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CE

490E75=2_C

Table of contents

EN

1 Foreword

INFORMATION

Date of last update: 2025-09-24

- ► 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.

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).

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.

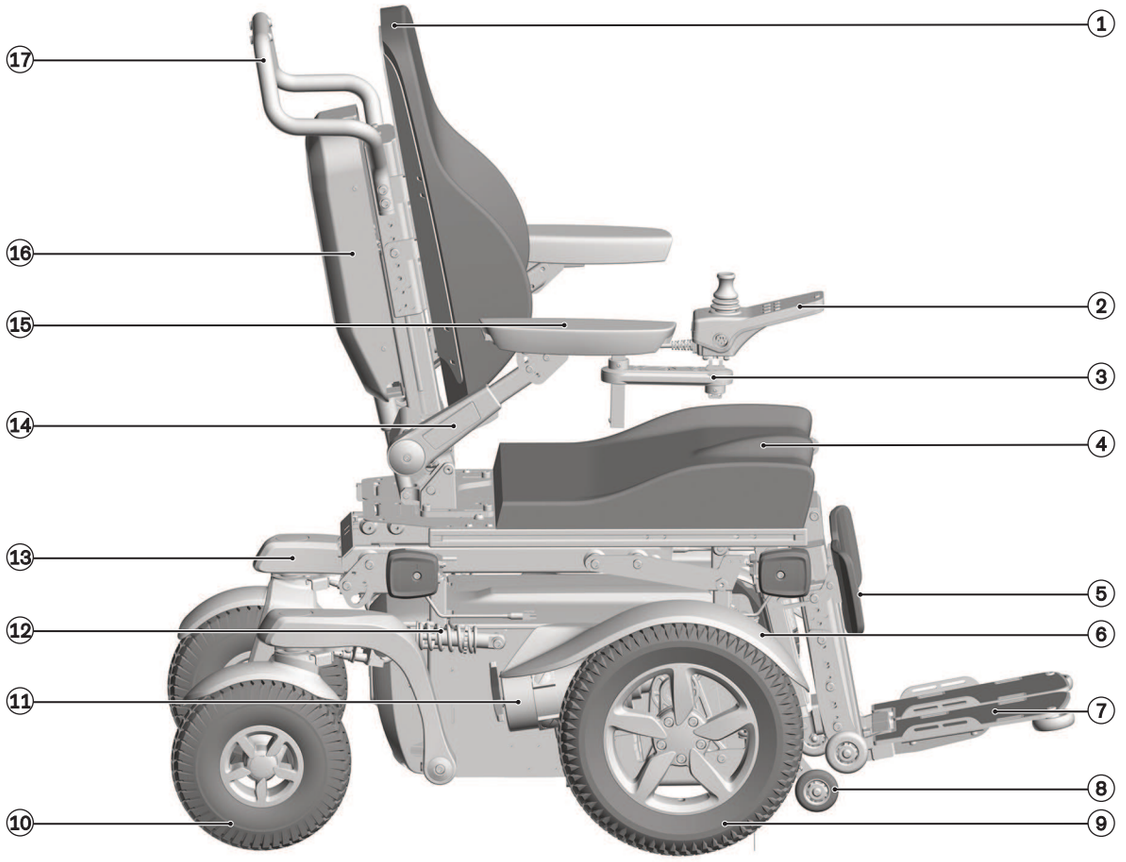
The power wheelchair is controlled by the ICON wheelchair control device (see page 19). The control device is used to enter driving commands and display the current status. The control electronics in the power module and in other integrated components make it possible to control the drive motors and 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

1



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

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 7). 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.

3.5 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.

- Regular maintenance is important. It increases safety and ensures the the product reaches its intended lifetime.
- Inspect and maintain this product **at least once a year** according to the manufacturer's specifications (maintenance plan).
  To achieve the expected lifetime of 8 years, annual inspection of the product by qualified personnel is mandatory in accordance with the maintenance plan in the service manual.

