices.

²⁾ Some seat functions are performed by combining multiple actuators. For these seat functions, the display shows an icon that shows all actuators for the setting that are actively involved in the seat function.

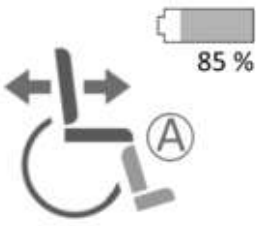
Display on the LCD module

Seat functions – seat symbols depending on equipment

Display	Function	Deflection using the input device ¹⁾
	Power seat tilt	Backwards: seat slowly tips backwards Forwards: seat slowly tips forwards to a horizontal position
	Power back support angle adjustment	Backwards: back support tilts backwards Forwards: back support tilts forwards
	Power leg support adjustment – leg support angle	Backwards: the leg support moves up Forwards: the leg support moves down
	Power seat height adjustment	Backwards: seat moves up Forwards: seat moves down

Display	Function	Deflection using the input device ¹⁾
	Connected seat functions (example shown: power back support angle adjustment + power leg support adjustment) ²⁾	Forwards: seat functions move forwards Backwards: seat functions move backwards

Seat functions – further information

Display	Function	Meaning
	Additional indicator, anterior power seat tilt: If the letter "A" is displayed, this informs the user that the seat tilt is anterior (seat tilted forwards beyond he horizontal position).	The anterior position can lead to restrictions in driving mode or when adjusting seat functions or functions from the ECON adjustment software. By deflecting the input device backwards, the seat exits the anterior seat tilt and automatically stops in the initial position.
	Additional setting for latch driving mode	In this mode, only a single short forward/backward movement of the joystick is required for the seat adjustment to continue to extend (see page 53).

¹⁾ The deflection direction can be adjusted by qualified personnel. When special controls are used, actuation is done with alternative input devices.

²⁾ Some seat functions are performed by combining multiple actuators. For these seat functions, the display shows an icon that shows all actuators for the setting that are actively involved in the seat function.

7.11.10 Programmable seat positions (memory function)

Transfer seat seat variant

NOTICE

Execution of anterior functions

Collision of the product due to unfavourable movements

- For a smooth movement pattern, we recommend always **selecting driving position M1** before executing an anterior function.
- After cancelling an anterior function, select driving position **M1 again**.
- If one of the rollers on the leg support touches the ground, driving the wheelchair is no longer permitted. In this case, select driving position **M1**.
- If the leg support rollers touch the ground frequently and unintentionally, contact the qualified personnel to check the settings and have them corrected as needed.

Multilift seat version

NOTICE

Performing anterior functions

Collision of the product due to adverse movements

- ▶ To ensure a smooth movement pattern, it is recommended that you always select driving position **M1** before performing an anterior function. In the case of anterior function **A5** ("Active Relax"), it is recommended that you first select memory position **M4**.
- ▶ After cancelling an anterior function, select driving position **M1** again.
- ▶ If one of the rollers on the leg support touches the ground, driving the wheelchair is no longer permitted. In this case, select driving position **M1**.
- ▶ If the leg support rollers touch the ground frequently and unintentionally, contact the qualified personnel to check the settings and have them corrected as needed.

INFORMATION

The memory functions with the seat that is tilted forwards are pre-programmed for special applications (anterior positions, letter "A"). These seat positions are designed to support the user, e.g. when getting in and out of the wheelchair. In these seat positions, the manual adjustment range of the individual power seat functions may be limited (e.g. leg support angle). This restriction does not constitute a malfunction, but helps to prevent collisions and unstable sitting positions.

Pre-programmed seat functions are additional functions. These execute predefined power seat adjustments. Depending on the programming, the control device can also control several seat adjustment actuators at the same time.

The following section gives an overview of the topic. Due to different order variants and individual adjustments made by qualified personnel, only an individual selection of these will generally be available for a specific power wheelchair.

Some variants are pre-programmed at the factory, while other variants can be individually specified by qualified personnel in coordination with the user upon delivery of the product.

Pre-programmed seat functions are generally identified using the following letters:

- M1 = factory pre-programmed driving position
- Mx = additional memory functions (saved seat positions that can be subsequently changed)
- A = anterior functions (saved seat positions with seat surface tilted forwards)
- E = emergency function

The numbers identified below are examples, and the numbers assigned by the factory or qualified personnel may be different depending on the number of predefined seat functions stored.

Seat functions – memory functions numbered depending on equipment and individual adaptation

Display	Function
	M1: The seat position corresponds to the factory-set driving position.
	Mx: Additional individual seat positions are programmed and numbered according to the user's needs. Up to 8 memory functions in total are possible (including driving position M1, anterior functions and emergency function)

Transfer seat seat variant

Seat functions – anterior functions numbered depending on equipment

Display	Function
	A2 ("Active Access"): This function facilitates getting into the wheelchair. The seat tilts forwards by 15° and the foot plate lowers to the floor. The wheelchair cannot be driven in this seat position (drive-away lock).

Seat variant with seat height adjustment + seat tilt

Seat functions – anterior functions numbered depending on equipment

Display	Function
	A2 ("Active Access"): This function facilitates getting into the wheelchair. The seat tilts forwards by 15° and the foot plate lowers to the floor. The wheelchair cannot be driven in this seat position (drive-away lock).
	A3 ("Active Touch"): The seat tilts forwards by up to 30°. The wheelchair can be operated at a reduced speed (creep speed). The manufacturer recommends using a knee pad (see page 64).
	A5 ("Active Relax"): This function is used for muscular recovery. The seat tilts forwards by up to 30°, the leg supports (175°) and back support (165°) form a near-straight surface. The wheelchair can be operated at a reduced speed (creep speed). The manufacturer recommends using a knee pad (see page 64).

Seat functions – emergency function, numbered depending on equipment

Display	Function
	E5 : The seat moves to the predefined emergency position.

Start and stop of pre-programmed seat positions

If a pre-programmed seat position is selected on the display, the seat is moved to the corresponding position by actuating the joystick or an alternative input device. The joystick or alternative input device must be actuated **forwards**.

When using the buttons on the LCD module, press the navigation button  (down) to move the seat to the selected seat position.

By default, the control is set so that the input device only needs to be briefly actuated once to move the seat to the desired seat position. This functionality is referred to as the self-holding mode and is indicated by the term “Latch” on the display (see page 34). The movement can be stopped at any time by actuating the input device again.

If the self-holding mode is not shown on the display, the input device must be actuated until the pre-programmed seat position has been reached and the movement automatically stops. The movement can be stopped at any time by releasing the input device.

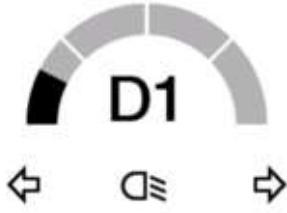
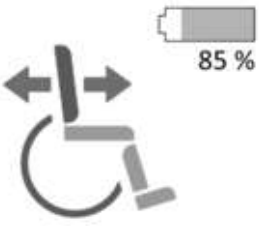
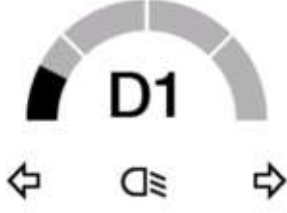
If necessary, the qualified personnel can activate or deactivate the self-holding mode individually for each pre-programmed seat position.

Pre-programmed seat positions can be exited by switching to a different seat position, typically driving position **M1**.

Selecting a pre-programmed seat function using the push-button module (if available)

See the “Push-button module” section for how to proceed (see page 93).

Selecting a pre-programmed seat function from the “Driving functions” section – example

Step	Display	Action*	Effect
1		Press [Mode] button twice	Control device switches to the “Seat functions” section When the [Mode] button is pressed briefly and in a slow sequence, the control device first switches through all driving profiles before the “Seat functions” section is displayed.
2		Joystick right/left	Switches between seat functions until pre-programmed driving position M1 appears INFORMATION: The seat should be in driving position M1 before other memory and anterior functions are activated.
3		Joystick forwards	Seat moves to pre-programmed driving position M1
		Joystick right/left	Switches between pre-programmed seat functions Depending on programming: A1/A2/A3; M2/M3/M4; E5 (example below: A2) The numerical values may vary on an individual basis
4		Joystick forwards	Seat moves to the pre-programmed seat position
		Joystick right/left	Switches to additional seat positions
5	--	Press [Mode] button multiple times	Control device uses settings to switch back to the first activated driving profile (e.g. D1)
6		--	The power wheelchair is ready to be used again

Selecting a pre-programmed seat function from the home screen

Step	Display	Action*	Effect
1		Joystick right	Switches to the "Seat functions" section
2 – 6	See above		

** The specified direction of movement refers to using a joystick without "Latch Driving". Alternative input devices can be used.

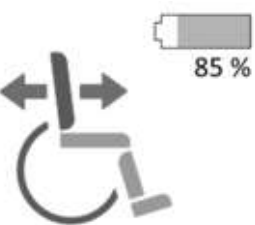
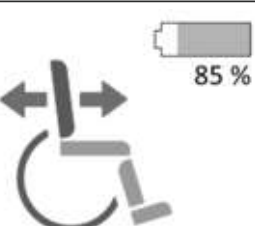
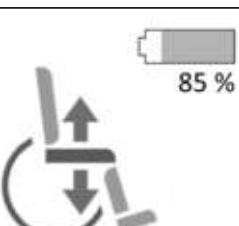
Changing/programming a memory function

The difference between a memory function and other pre-programmed seat functions is that a memory function can be easily changed on an individual basis by the user, an attendant or qualified personnel.

However, a memory function can only be changed/programmed by a trained person and if the qualified personnel has enabled the function.

If this is the case, the user or an attendant can make various seat adjustments (e.g. back support angle adjustment and seat height adjustment) and save them together under one memory entry (e.g. M6). Activating the memory function then moves the seat to the saved position.

The following example shows how to first adjust the seat and then save the position as a memory function.

Step	Display	Action	Effect
1		Press [Mode] button	Control device switches to the "Seat functions" section
2		Joystick right/left	Switches between seat functions (example: back support angle adjustment)
3		Joystick backwards or forwards	Seat function is adjusted backwards or forwards as appropriate
4		Only if needed (if saving another seat adjustment function together with the first seat adjustment function): joystick right/left	Switches between seat functions (example: seat height adjustment)

Step	Display	Action	Effect
5		Joystick backwards or forwards	Seat function is adjusted up or down as appropriate
6	--	Press [Mode] button	Switches to the "Settings" section
7		Joystick left/right	Control device switches to the "Save seat function" sub-section
8		a) Joystick forwards	Activates the save memory function sub-function (M)
		b) Joystick left/right	Selects the specific memory function Mx
9		Joystick forwards	The seat adjustment that has been set is saved under Mx (example: M6)
10		Red cross disappears	Memory function saved
11	--	Press [Mode] button multiple times	Control device uses settings to switch back to the first activated driving profile (e.g. D1)
12		--	The power wheelchair is ready to be used again

7.12 Two-point lap belt with metal buckle, padded

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

7.12.1 Adaptation

⚠ CAUTION

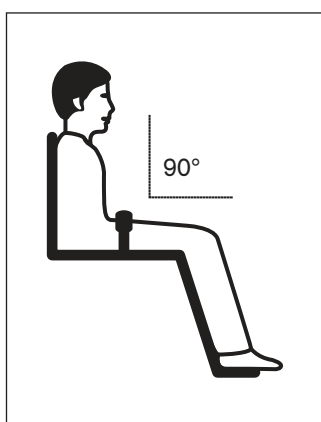
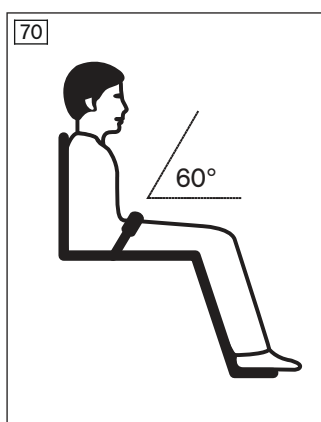
Improper adjustments

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

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

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

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) Fasten 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 (see fig. 71, item 1) at a right angle.
- 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 belt 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 belt 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 belt system

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 Lap belt with rewinder

The lap belt has a locking mechanism to prevent the user from sliding forward out of the seat.

A rewinder allows the length of the lap belt to be freely adjusted. It tightens automatically according to the user's movements.

7.13.1 Adaptation

⚠ CAUTION

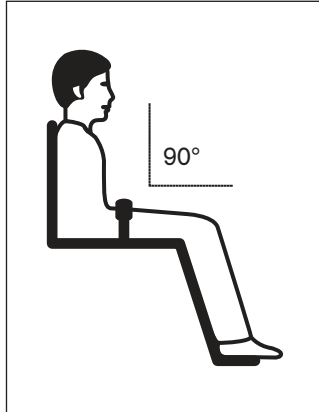
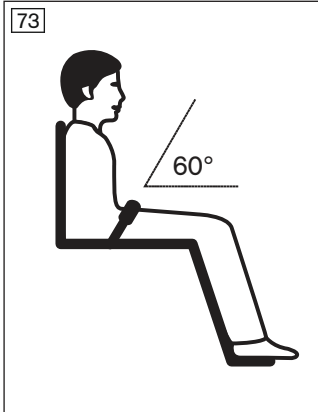
Improper adjustments

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

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

Length adjustment is not necessary since the belt tightens automatically. Nevertheless, some basic positioning instructions should be observed.

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Positioning the user in the seat

- Place the user in an upright, 90° seated position (if physiologically possible).
- Ensure that the back is up against the back support pad (if physiologically possible).
- The lap belt should be at an angle of about 60° to 90° to the seat surface and run in front of the hip bone.

Possible positioning errors

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

7.13.2 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**Improper adjustments**

Injury due to overtightening of the lap belt

- ▶ Automatic tightening of the lap belt may lead to excessive pressure at the contact points of the lap belt.
- ▶ If the lap belt with rewriter fits too snugly, it has to be opened and applied again. Alternatively, the user or an attendant can unlock the belt at the belt reel and loosen it somewhat.

⚠ CAUTION**Improper adjustments**

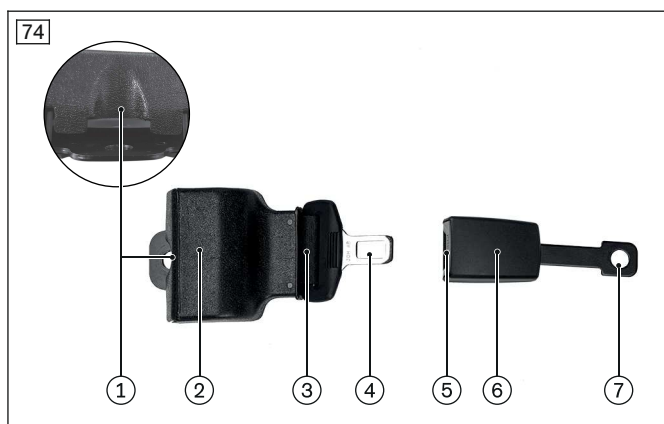
Injury due to excessive tightening of the rewinding belt when using programmable seat functions

- ▶ Changing the position while using the "Active Touch" and "Active Relax" seat functions changes the body intersection. This can cause constriction when switching to a normal seat position. Please check the belt length, with the help of an attendant where required by the circumstances. If necessary, the strap must be loosened first or another strap must be selected.

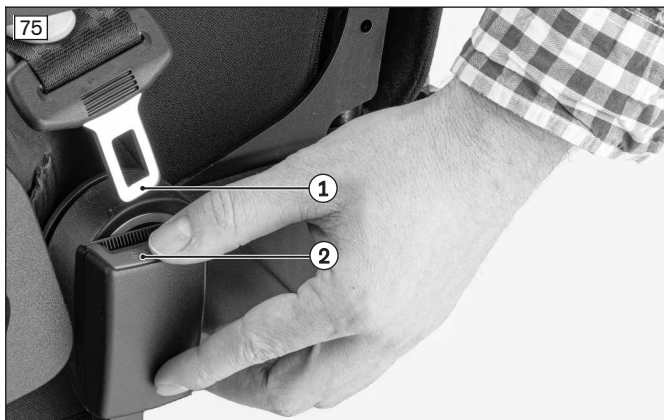
⚠ CAUTION**Medical risks**

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.

**Alignment**

- 1 Rewinding belt unlocking mechanism
- 2 Rewinding belt housing
- 3 Rewinding belt
- 4 Rewinding belt tongue piece
- 5 Buckle unlocking mechanism
- 6 Buckle
- 7 Buckle mounting point

**Applying the lap belt**

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

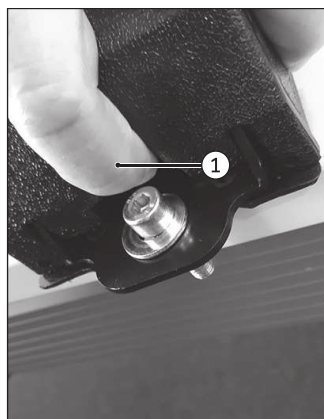
- 1) Hold the rewinding belt (see fig. 74, item 3) by the tongue piece (see fig. 74, item 4) and pass it around the user's body to the buckle (see fig. 74, item 5/6).
- 2) Push the tongue piece into the buckle until you hear the tongue piece click into place (see fig. 75, item 1/2).

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 belt and thigh.

- 3) Pull to check that it is secure.

Opening the lap belt

- 1) Push the unlocking mechanism on the buckle (see fig. 75, item 2).
- 2) Open the buckle and pull out the belt (see fig. 75, item 1/2).



- 3) Allow the belt to retract into the belt reel.

If necessary, loosen the lap belt

The lap belt can be loosened if it is too tight.

- 1) Apply light to moderate pressure to push in the unlocking mechanism of the rewinding belt (see fig. 76, item 1). To do so, reach into the indentation of the housing and push the housing inward.
- 2) The unlocking mechanism releases the rewinder. Now the lap belt can be unrolled and rewound without resistance.
- 3) Pull the lap belt out slightly.
- 4) Release the housing of the rewinder. The rewinding belt is locked again.

Cleaning the belt system

- Always dry clean the belt to protect the rewinder against the ingress of water and therefore against corrosion.
- Carefully wipe the belt straps with a clean, dry, 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.

7.14 Control unit accessories

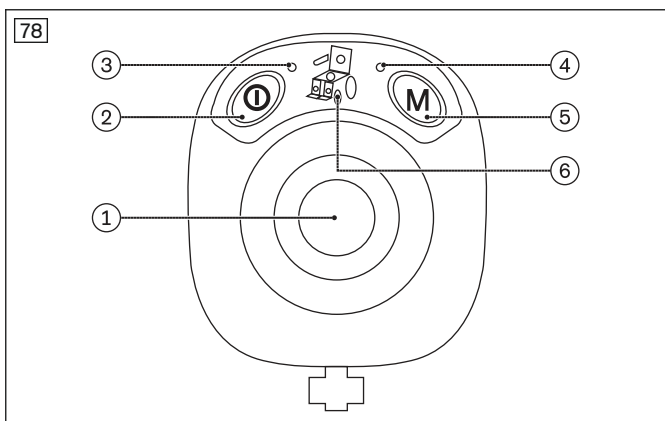
7.14.1 Attendant control



The power wheelchair has been equipped with a separate control panel for attendant operation. The separate control panel is height-adjustable and removable.

Functional overview

The attendant uses the attendant control to operate the driving function and the power seat functions.



Attendant control overview

- 1 Joystick
- 2 [On/off] button
- 3 [Charge level] LED display
- 4 [Mode] LED indicator
- 5 [Mode] button
- 6 [Selected power seat function] LED indicator

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.

[On/off] button

Hand module switched off: the [On/off] button on the attendant control is used to turn the power wheelchair on, activate the drive-away lock and turn the wheelchair off. The attendant control is active.

Hand module switched on: by pressing the [On/off] button on the attendant control, the attendant takes over the control function from the hand module or ICON LCD module. The attendant control is active. By pressing the button again, the attendant returns the control functions to the hand module or ICON LCD module.

When the attendant control is active, the display on the ICON hand module or ICON LCD module shows the following:

Display	Information
	Attendant control active (shown here in driving profile 1)

[Charge level] LED display

INFORMATION

- If the **attendant control/hand module are used in combination**, the battery charge level is also indicated by the display symbols on the LCD screen on the ICON hand module or ICON LCD module.

The LED lights up when the unit is on.

Colour and flash codes provide information on the current battery charge level:

LED	Information
Green is lit	Battery charge level > 70 %
Orange is lit	Battery charge level 30 % – 70 %
Red is lit	Battery charge level < 30 %
Red is flashing	Battery deep discharge Charge as soon as possible
Green is flashing	Battery overvoltage (e.g. after driving downhill) Continue driving slowly
Red/orange/green flashing alternately	Charging process/drive-away lock

[Mode] button

Pressing the button first switches between driving profiles 1 and 2. Pressing the button again switches the control device to the "Seat functions" and "Auxiliary" areas.

[Mode] LED indicator

INFORMATION

- If the **attendant control/hand module are used in combination**, driving profile 1 and errors are indicated by default by the display symbols on the LCD screen on the ICON hand module or the ICON LCD module.

The LED has 3 colour and various flash codes to indicate the statuses of the speed level and system errors:

LED	Information
Green is lit	Driving profile 1
Orange is lit	Driving profile 2
Red is flashing	Error (see page 137)
Off	"Auxiliary" or "Seat functions" area active (see below)

[Selected power seat function] LED indicator

INFORMATION

- If the **attendant control/hand module are used in combination**, the selected seat function is indicated by the display symbols on the LCD screen on the ICON hand module or the ICON LCD module. The [Mode] LED display on the attendant control is off.

The power seat functions are accessed by pressing the [Mode] button.

The currently selected seat function is indicated by the following LEDs:

Display	Information
	Power back support angle adjustment
	Power seat height adjustment
	Power seat tilt
	Power leg support adjustment

Moving the joystick to the right switches between the different seat functions. The relevant function can be extended or retracted by moving the joystick forwards or backwards.

Finally, pressing the [Mode] button activates driving profile 1 or driving profile 2 again.

The corresponding LEDs flash if errors occur (see page 137).

7.14.2 Joystick top



The joystick top enlarges the support surface for the hand, thereby making it easier to operate the input device.

7.14.3 ICON push-button module

INFORMATION

If the power wheelchair was ordered with a memory function, the buttons described below may also be programmed to directly select saved seat adjustment movement patterns (see page 81).

The power wheelchair is equipped with a push-button module.

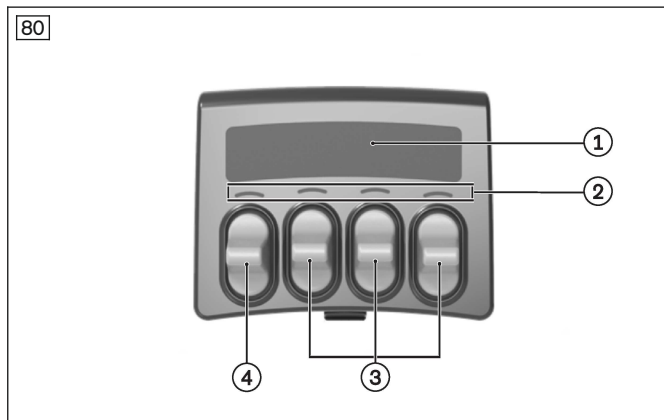
Depending on the programming, the push-button module lets the user operate additional power seat functions or light functions directly during normal driving operation, for example. It is available with flat or rocking buttons (figure shows flat button variant).

One or two functions can be assigned to each of the four buttons (see fig. 80, item 3/4). A button can be designed as a selection button for scrolling to multiple groups with different button functions (see fig. 80, item 4). Scrolling

with this button causes new functions to be displayed for each of the other three buttons. By default, the left button is used to scroll through the sub-functions.

The functions and the sequence of functions on the push-button module can be adapted to the requirements of the user by qualified personnel.

If the control device is in drive mode, the push-button module can be used in parallel.



Push-button module overview

- 1 OLED display (programmed functions)
- 2 LED feedback
- 3 [Function up/down] or [Function on/off] buttons
- 4 Function button or scroll button

OLED display

The symbol for which the corresponding button has been configured appears here. If, for example, a button has been programmed to adjust the height of a seat, the display will show the corresponding symbol.

The display does not display errors or warnings in the system.

Two brightness levels (day/night) can be configured by qualified personnel. The brightness of the display changes depending on the feedback from the light sensor or the programming in the ICON LCD module.

Display examples

Display	Information
	Selection button for scrolling to groups with different button functions [Function up/down]
	Power seat tilt [Function forwards/backwards]
	Power back support angle adjustment [Function forwards/backwards]
	Power leg support adjustment – leg support angle [Function up/down]
	Power leg support adjustment – foot plate height [Function up/down]
	Power seat height adjustment [Function up/down]
	Connected seat functions (example shown: power back support angle adjustment + power leg support adjustment) ¹⁾ [Function up/down]

Display	Information
	Lights [Function on/off]
	Example of two functions with one button: direction indicator left/right [Function on/off]
	Example of two functions with one button: memory function M4/M5 [Function on/off]

¹⁾ Some seat functions are performed by combining multiple actuators. For these seat functions, the screen displays an icon that displays all the actuators for the setting that are actively involved in the seat function.

Display example of a group with button functions

Display	Information
	Combination of the functions described above

Button functions

The buttons can be used differently depending on the function displayed:

- A particular button will execute the displayed function [Function up/down; Function front/back; Function on/off] (see fig. 80, item 3/4). If a button has two functions, two icons are displayed above the button.
 - Rocking buttons:** the relevant seat function is adjusted up/down or forwards/backwards depending on the position of the rocker. Other functions are switched on/off in the same way.
 - Flat buttons:** the relevant seat function is adjusted up/down or forwards/backwards depending on whether the top or bottom end of the button is pressed. Other functions are switched on/off in the same way.
 - Buttons with two functions:** the functions are displayed above and below a slash (e.g. direction indicator left/right). The relevant function is executed depending on whether the top or bottom end of the button is pressed. The relevant function is stopped when the top or bottom end of the button is pressed again.

LED feedback

The LED light above each button shows the driving status based on the position of the seat. This corresponds to the status displayed on the hand module or the LCD module:

LED colour	Meaning
Green	Full driving speed
Yellow	Restricted speed (creep speed)
Red	Full drive-away lock
None	Button is not assigned to any seat function

7.14.4 ICON tray module

7.14.4.1 Safety instructions

WARNING

Improper use in vehicles for transporting persons with reduced mobility

Severe accidental injuries caused by use with untested product combinations

- Remove the product before using the wheelchair in a vehicle for transporting persons with reduced mobility.
- Store the product safely within the vehicle.

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.

⚠ CAUTION**Driving with objects on the tray top**

Injuries due to unsecured objects

- Remove all objects from the tray top prior to travelling.

NOTICE**Improper use**

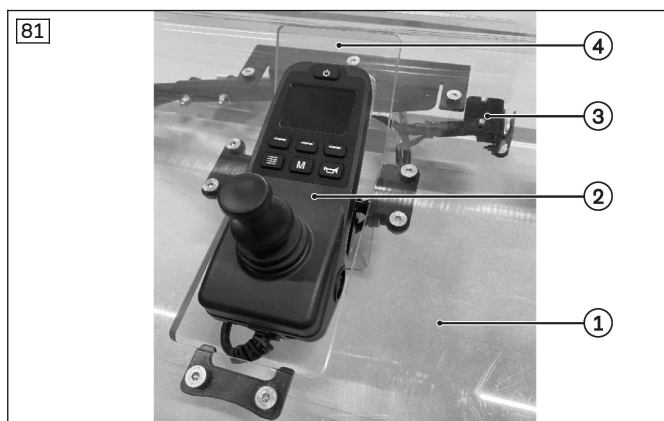
Damage to the product caused by incorrect use

- 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.

7.14.4.2 General

The power wheelchair is equipped with an ICON tray module.

The ICON tray module is used to swivel the integrated hand module on the tray of a power wheelchair.



The mid-tray control device consists of a tray (see fig. 81, item 1) with a wheelchair hand module integrated in the middle (see fig. 81, item 2), as well as a charging receptacle mounted under the tray (see fig. 81, item 3).

When the hand module holder (see fig. 81, item 4) is folded down by hand, the tray surface is flat and the top forms an unbroken surface. When it is folded down, the wheelchair control device automatically locks the driving function.

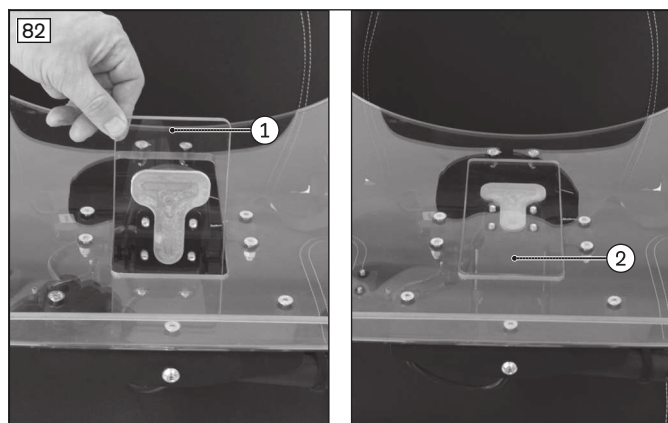
The tray with tray module can be folded to the side for getting in the wheelchair and removed for transport (see page 116).

7.14.4.3 Using the product**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. Observe the safety notices at the beginning of the section.

INFORMATION

- Use the XLR charging receptacle below the tray to charge the battery.
- You can remove the tray for transport if necessary.
 - To do this, disconnect the power connector below the arm support. To disconnect, turn the ring on the connection plug anticlockwise and open the bayonet connector.
 - To close, turn the connection plug clockwise until the bayonet connector engages.



Folding down the hand module

- 1) Grasp the hand module holder (see fig. 82, item 1).
- 2) Fold the hand module down so the tray forms an unbroken surface (see fig. 82, item 2).

7.14.4.4 Cleaning

- 1) Clean the product with warm water and a mild detergent.
- 2) Rinse with clear water and let the product dry.

Important notice regarding cleaning

- Do not use any aggressive cleaners, solvents or hard brushes etc.

7.14.4.5 Maintenance

In order to ensure the safety of the product, it must be maintained for the entire duration of use.

- Check the screw connections for firm fit on a regular basis.
- Have all worn or damaged components replaced promptly.
- Pay particular attention to cracking in the tray top.

7.14.5 ICON Multi switch

The product is equipped with a multi-switch.

The multi-switch is required to be able to connect and operate more than 2 external Piko buttons/switches to the control device. The functions of the Piko buttons/switches connected to the multi-switch can be adapted by qualified personnel if required.

7.14.6 ICON output module

The product is equipped with an output module.

The output module is used to operate external devices via the wheelchair control device. The output module can be used to operate, for example, a valve switch for a catheter bag, a wireless switch for the garage door or an external robot arm. The functions have been configured by qualified personnel according to the needs of the user and can be assigned, for example, to separate buttons or buttons on the ICON push-button module.

The functions of the output module are set individually. The qualified personnel who fitted the wheelchair can provide more information on operating the connected devices.

7.15 Special controls

7.15.1 Safety

⚠ WARNING

Defective safety functions

Severe injuries due to falling, tipping over, collision of the wheelchair

- ▶ Check the proper condition of the on/off button and mode button safety devices prior to every use.
- ▶ Only use the special controls if the on/off button and mode button are functioning.

INFORMATION

Also observe the safety notices in the section "Driving functions" (see page 46).

INFORMATION

Driving the power wheelchair in Latched mode requires increased attention by the user. Ottobock recommends special training on using the special control in Latched mode.

INFORMATION

The controls of the power wheelchair are protected according to protective system IPX4 and can thus be used in inclement weather (e.g. rain). The controls are approved for outdoor and indoor use and meet the requirements for climate and splash water.

7.15.2 General**7.15.2.1 Switching on**

Depending on the configuration, the special control device can be switched on or off using the following methods:

- [on/off] button on ICON hand module
- [on/off] button on ICON LCD module
- Separate [on/off] button

7.15.2.2 ICON LCD module

The joystick control has been connected to the ICON LCD module. Further information: see page 28.

The button control has been connected to the ICON LCD module. Further information: see page 28.

7.15.3 Joystick controls**⚠ CAUTION****Risk of uncontrolled driving behaviour**

Risk of injury due to accidental joystick movements

- ▶ The movement of the joystick controls the speed and direction. Special joysticks have significantly reduced adjustment tracks and forces.
- ▶ Before regular everyday use, practise using the controls on an open stretch of terrain.

7.15.3.1 Product description

The joystick control enables users who do not have sufficient hand motor skills to move the standard joystick on the control panel to control the power wheelchair.

The installed special joystick can be operated with individually adapted movement ranges and forces.

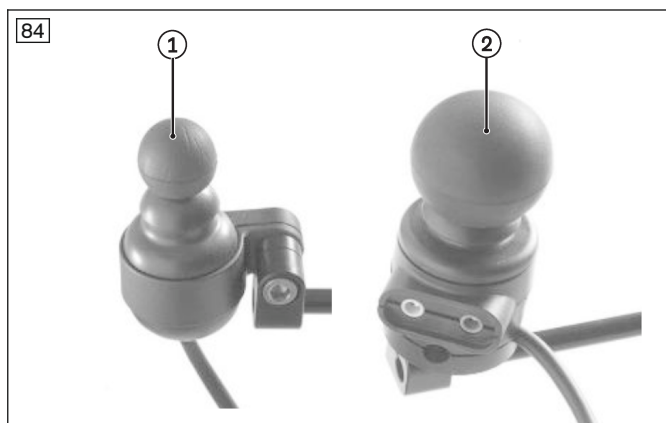
Mini joystick for special control device functions

The power wheelchair has been equipped with a calibratable mini joystick for special control functions.