4 Safety

4.1 Explanation of warning symbols

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

4.2 General safety instructions

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

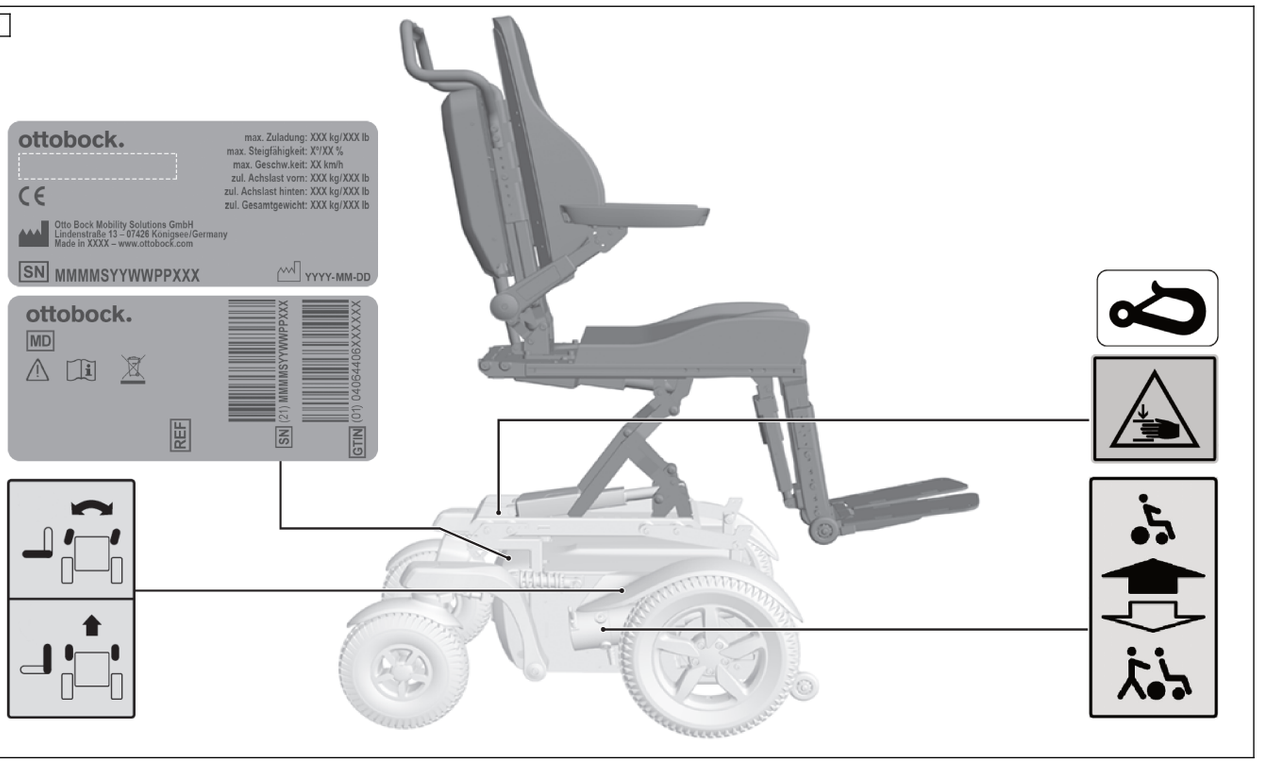
The serial number required for enquiries and ordering spare parts and accessories is found on the nameplate. For explanations of the nameplate, see the section “Nameplate” (see page 12).

4.5 Nameplate and warning labels

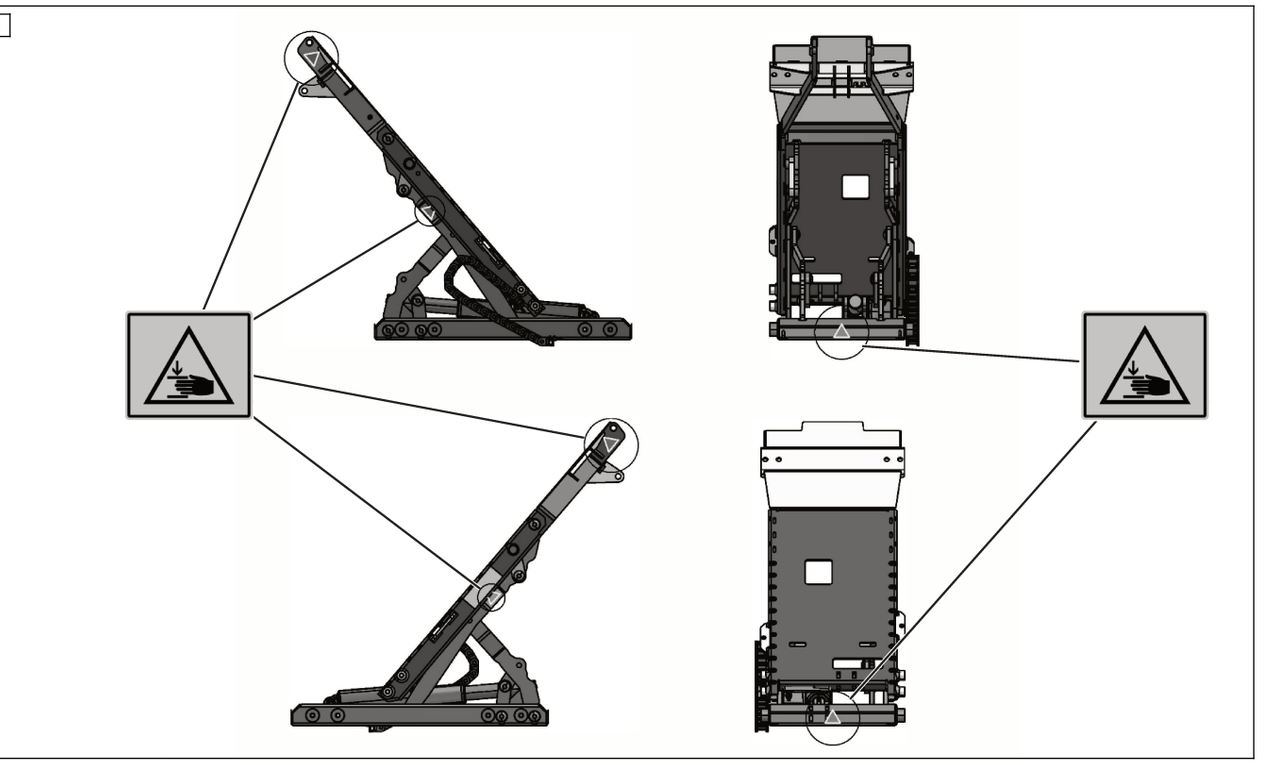
4.5.1 Signage on the product

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

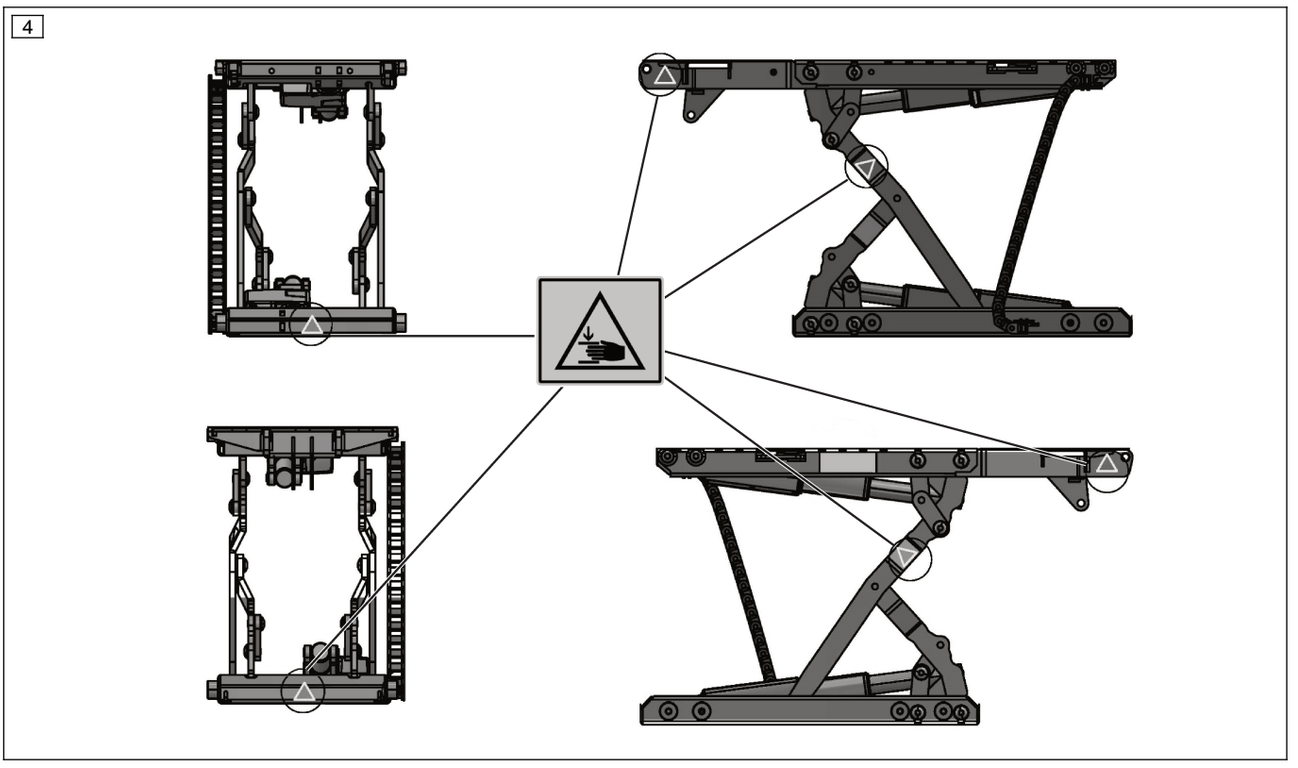
2


ottobock.
max. Zuladung: XXX kg/XXX lb
max. Steigfähigkeit: X°/XX %
max. Geschw.keit: XX km/h
zul. Achslast vorn: XXX kg/XXX lb
zul. Achslast hinten: XXX kg/XXX lb
zul. Gesamtgewicht: XXX kg/XXX lb
Otto Bock Mobility Solutions GmbH
Lindenstraße 13 – 07426 Königsee/Germany
Made in XXXX – www.ottobock.com
SN MMMMSYYWWPPXXX
YYYY-MM-DD
ottobock.
MD
REF
SN
GTIN