It can be operated with little force and – depending on the installation situation – by hand or chin, for example. Various joystick attachments with different degrees of grip and stiffness are available for the mini joystick.

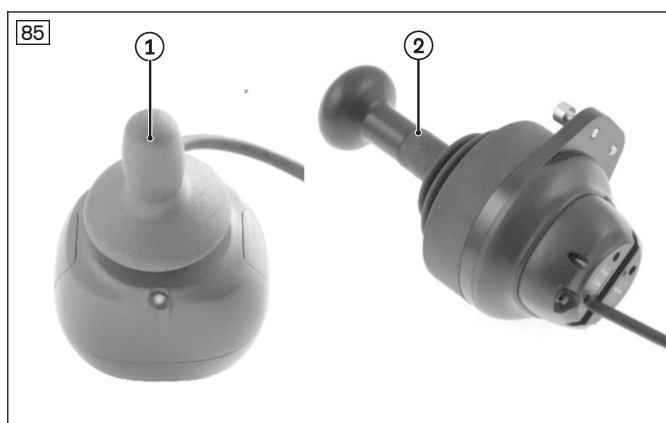
Joystick for special control device functions

The power wheelchair has been equipped with one of the following joysticks for special control device functions:



- **mo-Vis micro joystick:** very small joystick, minimum force required (approx. 10 g), operated using fingers or chin, for example (see fig. 84, item 1).
- **mo-Vis Multi joystick:** smaller joystick, limited force required (approx. 50 g), operated using fingers or chin, for example (see fig. 84, item 2).

The power wheelchair has been equipped with one of the following joysticks for special control device functions:



- **mo-Vis Allround light joystick:** medium joystick, moderate force required (approx. 120 g, see fig. 85, item 1).
- **mo-Vis Allround joystick:** medium joystick, normal force required (approx. 250 g). Developed for comprehensive use, this joystick is suitable for most wheelchair users. It can be used as a standard joystick, chin joystick or joystick for attendants (see fig. 85, item 1).
- **mo-Vis Heavy Duty joystick:** large joystick, very high level of force required (approx. 650 g). Operated by hand or foot. Developed for users who operate their joystick with a high level of force (see fig. 85, item 2).

Joystick on a chin swivel arm

The joystick has been mounted on a chin swivel arm. This allows the power wheelchair to be controlled using the chin.

The qualified personnel programmed the movement ranges according to the specific abilities of the user.

Joystick on the tray

The joystick was mounted on a holder for the tray. This makes the joystick readily accessible for the user.

The qualified personnel programmed the movement ranges according to the specific abilities of the user.

Joystick on the arm support



The joystick has been mounted on the forearm support (see fig. 86, left). This makes the joystick readily accessible for the user.

Depending on the model, one or two separate further buttons (on/off button, mode button) have been installed next to the joystick (see fig. 86, right).

The qualified personnel have programmed the movement ranges according to the specific abilities of the user.

Joystick without factory holder

The joystick has been installed in an individual position by the qualified personnel. The position has been chosen to make the joystick easy for the user to reach and operate it.

The qualified personnel have programmed the movement ranges according to the specific abilities of the user.

mo-Vis chest/shoulder bracket for holding a joystick

A mo-Vis chest-shoulder bracket for attaching the joystick is included with the product. This allows the power wheelchair to be controlled using the chin. In addition, a holder for the joystick may have been attached to the side or rear of the wheelchair by qualified personnel. The joystick can be put on this holder when it is not needed.

The qualified personnel have programmed the movement ranges according to the specific abilities of the user. Further information on use of the chest-shoulder bracket and the separate holder can be found in the enclosed instructions for use.

Piko buttons or push buttons

CAUTION

Incorrect positioning of the emergency stop

Risk of injury due to inaccessible external button

- Position the external Piko button/push button with the emergency stop function in such a way that it is easy for the user to reach at any time, but will not be pressed accidentally (through uncontrolled motions while driving).

The joystick control is normally combined with one or two freely positionable Piko buttons.

Alternatively, the joystick control can be combined with one or two freely positionable push buttons. Ottobock offers the option of integrating the push buttons directly into the joystick attachment.

Variant with a Piko button/push button

Piko button 1 function; push button 1 function	Variant 1: on/off button for the control device; emergency stop function when actuated while driving Variant 2: mode button; briefly pressing it (approx. 1 s) retrieves the available driving profiles and operating modes (e.g. "Seat functions" section) of the control system in succession (dependent on programming and connected devices); Only with programmed sequence mode: scrolling through the menu items
1-button control function	In the driving profile: controls the speed and driving direction In the "Seat functions" section: adjusts the seat option; switches to the next seat option In an operating mode: navigates/operates the mode; scrolls through the menu items

Variant with two Piko buttons/push buttons

Piko button 1 function; push button 1 function	On/off button for the control device; emergency stop function when actuated while driving
Piko button 2 function; push button 2 function	Mode button; briefly pressing it (approx. 1 s) retrieves the available driving profiles and operating modes (e.g. "Seat functions" section) of the control system in succession (dependent on programming and connected devices)
1-button control function	In the driving profile: controls the speed and driving direction In the "Seat functions" section: adjusts the seat option; switches to the next seat option In an operating mode: navigates/operates the mode; scrolls through the menu items

Using additional buttons

Due to the variable configuration options, qualified personnel will provide instructions on the specific functions of additional buttons.

Special features of the supplied joystick control include:

- Intuitive operation
- Simple menu navigation
- Individual settings for amplification
- Modular concept for individual adaptation

- Service-friendliness thanks to simple design
- Adjustment of speed, acceleration and deceleration values to the user's individual needs.

Detailed information regarding the technical data, configuration and assembly of the individual joysticks can be found in the respective user and installation handbook provided with the joystick.

7.15.3.2 Drive mode

Switching on joystick control

The joystick control can be turned on with the [On/off] button for driving. The control device switches off automatically if it is not used for a set period of time. The switch-off time can be adjusted.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is activated; the LCD module shows the defined entry point, e.g. the driving profile (see page 28) Hand module is deactivated (depending on configuration, depending on programming of the priority circuit)

Switching off joystick control

Joystick control must always be switched off when the driving and menu functions are not needed. This prevents uncontrolled movement of the wheelchair due to unintentional activation of the joystick control.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is deactivated Display on the LCD module switches off

EMERGENCY STOP function

The [On/off] button serves as an EMERGENCY STOP in drive mode.

Driving commands

The LCD module shows the selected entry point, e.g. drive mode, after switching on. The driving profile or speed level can be selected using the menu navigation.

To drive, push the joystick in the desired direction of travel. The speed is increased while the user pushes the joystick in the selected direction, or until the defined maximum speed has been reached.

The following four directions of movement of the joystick are used to control the wheelchair:

Action	Response
Forwards	The wheelchair drives forwards
Backwards	The wheelchair drives backwards
Right	The wheelchair drives to the right according to the selected angle
Left	The wheelchair drives to the left according to the selected angle

The wheelchair can be braked using the following methods:

Action	Response
No command, joystick no longer being operated (only when not set to latch driving mode)	Automatic halt
Push joystick in the opposite direction	Quick stop CAUTION! During this manoeuvre, the braking distance is shorter and the braking acceleration is higher.

The speed decreases until the wheelchair comes to a halt. When the joystick is activated again, the wheelchair continues in the desired direction.

INFORMATION

The mechanical brake is automatically activated and prevents the wheelchair from rolling away when the wheelchair comes to a halt.

7.15.3.3 Latched drive mode

In latch driving mode, the driving function is maintained without the user having to continuously press the joystick control. This relieves strain on the user when driving longer distances. The joystick control only needs to be pressed until the desired speed has been reached. The wheelchair then drives at this speed until the joystick control is pressed again. Steering corrections can be made at any time while driving.

Further information on latch driving mode: see page 53.

The braking process is performed as described for drive mode: see page 101.

7.15.3.4 Home screen

You can switch from a driving profile to the home screen and back with a long press on the separate mode button (standard design) **during standstill**. Here the user can control the seat functions or use additional functions, such as adjusting settings.

Switching **from a driving profile to the seat functions with the [Mode] button** while driving causes an emergency stop of the wheelchair. The qualified personnel can also configure whether each switch between the driving profiles leads to a stop at first. The qualified personnel who fitted the wheelchair can provide more information.

The joystick is used to navigate within a menu. The menu navigation is displayed on the LCD module.

Action	In a user menu*
Forwards	Scroll up in list
Backwards	Scroll down in list
To the right	Select menu item
To the left	Return or no function (depending on programming)

*) A Piko button/push button can also be provided for menu selection depending on programming. The menu items can be scrolled through here by pressing the corresponding Piko button/push button.

7.15.4 1-button control (scan function)

7.15.4.1 Product description

With the button control, users who do not have sufficient hand motor skills to move the standard joystick on the control panel are able to control the power wheelchair. Buttons are available in different colours and sizes for button control, making them easy to operate and distinguish.

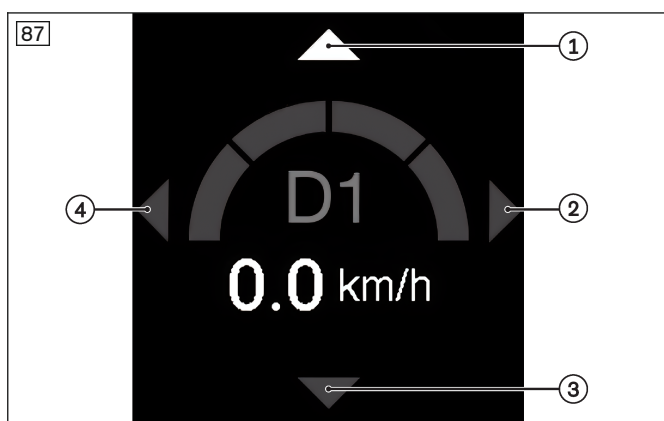
The button control is equipped with 1 button (scan function, also called scan-light control).

All functions, including the driving function, can be controlled using this button. The driving directions display and the menu display are automatically moved through at a configurable speed. Pressing the button implements the currently displayed driving direction or function.

As a rule, the button is operated by hand by the user.

7.15.4.2 Drive mode

The sampling rate in Drive mode can be programmed by the qualified personnel to adjust to the user's abilities.



The symbols shown on the left appear on the display after the LCD module is switched on.

The behaviour of the wheelchair in response to operator actions depends on whether the control device is configured with or without latch driving mode.

No latch driving mode: when the button is held down, the wheelchair drives in the corresponding direction until the button is released, displaying one of the arrow symbols shown on the left (see fig. 87, items 1 – 4).

With latch driving mode: see following section.

If the button is pressed when the “Mode” symbol appears, the menus for the available driving profiles and operating modes of the control system are accessed in succession (dependent on programming and connected devices)

Switching on button control

Button control can be switched on for driving either by pressing the button or on the LCD display.

Action	Response
Press the button (depending on programming: either by pressing once or by a double command)	Button control is activated; the LCD module shows the defined entry point, usually the continuous direction symbols
	Hand module is deactivated (depending on configuration, depending on programming of the priority circuit)

Switching off button control

Button control must always be switched off when the driving and menu functions are not needed. This prevents uncontrolled movement of the wheelchair due to unintentional activation of the sequential indicator control. The control device will switch off automatically after 20 minutes.

Action	Response
Select the programmed menu item to switch off ("Power off"), then press the button	Button control is deactivated
	Display on the LCD module switches off

Driving commands

The LCD module shows the selected entry point, usually the continuous direction symbols, after switching on. The sequential indicator constantly switches between the individual arrows (see fig. 87, items 1 – 4).

The program automatically moves through the driving directions display and the menu display at a speed that can be configured by qualified personnel. Pressing the button implements the currently displayed driving direction or function.

4-way sensing: the following four directions of movement are used to control the wheelchair:

Sequential indicator driving command	Response
Top sequential indicator	The wheelchair drives forwards while the button is held
Left sequential indicator	The wheelchair drives to the left while the button is held
Bottom sequential indicator	The wheelchair drives backwards while the button is held
Right sequential indicator	The wheelchair drives to the right while the button is held
Middle sequential indicator	The wheelchair comes to a halt while driving, switches to menu mode

8-way sensing: the following eight directions of movement are used to control the wheelchair:

Sequential indicator driving command	Response
Top sequential indicator	The wheelchair drives forwards while the button is held
Top left sequential indicator	The wheelchair drives forwards and to the left while the button is held
Left sequential indicator	The wheelchair drives to the left while the button is held
Bottom left sequential indicator	The wheelchair drives backwards and to the left while the button is held
Bottom sequential indicator	The wheelchair drives backwards while the button is held
Bottom right sequential indicator	The wheelchair drives backwards and to the right while the button is held
Right sequential indicator	The wheelchair drives to the right while the button is held
Top right sequential indicator	The wheelchair drives forwards and to the right while the button is held
Middle sequential indicator	The wheelchair comes to a halt while driving, switches to menu mode

Brakes

The wheelchair can be braked using the following methods:

Action	Response
No command, button no longer being pressed (only when not set to latch driving mode)	Automatic halt

Action	Response
Drive command for the opposite direction (only possible when set to latch driving mode)	Speed is reduced

The wheelchair resumes driving in the desired direction when the corresponding drive command is entered again.

INFORMATION

The mechanical brake is automatically activated and prevents the wheelchair from rolling away when the wheelchair comes to a halt.

7.15.4.3 Latched drive mode

In latch driving mode, the driving function is maintained without the user having to continuously press the button. This relieves strain on the user when driving longer distances. The button only needs to be pressed until the desired speed has been reached. The wheelchair then drives at this speed until the button is pressed again. Steering corrections can be made at any time while driving.

The following operating mode can be programmed for latch driving mode by the qualified personnel:

- “1-Step”: driving in 1-step mode means that the latched speed is increased (when arrow is pointing in the direction of travel) or reduced (when arrow is pointing in the opposite direction) by briefly pressing the button.

Further information on latch driving mode: see page 53.

The braking process is performed as described for drive mode: see page 102.

7.15.4.4 Home screen

Switching from the driving profile to the home screen by pressing the button is only possible if the Mode symbol is shown on the LCD module.

Function (standard setting): when there is a long press on the button, the control device switches from the driving profile to the home screen. Here the user can control the seat functions or use additional functions, such as adjusting settings.

In standard programming, the program first toggles through the individual seat functions. The “Exit” option is then displayed, which can be used to return to the driving profile. If the button is pressed again while a seat function is displayed, the program moves through the operating options for the specific seat function, e.g. “Up”, “Down” or “Exit”. The corresponding action can also be triggered by pressing the button at this level.

Pressing the button **while driving** triggers an emergency stop.

INFORMATION

The time each function is displayed by the LCD module can be programmed by the qualified personnel. Have the qualified personnel instruct you in the specific function of the button.

7.15.5 3-button control

7.15.5.1 Product description

With the button control, users who do not have sufficient hand motor skills to move the standard joystick on the control panel are able to control the power wheelchair. Buttons are available in different colours and sizes for button control, making them easy to operate and distinguish.

The button control is equipped with 3 buttons.

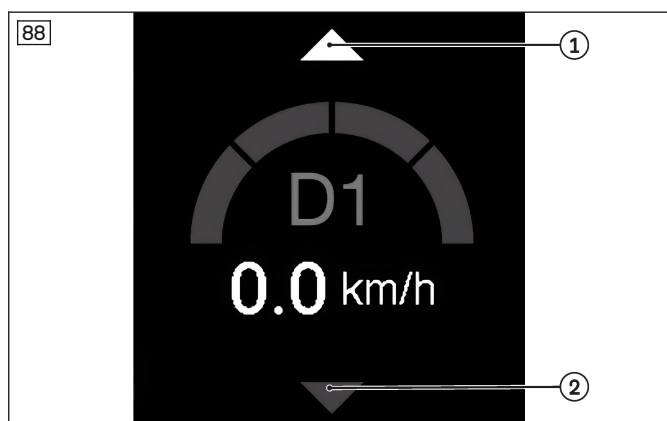
These buttons are used with the following functions:

- Forward/reverse
- Right
- Left

The buttons may be mounted on the tray, for example, and are operated by hand by the user.

Alternatively, the buttons can be integrated into the head support, in which case they are operated using the user's head. The head control is a special supplementary function of the special control (see page 111).

7.15.5.2 Drive mode



The symbol on the left appears after the LCD module is switched on.