3

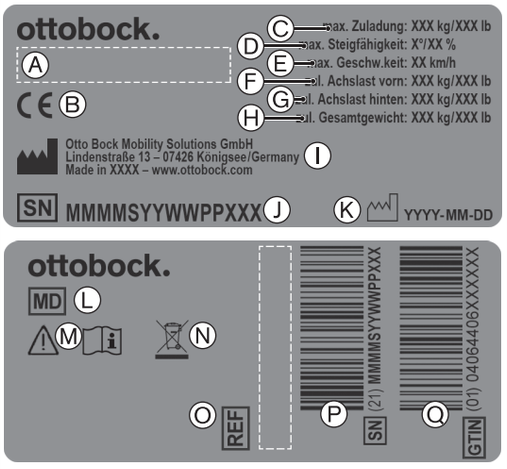


4



4.5.2 Nameplate

The nameplates are found on the mobility base.

Label		Meaning
	**A**	Reference material no. Name of the product
	B	CE marking
	C	Maximum load (see section “Technical data”)
	D	Maximum climbing ability (see section “Technical data”)
	E	Maximum speed (see section “Technical data”)
	F	Allowable axle load, front
	G	Allowable axle load, rear
	H	Allowable overall weight
	I	Manufacturer information/address
	J	Serial number[1)]
	K	Manufacturing date[2)]
	L	Symbol for medical device
	M	**WARNING!** Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).
	N	Symbol for separate collection of electrical and electronic devices. Components of the power wheelchair and batteries may not be disposed of in household waste.
	O	Manufacturer’s reference number for the product variant
	P	Serial number (PI)[3),1)]
	Q	Global Trade Item Number (DI)[4)]

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

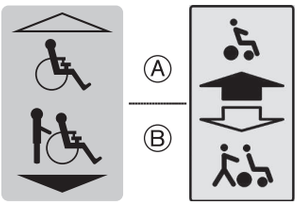
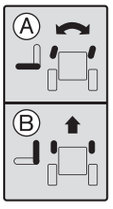
[2)] YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

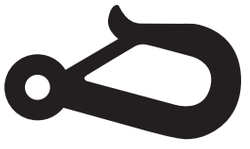
[3)] UDI-PI to GS1 standard; UDI = Unique Device Identifier, PI = Production Identifier

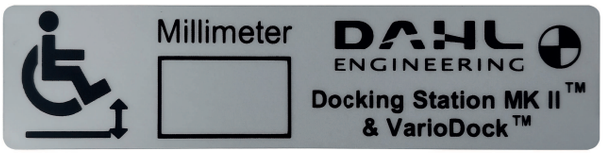
[4)] UDI-DI to GS1 standard; UDI = Unique Device Identifier, DI = Device Identifier

	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

Label		Meaning
	**A**	Power driving mode: motor brake locked (see page 37)
	B	Manual driving mode: motor brake released (see page 37)
	**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.

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

Label	Meaning
	The wheelchair is equipped with a locking plate for the Dahl MK II or VarioDock docking station from Dahl Engineering ApS. The locking plate is mounted under the wheelchair. For further information, see the instructions for use 647H1802=ALL_INT for the Ottobock 491S75=ST435 mounting kit.

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

The wheelchair is equipped for use of the Dahl MK II or VarioDock docking system from Dahl Engineering ApS. For information on using the docking system, see the corresponding assembly and operating instructions as well as the instructions for use of the Ottobock 491S75=ST435 mounting kit. The maximum permissible load for the wheelchair with this option is reduced to **136 kg**.

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 38).
- If the product is not used for a longer period of time, deactivate the main fuse after charging (see page 15). 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 71.
- 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.
- 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 15)
- Charging the battery (see page 39)

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

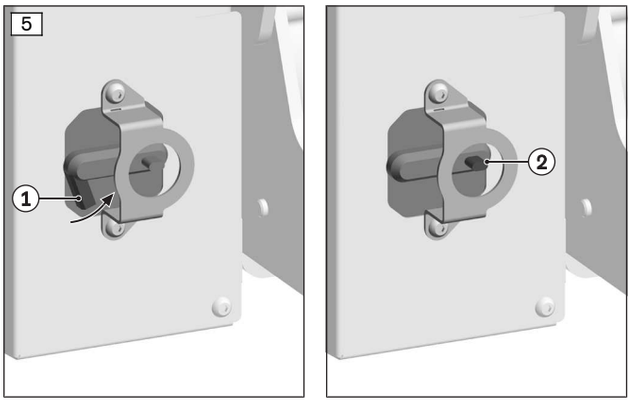
7.1 Main fuse

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. 5, 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. 5, 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.