The behaviour of the wheelchair in response to operator actions depends on whether the control device is configured with or without latch driving mode.

No latch driving mode: when a button is held down, the wheelchair drives in the corresponding direction until the button is released. Two of the buttons are used to drive to the left/right (not displayed on the LCD module). The third button drives the wheelchair either forwards or backwards, depending on the active display (see fig. 88, item 1/2).

With latch driving mode: see following section.

Switching on button control

Button control can be switched on for driving either with the [On/off] button or alternatively on the LCD display. The control device switches off automatically if it is not used for a set period of time. The switch-off time can be adjusted.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is activated; the LCD module shows the defined entry point, e.g. drive mode
	Hand module is deactivated (depending on configuration, depending on programming of the priority circuit)

Switching off button control

Button control can be switched off either with the on/off button or on the LCD display. Button control must always be switched off when the driving and menu functions are not needed. This prevents uncontrolled movement of the wheelchair due to unintentional activation of the button control.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is deactivated
	Display on the LCD module switches off

EMERGENCY STOP function

The [On/off] button serves as an EMERGENCY STOP in drive mode.

Driving commands

The LCD module shows the selected entry point, e.g. drive mode, after switching on. The driving profile or speed level can be selected using the menu navigation.

Press the appropriately programmed button to drive. The speed increases while the user presses the button, or until the defined maximum speed has been reached.

The following three buttons are used to control the wheelchair:

Button	Drive mode
Forwards/backwards*	The wheelchair drives forwards
	The wheelchair drives backwards
Right	The wheelchair drives to the right
Left	The wheelchair drives to the left

* Depending on programming, switching between forwards and backwards can be carried out by simply pressing the user switch or through an automatic change in direction by pressing the forwards/backwards button (see below).

Switching between driving forwards and backwards using separate mode button (if available)

Pressing once switches the direction for the forwards/backwards button. You can switch from drive mode to the user menu and back by double-clicking the separate mode button **during standstill**.

Pressing the separate mode button **while driving** triggers an emergency stop.

Switching between driving forwards and backwards using automatic change in direction by pressing the forwards/backwards button

After pressing and releasing the forwards/backwards button, the command is automatically interpreted in the opposite direction the next time the button is activated. This sequence must be completed within a specified period of time (typically 2 seconds; can be changed using programming). If the sequence is not finished within this period, activation of the button is interpreted as a driving command in the previously set direction (no change in direction).

You can switch from drive mode to the user menu and back by briefly pressing the external mode button (approx. 1 s) **during standstill**.

Pressing the separate mode button **while driving** triggers an emergency stop.

Brakes

The wheelchair can be braked using the following methods:

Action	Response
No command, button is no longer pressed (only when setting without latch driving mode)	Automatic halt
Drive command for the opposite direction (only possible when set to latch driving mode)	Speed is reduced

The wheelchair resumes driving in the desired direction when the corresponding drive command is entered again.

INFORMATION

The mechanical brake is automatically activated and prevents the wheelchair from rolling away when the wheelchair comes to a halt.

7.15.5.3 Latched drive mode

In latch driving mode, the driving function is maintained without the user having to continuously press the button. This relieves strain on the user when driving longer distances. The button only needs to be pressed until the desired speed has been reached. The wheelchair then drives at this speed until the button is pressed again. Steering corrections can be made at any time while driving.

The following operating mode can be programmed for latch driving mode by the qualified personnel:

- “1-Step”: driving in 1-step mode means that the latched speed is increased or reduced by briefly pressing the button.

Further information on latch driving mode: see page 53.

The braking process is performed as described for drive mode: see page 105.

7.15.5.4 Home screen

You can switch from a driving profile to the home screen and back by briefly pressing the separate mode button (standard design) **during standstill**. Here the user can control the seat functions or use additional functions, such as adjusting settings.

Pressing the separate mode button **while driving** triggers an emergency stop.

The Piko buttons/push buttons are used to navigate within a menu. The menu navigation is displayed on the LCD module.

3 buttons	In a user menu*
Forwards/backwards**)	Scroll up in list
	Scroll down in list
Right	Select menu item
Left	Back

*) **Sequence mode** can also be set for menu selection depending on programming. The menu items can be scrolled through here by pressing the separate user switch.

**) Depending on programming, switching between forwards and backwards can be carried out by simply pressing the separate mode button or through an automatic change in direction by pressing the forwards/backwards button.

7.15.5.5 Separate Piko buttons/push buttons (user switch)

INFORMATION

Due to the variable configuration options, qualified personnel will provide instructions on the specific functions of external Piko buttons/push buttons.

When the LCD module is used as part of the special control, the qualified personnel may also connect separate Piko buttons/push buttons. These enable direct access to control functions.

Using with a mode button (standard use)

Function (standard setting): when the separate mode button is pressed, the control device switches from the driving profile to the home screen. Here the user can control the seat functions or use additional functions.

In standard programming, the program first toggles through the individual seat functions. The “Exit” option is then displayed, which can be used to return to drive mode. If the separate mode button is pressed again while a seat function is displayed, the program moves through the operating options for the specific seat function, i.e. “Up”, “Down” or “Exit”. The corresponding action can also be triggered by pressing the user switch at this level.

Pressing the separate mode button **while driving** triggers an emergency stop.

INFORMATION

The standard setting can be adapted to the user's abilities by the qualified personnel through technical programming. Have the qualified personnel instruct you in the specific function of the user switch.

Using with additional separate Piko buttons/push buttons

The use and functional layout of additional Piko buttons/push buttons is individually determined by qualified personnel in coordination with the user or attendant.

Operation without separate Piko buttons/push buttons

The special controls assembled with the LCD module can also be implemented without Piko buttons/push buttons. This can be helpful if the user is unable to operate a separate Piko button/push button.

In this case the control device – depending on the programming – starts in the user menu, for example. If the “Exit” option is displayed, this can be used to return to drive mode.

7.15.6 4-button control

7.15.6.1 Product description

With the button control, users who do not have sufficient hand motor skills to move the standard joystick on the control panel are able to control the power wheelchair. Buttons are available in different colours and sizes for button control, making them easy to operate and distinguish.

The button control is equipped with 4 buttons.

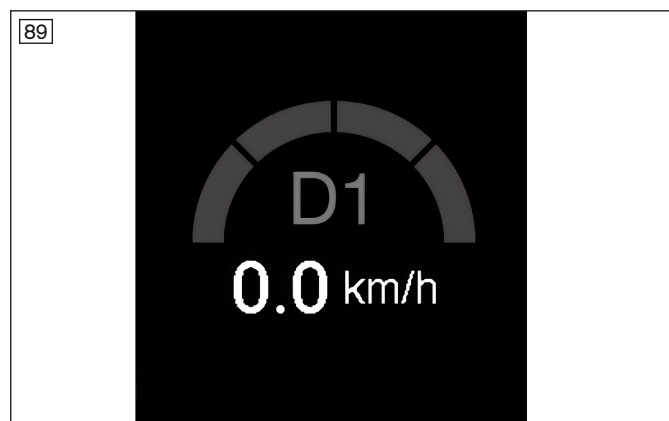
These buttons are used with the following functions:

- Forward
- Back
- Right
- Left

The buttons may be mounted on the tray, for example, and are operated by hand by the user.

Alternatively, the buttons can be integrated into the head support, in which case they are operated using the user's head. The head control is a special supplementary function of the special control (see page 111).

7.15.6.2 Drive mode



The symbol on the left appears after the LCD module is switched on.

The behaviour of the wheelchair in response to operator actions depends on whether the control device is configured with or without latch driving mode.

No latch driving mode: when a button is held down, the wheelchair drives in the corresponding direction until the button is released.

With latch driving mode: see following section.

Switching on button control

Button control can be switched on for driving either with the [On/off] button or on the LCD display. The control device switches off automatically if it is not used for a set period of time. The switch-off time can be adjusted.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is activated; the LCD module shows the defined entry point, e.g. drive mode
	Hand module is deactivated (depending on configuration, depending on programming of the priority circuit)

Switching off button control

Button control can be switched off either with the on/off button or on the LCD display. Button control must always be switched off when the driving and menu functions are not needed. This prevents uncontrolled movement of the wheelchair due to unintentional activation of the button control.

Action	Response
Press the [On/off] button for 2 to 3 s	Control device is deactivated
	Display on the LCD module switches off

EMERGENCY STOP function

The [On/off] button serves as an EMERGENCY STOP in drive mode.

Driving commands

The LCD module shows the selected entry point, e.g. drive mode, after switching on. The driving profile or speed level can be selected using the menu navigation.

Press the appropriately programmed button to drive. The speed is increased while the user presses the button, or until the defined maximum speed has been reached.

The following four buttons are used to control the wheelchair:

Button	Drive mode
Forwards	The wheelchair drives forwards
Backwards	The wheelchair drives backwards
Right	The wheelchair drives to the right
Left	The wheelchair drives to the left

Brakes

The wheelchair can be braked using the following methods:

Action	Response
No command, button is no longer pressed (only when setting without latch driving mode)	Automatic halt
Drive command for the opposite direction (only possible when set to latch driving mode)	Speed is reduced

The wheelchair resumes driving in the desired direction when the corresponding drive command is entered again.

INFORMATION

The mechanical brake is automatically activated and prevents the wheelchair from rolling away when the wheelchair comes to a halt.

7.15.6.3 Latched drive mode

In latch driving mode, the driving function is maintained without the user having to continuously press the button. This relieves strain on the user when driving longer distances. The button only needs to be pressed until the desired speed has been reached. The wheelchair then drives at this speed until the button is pressed again. Steering corrections can be made at any time while driving.

The following operating mode can be programmed for latch driving mode by the qualified personnel:

- “1-Step”: driving in 1-step mode means that the latched speed is increased or reduced by briefly pressing the button.

Further information on latch driving mode: see page 53.

The braking process is performed as described for drive mode: see page 107.

7.15.6.4 Home screen

You can switch from a driving profile to the home screen and back by briefly pressing the separate mode button (standard design) **during standstill**. Here the user can control the seat functions or use additional functions, such as adjusting settings.

Pressing the separate mode button **while driving** triggers an emergency stop.

The Piko buttons/push buttons are used to navigate within a menu. The menu navigation is displayed on the LCD module.

4 buttons	In a user menu*
Forwards	Scroll up in list
Back	Scroll down in list
Right	Select menu item
Left	Return or no function (depending on programming)

*) **Sequence mode** can also be set for menu selection depending on programming. The menu items can be scrolled through here by pressing the separate mode button.

7.15.6.5 Separate Piko buttons/push buttons

INFORMATION

Due to the variable configuration options, qualified personnel will provide instructions on the specific functions of external Piko buttons/push buttons.

When the LCD module is used as part of the special control, the qualified personnel may also connect separate Piko buttons/push buttons. These enable direct access to control functions.

Using with a mode button (standard use)

Function (standard setting): when the separate mode button is pressed, the control device switches from the driving profile to the home screen. Here the user can control the seat functions or use additional functions.

In standard programming, the program first toggles through the individual seat functions. The “Exit” option is then displayed, which can be used to return to drive mode. If the separate mode button is pressed again while a seat function is displayed, the program moves through the operating options for the specific seat function, i.e. “Up”, “Down” or “Exit”. The corresponding action can also be triggered by pressing the user switch at this level.

Pressing the separate mode button **while driving** triggers an emergency stop.

INFORMATION

The standard setting can be adapted to the user's abilities by the qualified personnel through technical programming. Have the qualified personnel instruct you in the specific function of the user switch.

Using with additional separate Piko buttons/push buttons

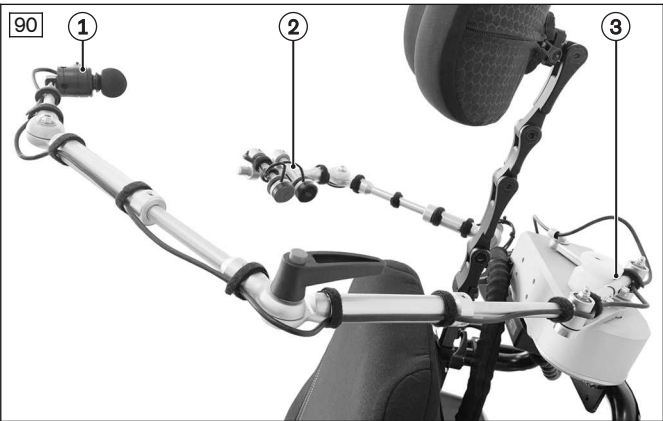
The use and functional layout of additional Piko buttons/push buttons is individually determined by qualified personnel in coordination with the user or attendant.

Operation without separate Piko buttons/push buttons

The special controls assembled with the LCD module can also be implemented without Piko buttons/push buttons. This can be helpful if the user is unable to operate a separate Piko button/push button.

In this case the control device – depending on the programming – starts in the user menu, for example. If the “Exit” option is displayed, this can be used to return to drive mode.

7.15.7 Swivel arm



The installed swivel arm offers the option of power-swivelling the special control elements to a passive position for getting in and out as well as to an active position for controlling the wheelchair. The swivel arm is operated with a multifunction switch.

- 1. Special control elements (e.g. joystick)
- 2. Multifunction switch (e.g. 2 Piko buttons or a satellite switch)
- 3. Swivel unit

Swivel arm control via satellite switch

The multifunction switch to operate the swivel arm is configured as a satellite switch.

The satellite switch is mounted on the right or left side.

The satellite switch has the following functions:

Activating the satellite switch	Satellite switch	Function
	Raise	Swivel in
	Down	Swivel out
	Move towards operator	On/off, EMERGENCY STOP
	Move away from operator	Mode function

The functions are stored in the standard programming as follows (special programming per customer request possible).

- When the satellite switch is moved upwards, the swivel arm with the special control elements is swung into the active position to control the wheelchair.
- When the satellite switch is moved downwards, the swivel arm with the special control elements is swung into the passive position for getting in and out.
- A toggle switch is located on the swivel unit for operation of the swivel arm by an attendant. The symbols on the toggle switch for swivelling in and out are the same as on the satellite switch.

Swivel arm operation via 2 Piko buttons

The multi-function switch to operate the swivel arm consists of 2 separate Piko buttons.

The 2 Piko buttons are installed on a holder on the right or left side.

The functional layout of the Piko buttons is individually determined by qualified personnel in coordination with the user or attendant. One way to allocate functions is e.g.:

Operating the Piko buttons	Piko buttons	Function
	1. Briefly press Piko button	Mode function
	1. Press Piko button long	On/off, EMERGENCY STOP
	2. Press Piko button (short or long)	Swivel function: • The swivel operation starts with the first pressure. • The swivel operation stops when pressed again. • The swivel operation stops automatically in the end positions. • The swivel direction switches automatically after a stop.

A toggle switch is located on the swivel unit for operation of the swivel arm by an attendant.

7.15.8 Head control

A head control is a special function that complements a special button or joystick control. The input devices (e.g. buttons) are mounted in the area of the head. The user can operate the driving and seat functions by moving the head.

When the back support is set far back, the weight of the head can rest on the rear input device. It can be strenuous for the user to lift their head forward from this position in order to set the back support forward again. To avoid this situation, in head controls the “backwards” input command is locked from a certain back support angle. This also prevents the back support from being inadvertently adjusted even further back.

A head control is not a product ordering option, but it may be programmed for the special control ordered by the qualified personnel. The qualified personnel that fitted the special control can provide more information about operation.

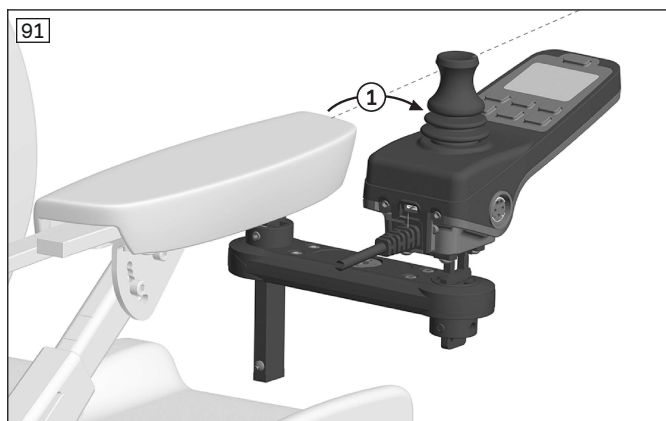
Automatic switch-off time

If the control device is not operated for some time, it automatically switches to sleep mode (see page 49). To exit sleep mode with a head control, a **left-right-left command** must be issued by default. Sleep mode can be adjusted or deactivated by qualified personnel if required.

7.16 Additional options

7.16.1 Holder for hand module

The holder can be swung away in parallel. This makes it possible to drive the wheelchair under a table or closer to an object. The holder can be rotated up to the arm support.



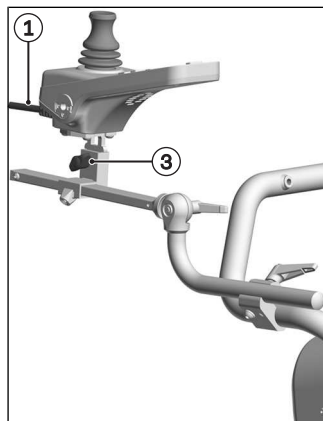
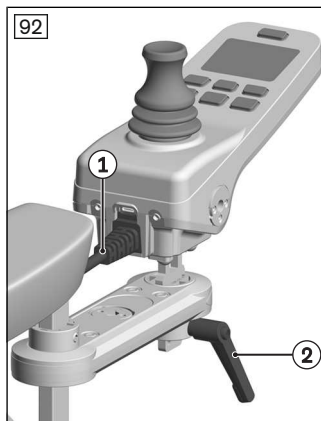
Swivelling away the hand module holder

- 1) Apply some pressure to push the hand module holder to the side.
→ The pivot element is released.
- 2) Swivel the hand module holder away to the side.

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

Module with plug-in holder

If required, the hand module can be removed from the arm support and attached to a holder on the back support. This allows an attendant to use the hand module to control the wheelchair.



Changing the position of the hand module

- 1) Switch off the control device.
- 2) Disconnect the cable of the hand module from the cable extension (see fig. 92, item 1). Loosen any cable attachments if necessary.
- 3) Loosen the clamping lever (see fig. 92, item 2) or the wing screw (see fig. 92, item 3) on the respective holder.
- 4) Pull the hand module upwards out of the holder and insert it into the other holder.
- 5) Tighten the clamping lever (see fig. 92, item 2) or the wing screw (see fig. 92, item 3) on the respective holder.
- 6) Route the cable of the hand module along the holder and wheelchair using suitable cable attachments (see fig. 92, item 1).

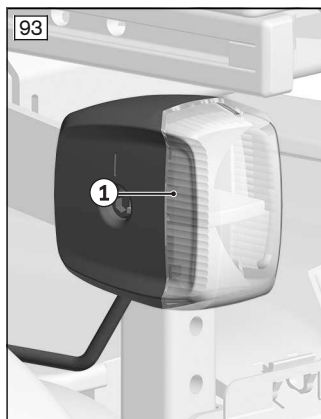
NOTICE! Make sure that no components collide and that the cable is not stretched or pinched, e.g. when adjusting the back support angle.

- 7) Connect the cable of the hand module to a suitable, free cable extension.
- 8) Switch on the control device and check the function of the hand module.

7.16.2 Lighting for road traffic

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

The light, the right and left direction indicators and the warning flashers are operated via the hand module.



The front lighting consists of two LED headlights with integrated LED direction indicators (see fig. 93, item 1). The rear lighting consists of two LED rear lights with integrated direction indicators.

To prevent damage when manoeuvring in confined spaces, the lighting is magnetically attached to the wheelchair.

If the lighting has become disconnected from the holder, it can be simply reinserted in its previous position (see fig. 93, item 2).

When connecting the lights, make sure there are no foreign objects on the magnets.

The lighting angle is secured by latches.

7.16.3 Belts/belt systems

The following instructions for adjustment and use apply to upper body harnesses and vests as well as chest/shoulder straps.

7.16.3.1 Adaptation

CAUTION

Improper adjustments

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

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

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

Positioning the user in the seat

- Place the user in an upright, 90° seated position (if physiologically possible).
- Ensure that the back is up against the back support pad (if physiologically possible).
- **Applies only to upper body harnesses/vests, harnesses for the upper body:**
 - Note the correct height adjustment of the back support on the product. The back support height must be level with the shoulders.
 - The belt system is intended to support the area of the upper body (sternum) from the front. The upper and lower harness straps have to be adjusted as needed.
 - Ensure that the positioning system is not too close to the throat. Otherwise, the upper harness straps have to be readjusted.

Possible positioning errors

- The user's hips are not secured with a separate lap belt.
- If the positioning system is too loose, the user can shift forwards/slide down.
- The positioning system collides with devices, accessories or supply hoses during installation and adjustment, restricting their functionality.
- **Applies only to upper body harnesses/vests, harnesses for the upper body:**
 - The positioning system is too close to the throat, endangering the user.
 - The positioning system makes contact with the user in the area of the soft tissues of the abdomen (too low).

Adjusting the belt length

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

7.16.3.2 Use

WARNING

Incorrect application

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

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

⚠ CAUTION**Incorrect application**

Risk of pressure points, constriction due to user error

- ▶ **Applies only to upper body harnesses/vests, harnesses for the upper body:** Follow the positioning instructions. Ensure that the belt system lies against the chest evenly on both sides and is not too tight.
- ▶ **Applies only to upper body harnesses/vests, harnesses for the upper body:** Ensure that the belt system supports the area of the upper body from the front. The belt system has to be applied/positioned so that the neck and area of the throat remain free at all times.
- ▶ **Applies to chest/shoulder positioning aids on the back support:** Make sure that the chest/shoulder positioning aids on the back support are attached only to parts that move with the back support as it is adjusted (power length adjustment). If the lower section of a chest/shoulder positioning aid is attached to the arm supports or seat plates, adjusting the length adjustment actuator may result in crushing or strangulation due to belt shortening.

⚠ CAUTION**Improper use**

Falls, user falling out due to improper use

- ▶ Only open the belt system and the applied lap belt when the user is ready to get out of the product.
- ▶ Do not leave the user unsupervised if the cognitive abilities of the user could lead to unintentional opening of the belt system.
- ▶ Information about subsequent acquisition and mounting is provided by the qualified personnel that handed the product over to you.

⚠ CAUTION**Medical risks**

Injuries, pressure sores due to application errors

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

The belt system can be used for additional positioning of the user in the power wheelchair.

Applying the belt system

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

Cleaning a belt system with metal closure**INFORMATION**

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

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

Cleaning a belt system with plastic closure

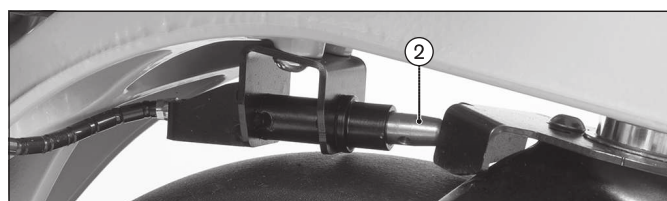
- Depending on the model, belts/straps with plastic buckles can be washed in the washing machine between **40 °C and 60 °C**.
- **Recommendation:** Use a laundry bag or net and mild detergent.
- Alternatively, the belt straps can be cleaned by gently dabbing them with warm soapy water (with some disinfectant)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

Additional cleaning instructions

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

7.16.4 Caster wheel swivel lock

The caster wheel swivel lock is used to lock the caster wheels in the forward direction so turning is no longer possible. Having the power wheelchair drive in a perfectly straight line increases safety when driving on ramps or using lifts.

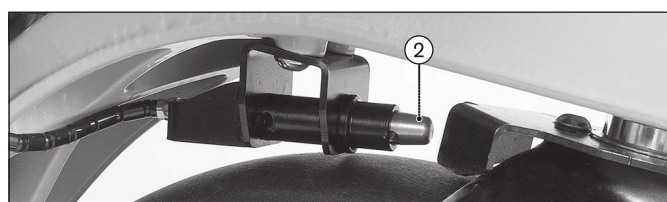


Engaging the caster wheel swivel lock

- 1) Push the release lever down (see fig. 94, item 1).
- 2) The caster wheel swivel lock bolt engages in the front fork (see fig. 94, item 2). The power wheelchair drives straight ahead, forward or reverse.

NOTICE! Please note that the caster wheel swivel lock function is mechanical and works without feedback to the control device. Steering movements or high speeds can place a heavy load on the caster wheel swivel lock and damage it. Drive at slow speed and do not enter steering commands in the input device when the caster wheel swivel lock is activated.

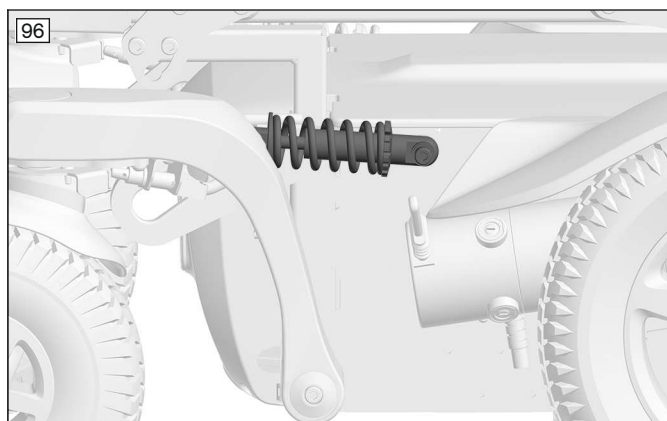
INFORMATION: Clean the caster wheel swivel lock bolt if it gets dirty.



Disengaging the caster wheel swivel lock

- 1) Push the release lever up (see fig. 95, item 1).
- 2) The caster wheel swivel lock bolt releases the front fork again (see fig. 95, item 2). The caster wheels are unlocked and can swivel freely again.

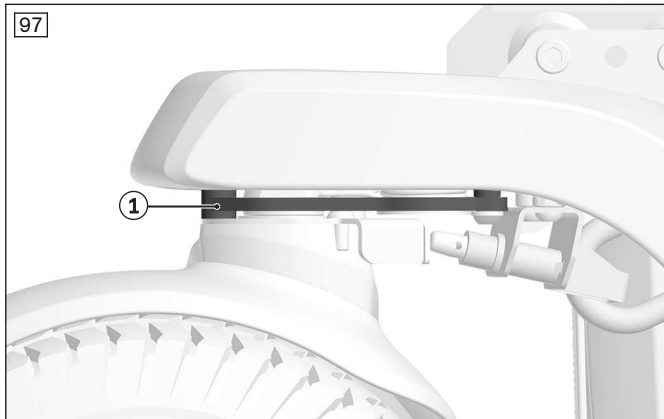
7.16.5 Spring-mounted caster wheel swing arm



The spring elements on the caster wheel swing arms increase driving comfort, especially when driving on rough terrain.

They also improve traction.

7.16.6 Mechanical track stabiliser



The mechanical track stabiliser (see fig. 97, item 1) under the caster wheel swing arm stabilises the caster wheels when moving forward at high speeds.

As a result, the track is better maintained when driving straight forwards (e.g. in road traffic).

7.16.7 Tray

7.16.7.1 Safety instructions

⚠ WARNING

Improper use in vehicles for transporting persons with reduced mobility

Severe accidental injuries caused by use with untested product combinations

- ▶ Remove the product before using the wheelchair in a vehicle for transporting persons with reduced mobility.
- ▶ Store the product safely within the vehicle.

⚠ WARNING

Product catching fire

Burns due to user error

- ▶ The product is flammable. The possibility that it may catch fire if exposed to an ignition source cannot be excluded. Therefore, the utmost caution must be exercised in the vicinity of an open flame.
- ▶ Keep away from all ignition sources.

⚠ CAUTION

Incorrect adjustment

Crushing, pinching due to excessively tight adjustment

- ▶ Do not pinch the user when sliding the product in.
- ▶ Before using the tray, verify the use of the power back support angle adjustment with the user in all usable positions. The tray in combination with back support angle adjustment must be prevented from pinching the user.

⚠ 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.

⚠ CAUTION

Driving with objects on the tray top

Injuries due to unsecured objects

- ▶ Remove all objects from the tray top prior to travelling.

NOTICE

Improper use

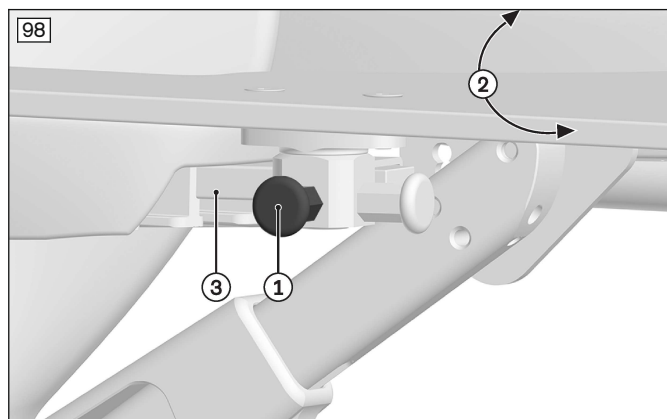
Damage to the product caused by incorrect use

- ▶ 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.

7.16.7.2 Using the product

INFORMATION

- The position of the tray should have been adapted to the user by the qualified personnel.

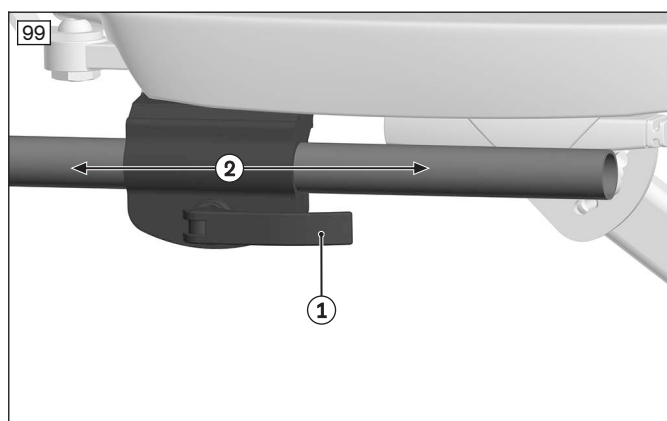


Using the tray

- 1) Pull the pin and swing the tray away to the side (see fig. 98, item 1/2).
- 2) Sit the user in the seat.
- 3) Fold the tray down again until the pin engages securely (see fig. 98, item 1/2).

CAUTION! The user must not get pinched by the tray. Ensure that the user's arms rest on the tray and that the round cutout at the front does not press against the user's body. Readjust the tray if necessary (see following section).

- 4) Verify that the tray is securely in place prior to use.



Removing the tray when necessary

- 1) Pull the pin and swing the tray away to the side (see fig. 98, item 1/2).
- 2) Open the quick-release lever on the swivel mechanism and pull the tray forwards and out (see fig. 99, item 1/2).

The clamping mechanism (see fig. 99, item 1) and the tray holder on the opposite side (see fig. 98, item 1/3) can remain under the arm supports.

7.16.7.3 Cleaning

- 1) Clean the product with warm water and a mild detergent.
- 2) Rinse with clear water and let the product dry.

Important notice regarding cleaning

- Do not use any aggressive cleaners, solvents or hard brushes etc.

7.16.7.4 Maintenance

In order to ensure the safety of the product, it must be maintained for the entire duration of use.

- Check the screw connections for firm fit on a regular basis.
- Have all worn or damaged components replaced promptly.
- Pay particular attention to cracking in the tray top.

7.16.8 Luggage carrier

NOTICE

Overloading the luggage carrier

Damage to product due to breakage

- The maximum load for the luggage carrier is **15 kg (33 lbs)**.
- Please note that the maximum load of the overall product must not be exceeded, even after loading the luggage carrier (see page 138).

NOTICE**Improper use of the seat tilt/back angle adjustment**

Damage to the luggage carrier due to collision with the seat back

- ▶ Note that the seat back may collide with the luggage carrier when the seat tilt and back angle adjustment are used in combination. In this case, remove the luggage carrier before using the seat adjustment.
- ▶ Note that the seat back may collide with items on the luggage carrier even with only a slight tilt. Take the items off the luggage carrier in this case. If this is not possible, then the seat or seat back must not be adjusted too far back.

INFORMATION

- ▶ Note that the centre of gravity of the power wheelchair shifts to the rear when the luggage carrier is fully loaded.
- ▶ This may lead to unfamiliar steering and driving behaviour.

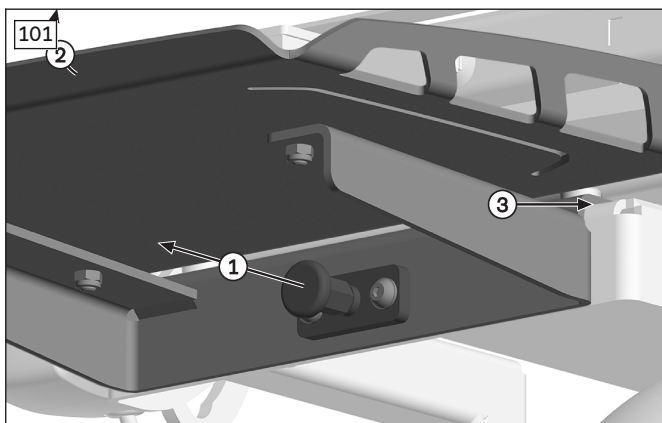
The luggage carrier can be used to store additional luggage. The luggage carrier can be removed if required.