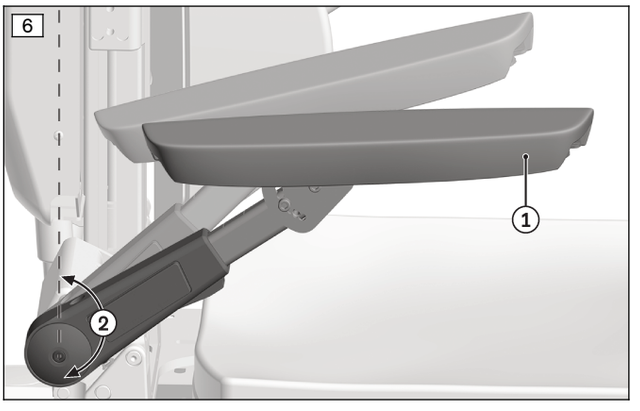
The arm supports offer the user support for the forearms.

The arm supports can be folded up if necessary to make getting in from the side easier (see page 18).

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

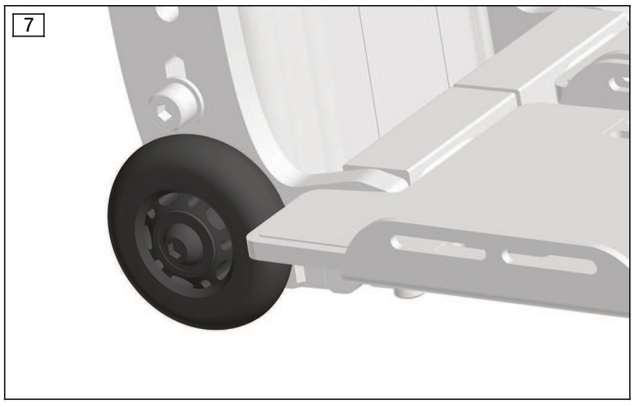
1) Grasp the front end of the arm support (see fig. 6, item 1).
2) Tilt the arm support upwards and backwards to the vertical position, or forwards and downwards (see fig. 6, item 2).

7.3 Leg support

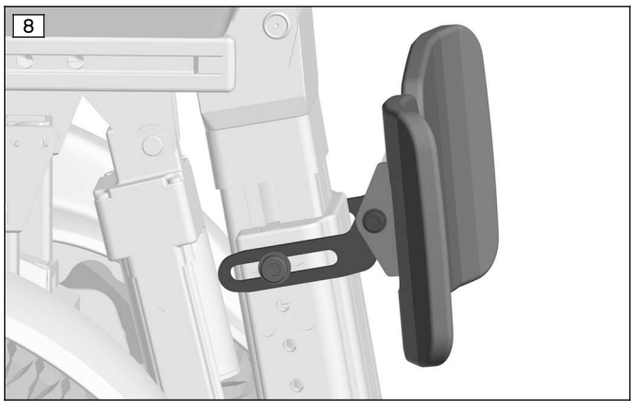
The user can place their feet on the central leg support.

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.

7.3.1 Folding the foot plate up/down

⚠ CAUTION

Improper use of the leg supports

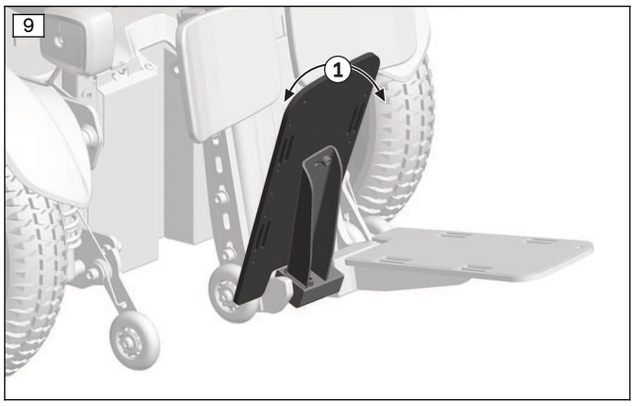
Abrasions due to sharp edges, skin irritation

► 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.

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. 9, item 1).

7.4 Backrest

⚠ CAUTION

Exposed pinch points

Crushing, pinching due to incorrect handling

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

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

7.4.1 Adjusting the back support angle

The back support angle can be adjusted as needed using the power back angle adjustment (see page 46).

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.