**Removing the luggage carrier**

- 1) Pull out the release bolt under the tray (see fig. 101, item 1).
- 2) Slightly lift the luggage carrier (see fig. 101, item 2) and take it off the support bar (see fig. 101, item 3).

Attaching the luggage carrier

- 1) Slightly lift the luggage carrier and set it onto the support bar (see fig. 101, item 2/3).
- 2) Push the luggage carrier down until the release bolt (see fig. 101, item 1) engages.

**7.16.9 External power supply****CAUTION****Electromagnetic fields of other electrical equipment**

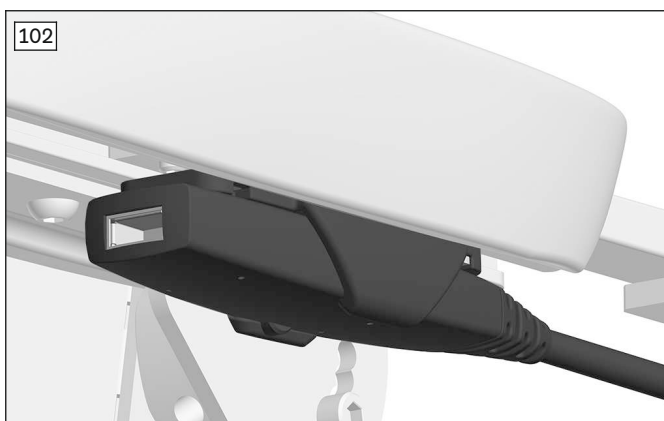
Falling, collision with persons or objects due to interference with the power wheelchair's control signals

- ▶ Make sure that the connected devices do not impact on the functions of the power wheelchair.
- ▶ As far as possible, do not use devices that emit strong electromagnetic fields in the vicinity of the power wheelchair. Always turn such devices off when charging them on the power wheelchair connectors.

NOTICE**Energy consumption, overload and damage to the connections**

Reduced distance range and loss of functionality of the power supply

- ▶ Note that drawing energy from the external power supply reduces the distance range of the power wheelchair. Check the charge level of the power wheelchair regularly and disconnect external devices from the connections when they are no longer needed.
- ▶ Do not exceed the maximum power and current output of the connectors used. Avoid using all connections at full capacity at the same time.
- ▶ Disconnect some or all of the devices from the connections in case of a possible overload. If the connections are not functional even with a low load, contact qualified personnel and have the internal fuse inspected and replaced.
- ▶ Protect the connections against water exposure, dirt and damage. Always fit the caps tightly when you are not using the connections.



The external power supply (e.g. below the arm support) is used to charge or operate external devices such as a mobile phone.

Power is supplied via a standard USB connection. The electrical power of the USB port is limited and not suitable for charging devices with high power requirements, e.g. laptops.

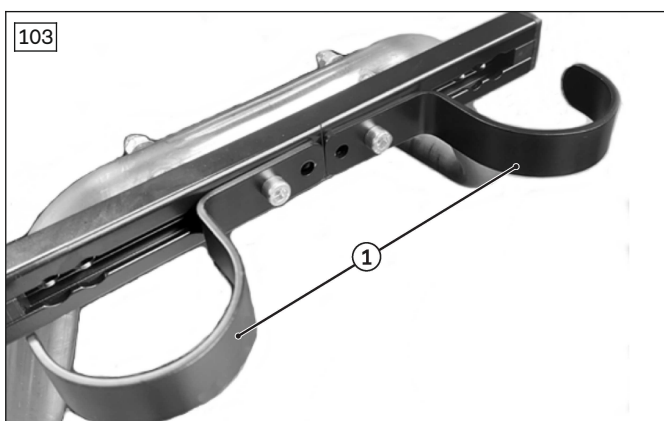
The external power supply is used only for connecting and charging external devices. The wheelchair cannot be charged using this interface.

7.16.10 Hand warmer

The hand warmer with two-hand cover is an option for installation on Ottobock power wheelchairs.

The product produces a stream of warm air that increases the temperature in the area of the control panel under cold ambient conditions.

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

7.16.11 Backpack hook

The backpack hook (see fig. 103, item 1) is intended for hanging a backpack on the back support.

The maximum permissible weight of the backpack is **10 kg**.

The backpack hook is attached to a multi bar on the back support.

7.16.12 Bag for oxygen cylinder

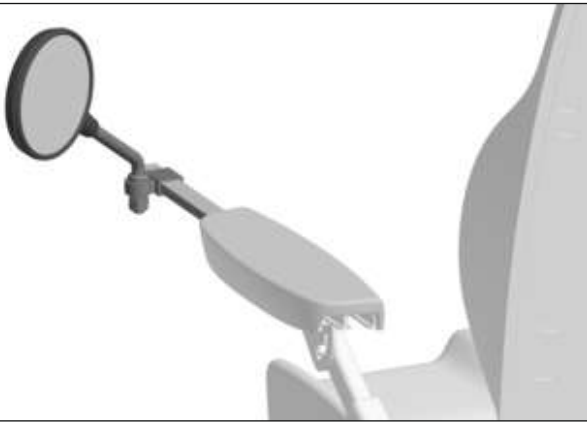
104



The bag can hold an oxygen cylinder and is hooked on the backpack hook on the back support.
The maximum permissible weight of the oxygen cylinder is **9 kg**.

7.16.13 Rear-view mirror

105



The rear-view mirror on the arm support can improve the user's all-round visibility.
The position of the rear-view mirror can be adapted to the needs of the user by the qualified personnel.

7.16.14 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 is equipped with additional options:

- Side panels (for deep contoured back support pad)
- Lumbar support (for flat or deep contoured back support pad)
- Splash guard for caster wheels
- Rear marker plate
- Holder for mobile phone or tablet
- Pocket for mobile phone
- Beverage holder
- Tool kit
- Airman pump

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. Before checking in the power wheelchair, the automatic circuit breaker has to be deactivated and the battery connectors must be insulated so they cannot short-circuit.
- ▶ 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 138).
- ▶ 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.

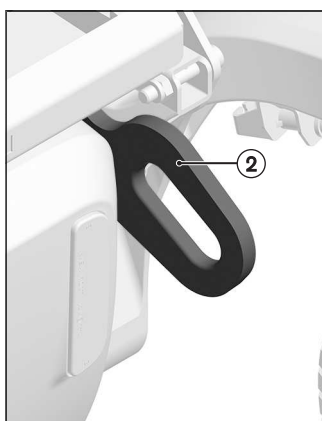
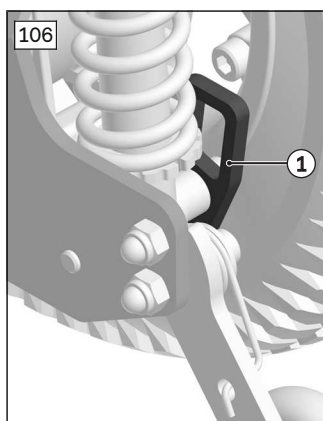
7.17.2 Reducing the transportation size

INFORMATION

Please note that the foot supports of the centrally mounted leg support must always be folded up all the way to the back when being transported to prevent them from folding down on their own.

7.17.3 Preparing for transport

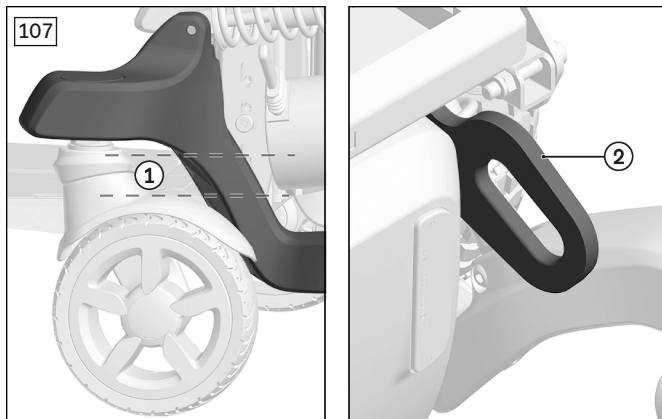
Front-wheel drive



Transporting the power wheelchair

- 1) Position the power wheelchair in its transport location.
- 2) Turn the control device off (see page 25 ff.).
- 3) Verify brake locking. It should not be possible to push the power wheelchair.
If needed: lock the brake (see page 54).
- 4) Fasten the power wheelchair with 4 cargo straps to the 4 transport eyebolts on the front/rear of the transport vehicle (see fig. 106, item 1/2).

Mid-wheel drive



Transporting the power wheelchair

- 1) Position the power wheelchair in its transport location.
- 2) Turn the control device off (see page 25 ff.).
- 3) Verify brake locking. It should not be possible to push the power wheelchair.
If needed: lock the brake (see page 54).

- 4) Fasten the power wheelchair with 4 cargo straps to the transport vehicle. To do this, use the 2 eyebolts on the frame and the 2 caster wheel swing arms opposite (see fig. 107, item 1/2).

INFORMATION: Place one belt loop twice around each caster wheel swing arm in the marked area.

INFORMATION: If available, the product can be alternatively attached to the transport eyebolts for transportation in a vehicle for transporting persons with reduced mobility instead of to the caster wheel swing arms.

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.
- ▶ The product may be used as a seat in a vehicle for transporting persons with reduced mobility if the safety elements provided by the manufacturer and appropriate fastening and personal restraint systems are used. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- ▶ Never transport more than one person in the product.
- ▶ Note the approved climbing ability for driving on the ramp to the vehicle for transporting persons with reduced mobility (see the "Technical data" section). Also make sure that you can handle the product safely within the permissible conditions for use.
- ▶ Turn off the control device after positioning the product in the vehicle for transporting persons with reduced mobility.
- ▶ Use the product in a vehicle for transporting persons with reduced mobility only if the seat is fully lowered and in a horizontal position, the leg supports are all the way down and the back support is in a straight (preferably vertical) position.
- ▶ Note the restrictions regarding the installed options (see page 126).

⚠ WARNING

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

Serious injuries due to improper handling of the product

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

The product has been tested by the manufacturer according 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 138).

7.18.1 Required accessories

Additional accessories must be installed to use the power wheelchair as a transport seat in a vehicle for transporting persons with reduced mobility. The qualified personnel who fitted the wheelchair can provide more information.

Securing the product with attachment straps

The ISO sets listed below are available for securing with attachment straps.

Please note: All ISO sets are approved up to a max. user weight of **160 kg**.

- Front-wheel drive version with APS seat, basic: 491S75=ST460
- Front-wheel drive version with APS seat including seat module (seat tilt or Multilift): 491S75=ST461
- Mid-wheel drive version with APS seat, basic: 491S75=ST462
- Mid-wheel drive version with APS seat including seat module (seat tilt or Multilift): 491S75=ST463

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

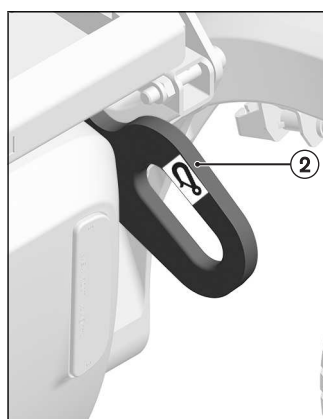
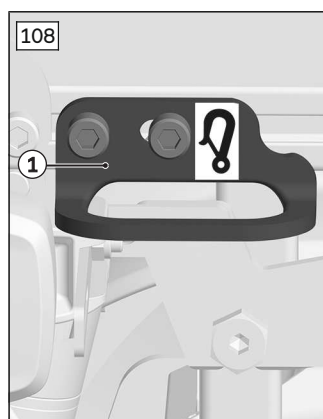
Loss of safe restraint due to failure to observe transportation instructions

- ▶ 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:

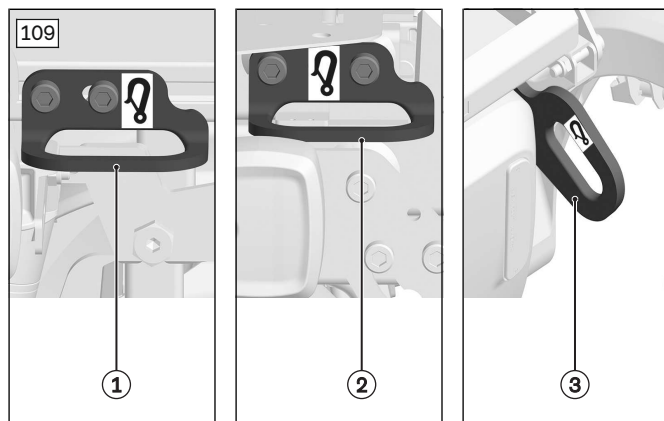
Front-wheel drive and mid-wheel drive



Attachment point positions (basic variant)

The front attachment points for securing the product in vehicles for transporting persons with reduced mobility are on the front section of the side rails of the APS seat (see fig. 108, item 1).

The rear hooks of the vehicle side wheelchair restraint belt are secured to the vehicle using the rear eyebolts on the frame (see fig. 108, item 2).



Attachment point positions

The front attachment points for securing the product in vehicles for transporting persons with reduced mobility are on the front section of the side rails of the APS seat (see fig. 109, item 1).

The rear attachment points for securing the product in vehicles for transporting persons with reduced mobility are at the rear end of the APS seat (see fig. 109, item 2).

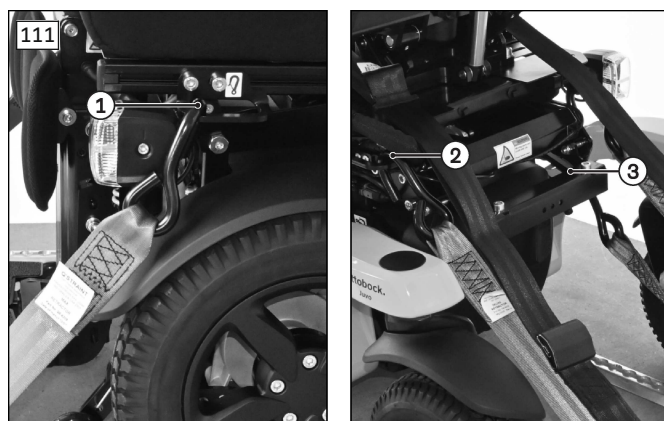
The eyebolts on the frame must also be used to tighten the vehicle side wheelchair restraint belts (see fig. 109, item 3).

Front-wheel drive



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=ALL_INT.
- 2) Switch the control device off (see page 49).
- 3) Verify brake locking. Engage the brakes if needed (see page 54).
- 4) Attach the vehicle side wheelchair restraint belts (see next illustration).



Attaching vehicle side wheelchair restraint belts

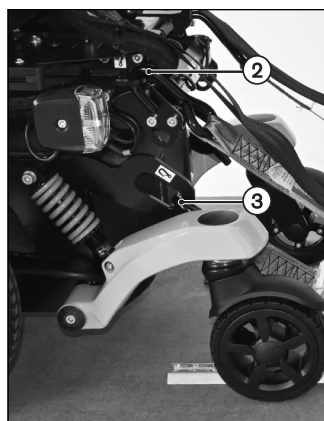
- 1) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two front belt eyes (see fig. 111, item 1). The front lighting can be removed from the magnetic holder and hung up if it is in the way.
- 2) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two rear belt eyes on the seat (see fig. 111, item 2).
- 3) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two rear eyebolts on the drive base (see fig. 111, item 3, slightly concealed).
- 4) Tighten the front and rear attachment straps as firmly as possible (see figure above).

Mid-wheel drive



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=ALL_INT.
- 2) Switch the control device off (see page 49).
- 3) Verify brake locking. Engage the brakes if needed (see page 54).
- 4) Attach the vehicle side wheelchair restraint belts (see next illustration).

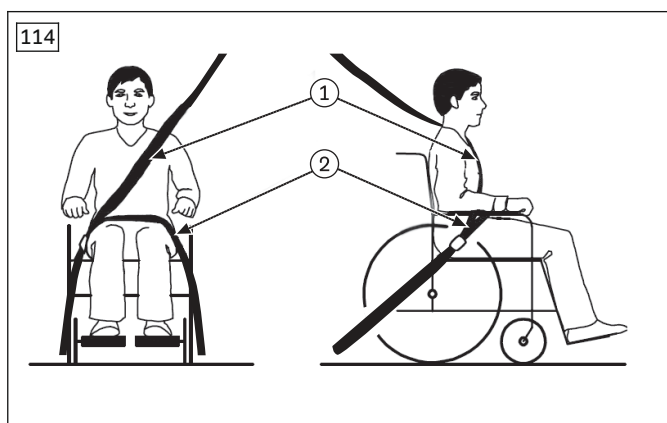


Applying the attachment straps

- 1) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two front belt eyes (see fig. 113, item 1). The front lighting can be removed from the magnetic holder and hung up if it is in the way.
- 2) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two rear belt eyes on the seat (see fig. 113, item 2).
- 3) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two rear eye-bolts on the drive base (see fig. 113, item 3).
- 4) Tighten the front and rear attachment straps as firmly as possible (see figure above).

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

- Use of the personal restraint system of the vehicle for transporting persons with reduced mobility is mandatory. Personal restraint systems in the vehicle for transporting persons with reduced mobility may not be attached to the wheelchair. The three-point restraint system must be attached entirely on the vehicle:
 - The lap belt of the personal restraint system is usually attached to the vehicle floor using a retractor.
 - 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.
- Ensure that the adjustment mechanisms of the restraint system cannot collide with the product's components.
- For a product with front-wheel drive, it is important to ensure that the length adjusters of the restraint system are at a sufficient distance from the caster wheel swing arms.



- The straps of the passenger 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. 114 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. 114, item 1).
- The harness strap must not be twisted on the user's body.
- The straps of the personal restraint system attached to the vehicle must be tightened as tight as possible after being put into position.

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

- 1) Pull each end of the restraint lap belt from the inner side of the seat through to the outside.
 - 2) Attach each of the ends of the restraint lap belt on the vehicle bottom in the manner described above.
INFORMATION: The power wheelchair's lap belt should be used in addition to position the passenger during transportation.
 - 3) Secure the shoulder harness above and behind the user.
- The four-point belt can be used in addition to position the passenger during transportation.

7.18.3 Restrictions for use

WARNING

Using the product with specific settings and/or installed options

Severe injury in case of accidents due to options coming loose

- Before using the product as a seat in a vehicle for transporting persons with reduced mobility, remove options that need to be taken off for safe transportation in such a vehicle. Please observe the following overview.
- Stow all removed options 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 is not possible	Detach option	Secure option on product
Tray, can be swung away to the side		X	
Mid-tray control, can be swung away to the right or left		X	
Lap belt with buckle			X**
Luggage carrier			X

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

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

If applicable, the following special controls must be observed in particular during transportation in a vehicle for transporting persons with reduced mobility:

Special control (variant)	Transportation in a vehicle for transporting persons with reduced mobility is not possible	Detach option	Secure option on product
Sip and puff control (standard control panel included)			X
Chin control			X

7.18.4 Prohibited use

WARNING

Improper use in vehicles for transporting persons with reduced mobility

Risk of serious injury when using the product as a seat

- Please note that certain optional components on the product exclude the use of the product in a vehicle for transporting persons with reduced mobility.
- If the prohibition symbol shown below appears on the nameplate, this means the following: in vehicles for transporting persons with reduced mobility, only use the seats installed in the vehicle with the corresponding personal restraint systems.
- Please contact qualified personnel for further up-to-date information on transportation in vehicles for transporting persons with reduced mobility.



If the adjacent symbol appears on the nameplate, this indicates the following:
The product may **not** be used as a seat in vehicles for transporting persons with reduced mobility.

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

Actuator 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.
- For more information on cleaning seat cushions, see the care instructions on the product or the supplied instructions for use.
- Use a damp plastic brush to clean the wheels and frame.
- Do not use any aggressive cleaners, solvents or hard brushes etc.
- Do not clean the product with a pressure washer or a jet of water. The penetration of water can cause corrosion.
- Observe additional cleaning instructions in the "Belt systems" section: (see page 112).
- Observe additional cleaning instructions in the "Tray" section: see page 116.

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. Follow the instructions for use provided by the disinfectant 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 tyre pressure. The correct tyre pressure is printed on the tyre casing and listed in the "Technical data" section.

- 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 128).
- Failure to maintain the product can lead to injuries for the user of the product.

8.1.1 Maintenance intervals

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

Component	Activity	Prior to every use	Weekly	Monthly
Drive wheels	Check that wheel mounts are securely fastened			X
	Check that wheels rotate freely and without axial runout			X
	Check directional stability of the power wheelchair	X		
Caster wheels	Check 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
	Check that seat lock is positioned securely	X		
Leg support	Check that mounting screws are fastened properly (check tightening torque)			X
	Check for damage to foot supports			X
	Check foot supports for adequate hold in the folded up position			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		

Component	Activity	Prior to every use	Weekly	Monthly
Brake	With brake engaged: check the braking function by trying to push the wheelchair			X
Seat adjustment functions	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	
Actuator/actuators	Visually inspect the adjustment mechanism for scratches, dirt and oil leaks			X
Product	Check the legibility and completeness of all labels and labelling on the product			X

Special control maintenance tasks

The proper functionality of the respective special control must be verified each time before the wheelchair is used. The actions described in the following table should be performed at the specified intervals either by the user or the attendants.

Component	Activity	Prior to every use	Weekly
Control device as a whole	Verify proper functionality: verify function of buttons, verify function of special control components	X	
Joystick control	Automatic reset to centre position (neutral position)	X	
Wear and tear parts (e.g. tubes of sip and puff control)	Visual inspection		X
Mechanical attachment of the control device	Check that the movable parts of the control device are properly fixed		X
Screw connections	Check for firm fit		X

8.2 Repair

WARNING

Prohibited repairs

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

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

8.2.1 Replacing defective lights

NOTICE

Use of incorrect bulbs

Damage/melting of the connecting cables due to excess current flow

- Note that the LED lighting may only be replaced with original lighting.

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

8.2.2 Replacing the battery

Batteries may only be replaced by qualified personnel.

8.3 Troubleshooting

INFORMATION

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

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

Faults without displaying an error code

The status of the control device is always indicated by the control and display elements (see page 25). Symbols indicate why the product is not working as expected. If no error code is displayed, this usually does not mean an error or malfunction, but an accidentally activated function in certain situations:

- If the drive-away lock is activated, it prevents operation and is shown as an icon on the display (see page 52). The drive-away lock can be deactivated by actuating the input device forwards and backwards.
- Some driving situations cause the driving parameters to be automatically restricted (creep speed). For example, when adjusting certain seat functions or driving on slopes, creep speed is shown on the display (see page 25). This does not constitute a malfunction. Creep speed is exited automatically when the seat is set to its normal driving position.
- Creep speed can also be triggered by the following faults:
 - Battery undervoltage
 - Errors in motors or relays
 - Current measurement outside the permissible range
 - Acceleration sensor error (gyro)
 - Monitoring the jacks on the input devices
- Error codes are displayed for these faults, which provide further information (see page 132). In these cases, the cause of the fault must be checked and the control device switched off and on again. Inform the qualified personnel if the error persists and the cause cannot be eliminated.
- In rare cases, the control device may trigger a drive-away lock if the distance between the leg support and floor is insufficient even though the actual distance is sufficiently large. In these cases, lower the leg support to the driving position. The length compensation moves further up and the control device releases the driving function again. Alternatively, the seat tilt (if available) can be tilted slightly backwards. Notify the qualified personnel if the error occurs frequently and the cause cannot be determined.

Faults with display of an error code

Warnings and errors on the power wheelchair are indicated on the hand module LCD screen, the LCD module (if available) or the attendant control (if available).

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.

In the event of a warning or error, an audible warning is triggered and the warning or error code is displayed (with default programming, does not apply to attendant control).

Warnings and errors have different degrees of severity. The system will display the warning and error messages periodically until the error is rectified:

Display	Degree of severity	Description	Meaning
 # XXX	Error	In night mode: red octagon with white cross and the error code number In day mode: as above, but all in black and white Notice: This symbol appears in the top left of the driving functions section when the drive is locked.	Indicates a malfunction that is preventing the power wheelchair from fully functioning.

Display	Degree of severity	Description	Meaning
 # XXX	Warning	In night mode: yellow triangle with black exclamation mark and the error code number In day mode: as above, but all in black and white	Indicates status information or a malfunction that is not severe enough to bring the power wheelchair to a standstill.

Warning and error messages can also be illustrated by symbols. The error code numbers are displayed under the symbols. Here are some examples:

Display	Degree of severity	Description
	Error	Battery completely empty, drive unit locked, charge battery
	Error	Overheating (e.g. overheating due to excessive load), drive unit locked
	Error	Brakes malfunctioning or brake unlocked/deactivated, drive unit locked
	Error	Joystick not centred
	Error	Not charging, mains plug not connected
	Warning	Overvoltage in the battery, speed reduced
	Warning	Temperature in the system too high, speed reduced
	Warning	Joystick off-centre
	Warning	Traction problem, traction control activated

8.3.1 Procedure for warnings and error messages

Some warnings or errors may make it impossible to drive the wheelchair. In this case, the error message must be noted, the control device switched off and the qualified personnel informed of the error message immediately.

Often, however, error messages will show a temporary or extreme event that is not a true error in the system. After turning the control device off and on, it is possible to determine whether the error still persists.

Other error messages can be rectified by correcting an operating state (e.g. overheating, battery undervoltage). Possible responses to such notifications include allowing the motor to cool or charging the battery.

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 usable. An error message simply appears at regular intervals. Nonetheless, the control device **must** be switched off for several minutes in this case. If the error mes-

sage continues to appear after switching on the control device, the error message **must** be noted, the control unit switched off again and the qualified personnel informed of the error message immediately.

If an error persists and/or the exact nature of the fault remains unclear, the qualified personnel must be informed immediately. The qualified personnel have comprehensive means of investigating the fault, eliminating the causes and quickly restoring the wheelchair's functionality.

Depending on the severity of the fault, the system can also automatically initiate an action such as reducing the speed.

8.3.2 Emergency mode (fallback mode)

In normal cases, the actuators (adjustment motors) reliably report their current position to the control device. This allows the different seat positions to be approached precisely and safely monitored. If this feedback is disrupted or contradictory with other signals, the control device recognises this error automatically and displays an error message. The user can confirm the error message and continue operating the wheelchair in emergency mode.

The function of the wheelchair is severely limited in emergency operation:

- The positions of the actuators are only detected by sensors in the end positions. This means that the power seat functions move less smoothly than usual.
- Automatic biomechanical length adjustment no longer occurs when adjusting the leg support or back support. This may make the sitting position less comfortable for the user.
- If certain seat positions are stored as memory functions, they can no longer be accessed.
- If the seat is equipped with a seat height adjustment mechanism, this may result in an unwanted slight inclination of the seat (seat tilt).

In emergency mode, the seat must be moved to the initial position (driving position) as far as possible. In this case the actuators should only be operated in urgent need. Emergency mode is intended solely to remain mobile until the qualified personnel have been contacted. Faults must then be inspected and professionally rectified by qualified personnel. The error messages that are displayed provide the qualified personnel with additional information on what triggered the emergency operation.

8.3.3 Wheelchair control unit error overview

INFORMATION

Depending on the version or country-specific equipment, the list of relevant error messages may deviate from the overview provided here.

The wheelchair control device displays warnings and errors in as much detail as possible by differentiating between numerous error codes. Not all displayed errors can be corrected by the user. Therefore, the following overview shows only the error codes and corrective actions that can be checked and implemented by users themselves.

If a warning or error is displayed that does not appear in the following overview, switch the control device off and then on again after a brief wait. If the error persists, contact the qualified personnel promptly. This also applies to warnings and errors that cannot be resolved with the above remedies.

Error messages (selection) on the ICON hand module or ICON LCD module

Error code	Error type	Meaning	Correction
3	Error	Brake 1 not connected	1. Turn off the control device; 2. Open and close the brake lever; 3. Turn on the control device
4	Error	Brake 2 not connected	If the error persists, contact qualified personnel
5	Warning	Attendant control: on/off jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
6	Warning	LCD module: on/off jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
7	Warning	Hand module: on/off jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
8	Warning	Secondary joystick: on/off jack disconnected	

Error code	Error type	Meaning	Correction
			1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
9	Warning	Attendant control: mode jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
10	Warning	LCD module: mode jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
11	Warning	Hand module: mode jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
12	Warning	Secondary joystick: mode jack disconnected	1. Turn off the control device; 2. Pull out and reconnect the jack connector; 3. Turn on the control device
16	Error	Brake 1 short-circuited or incorrectly programmed	1. Turn off the control device; 2. Open and close the brake lever; 3. Turn on the control device If the error persists, contact qualified personnel
17	Error	Brake 2 short-circuited or incorrectly programmed	
20	Warning/error	Battery undervoltage	Charging the battery
21	Error	Battery overvoltage (batteries may be overcharged)	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device; 4. Continue driving slowly, avoiding driving downhill quickly with fully charged batteries If the error persists, contact qualified personnel
22	Warning	Speed reduction (battery overvoltage)	1. Continue driving slowly; 2. Do not drive downhill quickly with fully charged batteries; 3. If the error persists: contact qualified personnel INFORMATION: The system reduces the speed if the battery charge is high but below the threshold that causes the overvoltage error (error 21).
23	Error	Motor error 1	1. Turn off the control device; 2. Open and close the brake lever; 3. Turn on the control device If the error persists, contact qualified personnel
24	Error	Motor error 2	
25	Error	Brake error 1	1. Turn off the control device; 2. Open and close the brake lever; 3. Turn on the control device If the error persists, contact qualified personnel
26	Error	Brake error 2	
27	Error	Motor power error message	1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device If the error persists, contact qualified personnel
28, 29	Warning	Power module (controller) error message due to electric motor shut-off	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
30	Error	Power module (controller) error message due to electric motor shut-off	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device

Error code	Error type	Meaning	Correction
31	Warning	Motor blockage detected	1. Reset and try to overcome the obstacle at higher speed; 2. If the motor is blocked again: drive around the obstacle or look for a place with a lower obstacle height
32	Error	Excess temperature	INFORMATION: The wheelchair stops to protect the system electronics. 1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device
33	Warning	Speed reduction (excess temperature)	INFORMATION: The wheelchair reduces its speed to protect the system electronics. 1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device
34	Error	Voltage drop on the primary module BUS system (hand module/LCD module)	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device INFORMATION: If a tray with tray module is installed, also check the connection on the extension cable for soiling and correct fit.
35, 36	Error/warning	Joystick not in neutral position	1. Turn off the control device; 2. Put the joystick in neutral position; 3. Turn on the control device
37	Warning	Switch function on joystick/button pressed when the unit is turned on	1. Turn off the control device; 2. Release the switch function; 3. Turn on the control device
43	Warning	Motor 1: Current measurement out of range	1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device If the error persists, contact qualified personnel
44	Warning	Motor 2: Current measurement out of range	
46	Warning	Bluetooth not working	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
49	Error	Strain gauge error	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
50	Warning	Control device module has been exchanged or replaced	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
51	Warning	Control device module added	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
52	Warning	Control device module removed	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
53	Warning	Sip and puff control was active when the control device was switched on (instead of in the relaxed hand position)	1. Turn off the control device; 2. Do not activate sip and puff control when switching on the control device
54	Error	Sip and puff control was out of the relaxed hand position when the control device was turned on	1. Turn off the control device; 2. Do not activate sip and puff control when switching on the control device
56	Warning	Overvoltage on a seat actuator	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device

Error code	Error type	Meaning	Correction
			If the error persists, contact qualified personnel
57	Error	Severe excess temperature on a seat actuator	1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device If the error persists, contact qualified personnel
58	Error	Defective H-bridge (error in a seat actuator)	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device If the error persists, contact qualified personnel
59	Error	ADC overrun (problem with analogue/digital conversion)	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
60	Error	Pressure sensor of the sip and puff control not connected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
62	Warning	Error on the actuator relay	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
66, 67	Warning/error	Undervoltage on the actuator	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device; 4. Charge the battery
68	Warning	Speed reduction (current limitation)	INFORMATION: The system reduces the speed if the current is too high. Allow the system to cool and drive slower
72	Warning	Speed reduction (stability control)	INFORMATION: The system reduces the driving speed if the wheelchair loses control during driving. Drive slower and adapt the driving characteristics to the conditions of the terrain
73	Warning	Timeout for speed feedback	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
74	Warning	Intervention while driving on a ramp	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device; 4. Check ramp suitability according to the product's climbing ability; 5. Have the ramp adjusted by qualified personnel if necessary
80	Warning	System in configuration mode	Turn the power off only after configuration is complete
81	Error	Overcurrent in motor M1	1. Turn off the control device; 2. Allow the system to cool; 3. Check the motors for ease of movement and wheels for blockages; 4. Turn on the control device
82	Error	Overcurrent in motor M2	If the error persists, contact qualified personnel
85	Warning	Gyro signal offset (speed limit or temperature range exceeded)	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
86	Error	Switching the control device off and on again required	1. Turn off the control device and wait briefly; 2. Turn on the control device
87	Error	Excessive temperature on a seat actuator	1. Turn off the control device; 2. Allow the system to cool; 3. Turn on the control device

Error code	Error type	Meaning	Correction
			If the error persists, contact qualified personnel
88 to 100	Warning	Lighting error	INFORMATION: These messages indicate a defect in the lighting that can only be corrected by qualified personnel. Contact qualified personnel
174	Warning	Invalid memory position	INFORMATION: The saved position is inconsistent or cannot be reached. 1. Save the memory position in the control device again with a different setting; 2. If the error persists: contact qualified personnel
203	Error	Test error prior to driving	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
204	Warning/error	Communication error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
205	Warning	Memory error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
206	Warning/error	Data error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
208	Warning/error	Monitoring error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
209	Warning	Monitoring software: download error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
210, 211	Error	Software error detected	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
212	Warning	Reset to default values	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
213	Warning	Parameter database restored	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device Contact qualified personnel in the event of a deviation in the function.
214	Warning	Error while loading the parameter database	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
215	Warning	Parameter database not saved	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device
221	Error	Gyroscope/acceleration sensor error	1. Turn off the control device; 2. Wait 5 seconds for system reboot; 3. Turn on the control device

8.3.4 Attendant control error overview

INFORMATION

When the attendant control is active and the [Charge level] LED display and [Mode] LED display flash together eight times, the error messages can only be displayed on the hand module or LCD module. The attendant control must be switched off in this case. More detailed information about the existing fault is then shown on the display on the hand module or LCD module (see page 132 ff.).