⚠ CAUTION

Incorrect handling when getting in

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

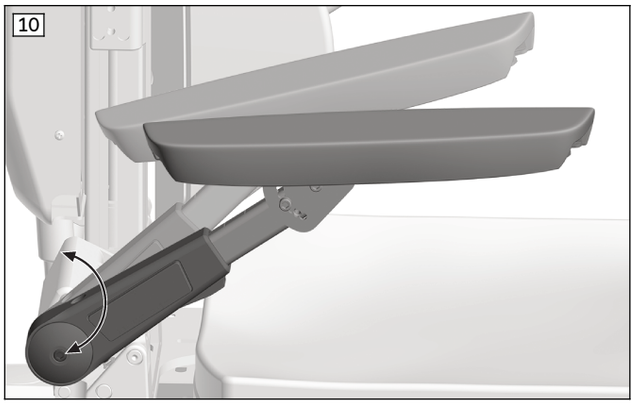
- ► Note that the wheelchair may tip if the foot plates are not lowered to the ground and you place your full weight on them while getting in or out.
- ► Only step on the foot plates when getting in or out when the seat is in the pre-programmed “Active Access” sitting position. If the wheelchair does 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.

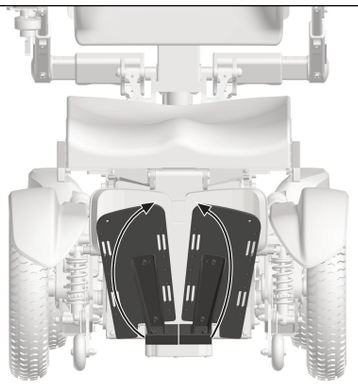
INFORMATION: If the foot plate cannot be folded easily without resistance, the mounting screws should be tightened slightly. Contact the qualified personnel if necessary.



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. 10).
4) **If necessary:** Fold up the foot plate towards the back to the stop (see fig. 11).
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.

11



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. 11).
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.

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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. 12).
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 10).
- ► 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

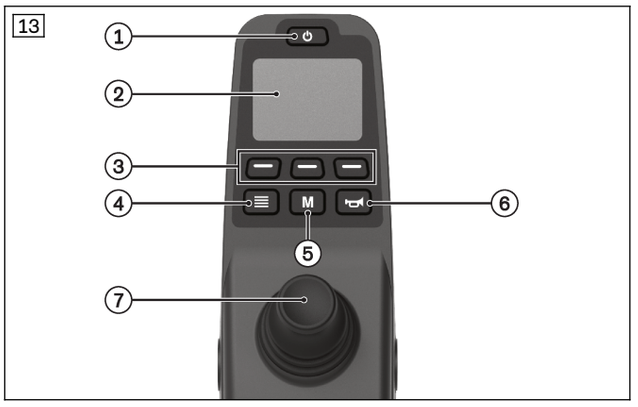
For the display functions on the LCD screen: see page 23.

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.

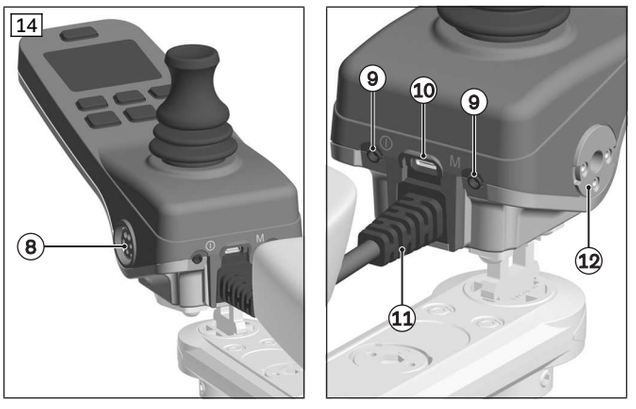
The hand module is used to switch the power wheelchair on and off, enter driving commands and display the current status of certain functions and components.

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.

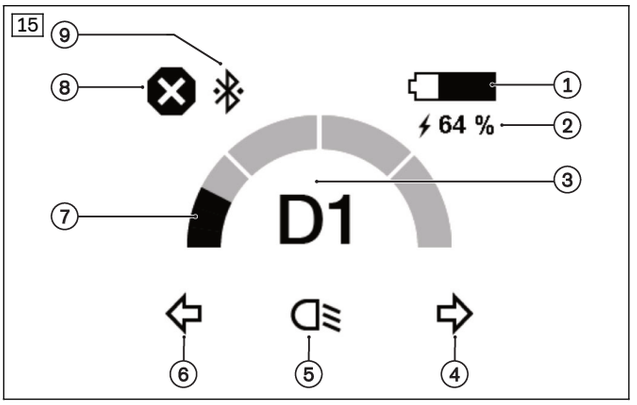
When switched on with its default programming, it shows the home screen. The sub-functions can be accessed by using the input device (e.g. joystick, Piko buttons) to select them.

Home screen	Joystick movement	Section	Screen
	Forwards	Driving functions	Driving functions (see page 33)
	To the right	Seat functions	Seat functions (see page 51)
	To the left	Auxiliary functions	Auxiliary functions (see page 27)

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 32). In combination with additional operating steps, it also activates/deactivates the drive-away lock (see page 35).

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 33).
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 49).
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 27).

[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 45 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 45 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. 14, 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.

7.6.1.2 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.

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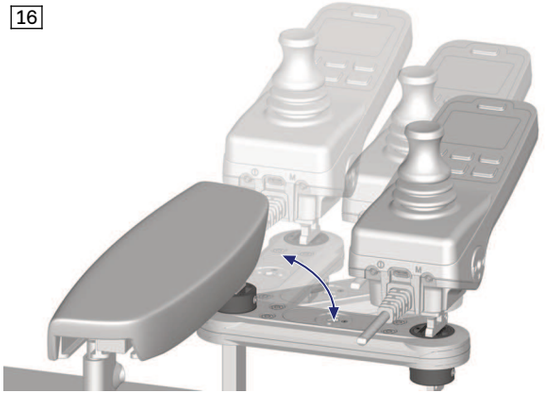


Swivelling away the holder

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

7.6.2 Display functions

INFORMATION

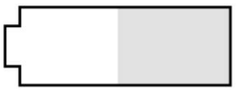
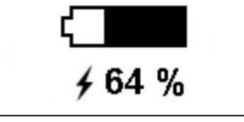
The displayed graphics and corresponding text descriptions can vary depending on the country and/or customer-specific configuration.

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 66). 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
	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)

Display	Information
	Drive-away lock (see page 35)
	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)

Display	Information
	Decreases the speed in the driving profile (in increments)
	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 63.

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.

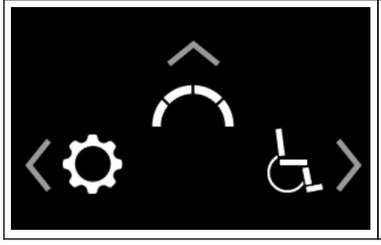
Further LCD screen functions

Further LCD screen symbols are described in the following sections:

- Section "Selecting the speed levels" (see page 33)
- Section "Drive-away lock" (see page 35)
- Section "Troubleshooting" (see page 63)

7.6.3 Day/night mode

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

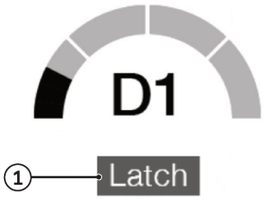
Display	Mode
	Example home screen: day mode
	Example home screen: night mode

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 27).

7.6.4 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 36). You can exit the self-holding mode by actuating the input device again.

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 19). The remaining buttons and the joystick on the hand module stop movement in self-holding mode.

7.6.5 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.

7.6.6 Adjustment possibilities

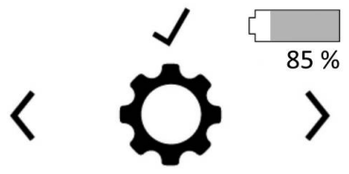
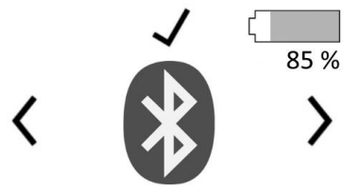
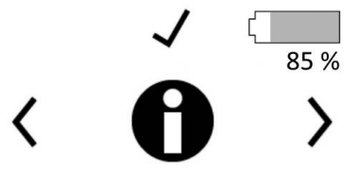
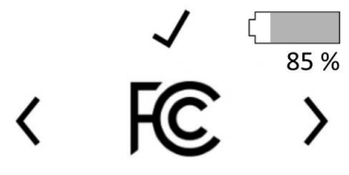
Depending on the programming, the user can adjust some settings.

7.6.6.1 ICON hand module

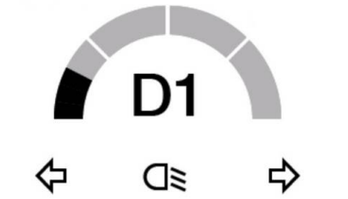
Procedure when using the ICON hand module

- 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.

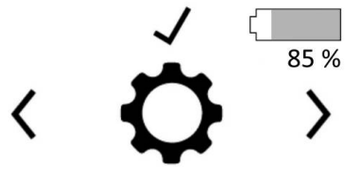
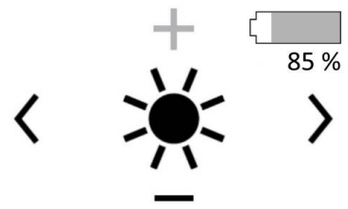
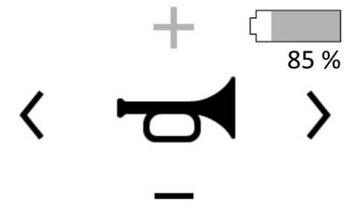
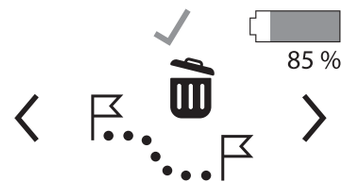
”Auxiliary” section – overview

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.
	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
	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

Display	Function	Deflection using the joystick/input device[1)]
	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.