[Charge level] LED display

LED	Error/warning	Cause	Possible action
Red is flashing	Battery undervoltage	Battery deep discharge	Charge as soon as possible
Green is flashing	Battery overvoltage	Voltage too high (after complete charging and driving downhill)	Continue driving slowly

[Mode] LED indicator

LED	Error/warning	Cause	Possible action
Red is flashing	Various product faults	More detailed information about the existing fault is shown on the display of the hand module or LCD module (see page 132 ff.).	

[Selected power seat function] LED indicator

LED	Error/warning	Cause	Possible action
LED back support surface is flashing	Back support angle adjustment motor error	Cabling or plug contact faulty Defective actuator	Check cabling/plug contacts Contact specialist dealer
Seat LED flashing	Seat tilt motor error	Cabling or plug contact faulty Defective actuator	Check cabling/plug contacts Contact specialist dealer
Two LEDs below the seat surface flashing	Seat height adjustment motor fault	Cabling or plug contact faulty Defective actuator	Check cabling/plug contacts Contact specialist dealer
LEDs on the back support surface and seat bottom flash	Power seat function temperature warning	Overheating due to excessive load	Cool down phase

8.4 Behaviour in case of breakdowns

INFORMATION

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

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

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

Notice: The power wheelchair serial number and the contact details of the specialist dealer, if stored, can also be accessed using the control device:

- **Hand module:** "Auxiliary" > System information section (see page 35)
- **LCD module:** "Auxiliary" section > "System information" (see page 37)

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 is available from the qualified personnel that adapted this product or the manufacturer's service department.

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

INFORMATION

The following tables may contain technical data that do not apply to your product due to the selected configuration.

Product classification

Application class (in compliance with DIN EN 12184)
Class A
Application class (according to DIN EN 12184)
Class B

Available drive types

Drive type
Front-wheel drive
Drive type
Mid-wheel drive

Maximum power wheelchair weight

Front-wheel drive weight	
Maximum weight	172 kg (379 lbs)
Mid-wheel drive weight	
Maximum weight	182 kg (401 lbs)

Maximum load – variants available

Load	
Maximum load	160 kg (352.7 lbs); the load is reduced depending on equipment
Limitation of the specified load – depending on features	
Power wheelchair in combination with	Maximum load
Terra, Terra Aquos, Terra Flair seat cushion	150 kg (330.7 lbs)

Maximum user weight – depending on order and equipment

User weight*	
Maximum user weight (User + luggage)	30 kg (66 lbs)
User weight*	
Maximum user weight (User + luggage)	40 kg (88 lbs)
User weight*	
Maximum user weight (User + luggage)	50 kg (110 lbs)
User weight*	
Maximum user weight (User + luggage)	60 kg (132 lbs)
User weight*	
Maximum user weight (User + luggage)	70 kg (154 lbs)
User weight*	
Maximum user weight (User + luggage)	80 kg (176 lbs)
User weight*	
Maximum user weight (User + luggage)	90 kg (198 lbs)
User weight*	
	100 kg (220 lbs)

User weight*	
Maximum user weight (User + luggage)	
User weight*	
Maximum user weight (User + luggage)	110 kg (242.5 lbs)
User weight*	
Maximum user weight (User + luggage)	120 kg (264.5 lbs)
User weight*	
Maximum user weight (User + luggage)	130 kg (286.6 lbs)
User weight*	
Maximum user weight (User + luggage)	140 kg (308.6 lbs)
User weight*	
Maximum user weight (User + luggage)	150 kg (331 lbs)
User weight*	
Maximum user weight (User + luggage)	160 kg (352.7 lbs)

* The product is set to the specified maximum user weight. Do not exceed the maximum user weight. Contact qualified personnel if any adjustments are required.

Dimensions and weights – power wheelchair

Dimensions and weights (front-wheel drive)*	
Overall width	Maximum: 650 mm (25.6")
Overall length (with vertical leg support)**	Maximum: 1260 mm (49.6")
Weight of the heaviest removable component	Luggage carrier option: 2.2 kg (4.8 lbs) Head support option: 1.1 kg (2.4 lbs)
Transport weights***	See "Weight"; see "Weight of the heaviest removable component"
Permissible overall weight with user and accessories	Version 6 km/h and 7.2 km/h with LINIX drive manufacturer: 320 kg (705 lbs) Version 6 km/h and 7.2 km/h with AMT drive manufacturer: 380 kg (838 lbs) Version 10 km/h: 320 kg (705 lbs)
Minimum turning radius****	650 mm (25.6")
Minimum turning circle*****	1300 mm (51.2")
Front/rear tyre size	9"/10"
Drive wheel tyre size	14"

* Depending on equipment selected

** + 20 mm (0.8") with luggage carrier

*** Weight of the heaviest component

**** Depending on configuration and options; specified value = smallest setting

***** DIN EN 12184, class A

Dimensions and weights (mid-wheel drive)*	
Overall width	Maximum: 650 mm (25.6")
Overall length (with vertical leg support)**	Maximum: 1240 mm (48.8")
Weight of the heaviest removable component	Luggage carrier option: 2.2 kg (4.8 lbs) Head support option: 1.1 kg (2.4 lbs)
Transport weights***	See "Weight"; see "Weight of the heaviest removable component"

Dimensions and weights (mid-wheel drive)*	
Permissible overall weight with user and accessories	Version 6 km/h and 7.2 km/h with LINIX drive manufacturer: 320 kg (705 lbs) Version 6 km/h and 7.2 km/h with AMT drive manufacturer: 380 kg (838 lbs) Version 10 km/h: 320 kg (705 lbs)
Minimum turning radius****	620 mm (24.4")
Minimum turning circle*****	1240 mm (48.8")
Front/rear tyre size	6"
Drive wheel tyre size	14"

* Depending on equipment selected

** + 60 mm (2.36") with luggage carrier

*** Weight of the heaviest component

**** Depending on configuration and options; specified value = smallest setting

***** DIN EN 12184, class A

Transportation size	
Storage length	Minimum: 920 mm (36.2")
Storage width	Maximum: 650 mm (25.6")
Storage height	Minimum: 1050 mm (41.3"); maximum: 1250 mm (49.2")

Dimensions and functions – seat

Dimensions – APS seat	
Effective seat depth*	300 – 560 mm (11.8" – 22")
Effective seat width*	320 – 560 mm (15.6" – 22")
Effective back width*	300 – 560 mm (11.8" – 22")
Front seat height**	420 – 580 mm (16.5" – 22.8")
Lower leg length***	230 – 440 mm (9" – 17.3")
Back support height****	650/750 mm (25.6"/29.5")
Distance from arm support to seat	180 – 400 mm (7.1" – 15.7")
Front position of the arm support	200 – 350 mm (7.9" – 13.8")

* In increments of 20 mm

** At 0° seat inclination, without seat cushion, in increments of 20 mm

*** In increments of 10 mm

**** Deviations possible with ADI back support (Baxx line)

Seat and back support adjustment	
Set pre-tilt of the seat	0°/2°/4° (depending on order and/or selected option)
Seat inclination*	With lift/tilt module: minimum: -30°; maximum: 45°
	With tilt module: minimum: 0°; maximum: 45°
Back support angle**	Minimum: 85°; maximum: 165°
Leg support angle**	Minimum: 90°; maximum: 170°

* Value range varies depending on selected option; specifications do not take set pre-tilt into account

** Specifications do not take set pre-tilt into account

Seat function (power)	
Back support angle adjustment	Continuously adjustable up to 70° (85° – 120°; 100° – 140°; 95° – 165°)*
Leg support adjustment	Continuously adjustable up to 75°
Seat tilt**	Adjustable in the posterior direction by up to 45° (with centre of gravity shifting)
Seat height adjustment**	Adjustable by up to 300 mm (11.8"); max. load: up to 160 kg (352.7 lbs)
Combined seat height adjustment/seat tilt 1**	

Seat function (power)	
	Seat height adjustment: adjustable by up to 300 mm (11.8") Seat tilt: adjustable by up to 15° anterior and 45° posterior Max. load: up to 160 kg (352.7 lbs)
Combined seat height adjustment/seat tilt 2**	Seat height adjustment: adjustable by up to 300 mm (11.8") Seat tilt: adjustable by up to 30° anterior ("Active Touch" factory setting) and 45° posterior; includes knee pad Max. load: up to 160 kg (352.7 lbs)

* Indication-related

** Depending on equipment selected

Drive wheels and caster wheels – variants available

Drive wheels	
Wheel size	14"
Tyre type	Pneumatic tyres
Air pressure	Adjust the tyre pressure according to the specifications on the tyre sidewall to prevent injuries or damage to the product: 3.5 bar / 350 kPa / 50 PSI

Drive wheels	
Wheel size	14"
Tyre type	PU tyres

Caster wheels	
Wheel size	6"
Tyre type	PU tyres

Caster wheels	
Wheel size	9"
Tyre type	Pneumatic tyres
Air pressure	Adjust the tyre pressure according to the specifications on the tyre sidewall to prevent injuries or damage to the product: 3.5 bar / 350 kPa / 50 PSI

Caster wheels	
Wheel size	9"
Tyre type	PU tyres

Caster wheels	
Wheel size	10"
Tyre type	Pneumatic tyres
Air pressure	Adjust the tyre pressure according to the specifications on the tyre sidewall to prevent injuries or damage to the product: 3.5 bar / 350 kPa / 50 PSI

Caster wheels	
Wheel size	10"
Tyre type	PU tyres

Driving data, batteries, distance ranges

Driving data	
Speed*	See nameplate for precise information: 6 km/h (3.7 mph); 7.2 km/h (4.4 mph); 10 km/h (6.2 mph)**
Climbing ability (basic model)**	Minimum: 9° (15.8 %); maximum: 10° (17.5 %)
Static stability – uphill	Minimum: 9° (15.8 %); maximum: 10° (17.5 %)
Static stability – downhill	Minimum: 9° (15.8 %); maximum: 10° (17.5 %)
Static stability – sideways	Minimum: 9° (15.8 %); maximum: 10° (17.5 %)
Dynamic stability uphill, forwards***	Minimum: 6° (10.5 %); maximum: 10° (17.5 %)

Driving data	
Dynamic stability uphill, backwards***	Minimum: 6° (10.5 %); maximum: 10° (17.5 %)
Dynamic stability – sideways****	Minimum: 6° (10.5 %); maximum: 10° (17.5 %)
Obstacles that can be overcome (e.g. curbs*****)	Minimum: 50 mm (2"); maximum 65 mm (2.5")
Braking distance (according to DIN EN 12184)*****	At 6 km/h (3.7 mph): 1000 mm (39.4") – on level surfaces At 7.2 km/h (4.4 mph): 1200 mm (47.2") – on level surfaces At 10 km/h [6.2 mph]: 2100 mm (82.7") – on level surfaces

* The specified speed can deviate by ± 10 %.

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

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

**** When turning on slopes

***** Maximum curb height that the wheelchair can drive down safely

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

Electrical circuit*	
IP protection rating (according to DIN EN 60529)	IP44
Operating voltage	24 V DC
Lighting	
LED front light	12 V, maintenance-free
LED rear light	12 V, maintenance-free
Automatic circuit breaker	100 A
Battery charger	For more information, see the included battery charger instructions for use

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

Battery	
Batteries	2 x 12 V; 62 Ah (C5) / 79.6 Ah (C20); gel; maintenance-free

Minimum driving distance range (on level surfaces)*	
Battery with 62 Ah (C5) / 79.6 Ah (C20)	Approx. 30 km (18.6 miles)

*The specified distance range was determined under defined conditions according to ISO 7176-4. In practice, the distance range can be reduced by up to **50** %. For information on this, see the section "Distance range" in the instructions for use (user).

Battery	
Batteries	2 x 12 V; 63 Ah (C5) / 74 Ah (C20); gel; maintenance-free

Minimum driving distance range (on level surfaces)*	
Battery with 63 Ah (C5) / 74 Ah (C20)	Approx. 30 km (18.6 miles)

* The specified distance range was determined under defined conditions according to ISO 7176-4. In practice, the distance range can be reduced by up to **50** %. For information on this, see the section "Distance range" in the instructions for use (user).

Battery (not delivered by Ottobock)	
Required specifications	2 x 12 V; up to max. 75 Ah (C5) / up to max. 92 Ah (C20); gel; maintenance-free

Battery charger (not delivered by Ottobock)*	
Required minimum specifications**	Battery chargers for a rated battery capacity of 25–56 Ah (C5): 8 A Battery chargers for a rated battery capacity of 45–65 Ah (C5): 10 A Battery chargers for a rated battery capacity of 55–75 Ah (C5): 12 A

Battery charger (not delivered by Ottobock)*	
	Protective insulation (class 2) according to IEC 60335-2-29; protection rating: IP21 (Ottobock recommends battery chargers with a protection rating of IP21) The battery charger fulfils the normative requirements of EN 12184. This also includes the requirements according to ISO 7176-14 (battery charger with reverse polarity protection; battery charger charges batteries to at least 80 % within 8 hours; battery charger includes information regarding nominal capacity and the possibility of charging overnight; battery charger indicates that the battery is properly connected) The device fulfils the normative requirements of ISO 7176-21 and ISO 7176-25.

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

** Note the deviating information of individual battery manufacturers.

Control device

Control device	
Model	ICON enAble® X1 control device in combination with power module and seat module
Max. output current per motor	120 A
Max. seat functions that can be controlled	6
Gyro stability control	Integrated in power module
Nominal input voltage	24 V
Operating voltage range	17 – 33 V
Absolute maximum voltage	35 V
Protection rating	IPX4

Control device accessories	
Model	ICON standard hand module (HCS = Handcontrol Standard)
Force for operating the joystick on the hand module	1.6 N
Nominal input voltage	24 V
Operating voltage range	17 – 33 V
Absolute maximum voltage	35 V
Protection rating	IPX4
Bushing for charging external devices (USB-C)	Charging voltage: 5 V (no power delivery) Max. charging current: 3 A Max. charging power: 15 W

Control device accessories	
Model	ICON LCD module (DM = Display Module)
Nominal input voltage	24 V
Operating voltage range	17 – 33 V
Absolute maximum voltage	35 V
Protection rating	IPX4
IR frequency range*	10 – 455 kHz
Bushing for charging external devices (USB-C)	Charging voltage: 5 V (no power delivery) Max. charging current: 3 A Max. charging power: 15 W

* Infrared functions are currently not supported by the control device of the LCD module.

External power supply	
SE connector	USB-A
Charging voltage	5 V (no power delivery)

External power supply	
Max. charging current	1.5 A
Max. charging power	7.5 W

Additional information

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

12 Appendices

12.1 Threshold values for wheelchairs transportable by train

INFORMATION

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

Feature	Threshold value (according to regulation (EU) No. 1300/2014)
Length	1200 mm (47.2"); plus 50 mm (2") for the feet
Width	700 mm (27.6"); plus 50 mm (2") on each side for the hands when moving
Smallest wheels	approx. 3" or greater according to the regulation, the smallest wheel must be able to accommodate a gap measuring 75 mm (3") horizontally and 50 mm (2") vertically
Height	max. 1375 mm (54.1"); including a 1.84 m (72.5") large male wheelchair user (95th percentile)
Turning radius	1500 mm (59.1")
Maximum weight	300 kg (661 lbs); for wheelchair with occupant, including baggage
Maximum obstacle height that can be overcome	50 mm (2")
Ground clearance	60 mm (2.4"); at an upward slope angle of 10°, ground clearance must measure at least 60 mm (2.4") under the foot rest for going forward at the end of the slope
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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Otto Bock Mobility Solutions GmbH
Lindenstraße 13 · 07426 Königsee/Germany
www.ottobock.com