7.7 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 71).
- 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 74).

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 9.
  - "Driving functions" > "Safety notices" section: see page 29.
  - "Power seat functions" > "Safety notices" section: see page 45.

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 37).
- ► Check the control unit display to ensure that the brakes are operational and functional (see page 66).

⚠ 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 62).
- ► 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 37).
- ► 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 19) 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 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

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 71).

► 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.

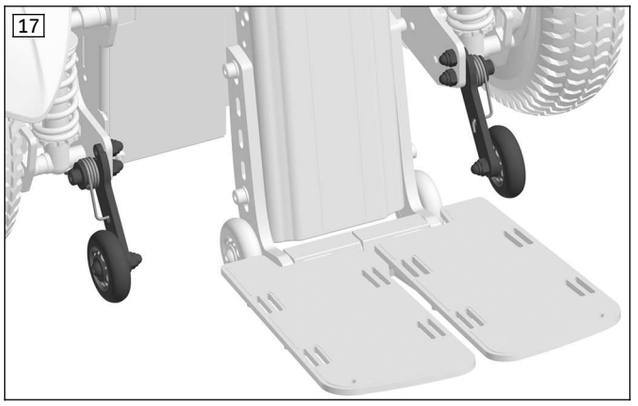
7.7.7 Range

The section "Technical data" contains precise information on the range of the product (see page 71).

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.

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.

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The limitation of the driving speed can be adjusted on the hand module using the [Softkey 1 - 3] buttons (see fig. 18):

- 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 %).

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.

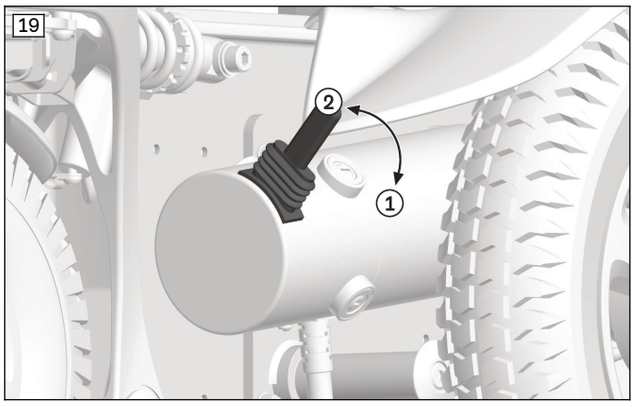
INFORMATION

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. 19, 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. 19, 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
 #4	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 66.

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

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

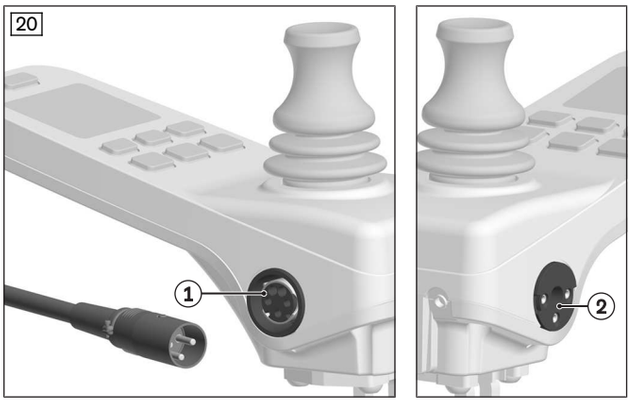
Improper charging

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. 20, item 1)
   → Magnetic charging receptacle (see fig. 20, 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.

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 16 ff.) and leg support (see page 16 ff.).

The seat is equipped with a seat module and comprehensive power seat functions (see page 45):

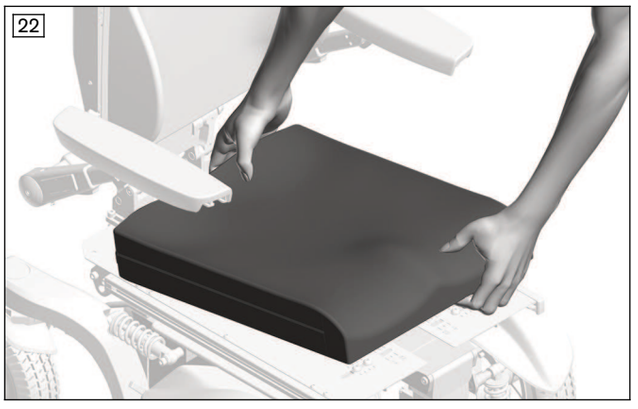
- Biomechanical back support angle adjustment
- Biomechanical knee angle adjustment (leg supports)
- Seat tilt
- “Active Access” transfer seat function
- Seat height adjustment (Multilift) with additional options “Active Touch” and “Active Relax”

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



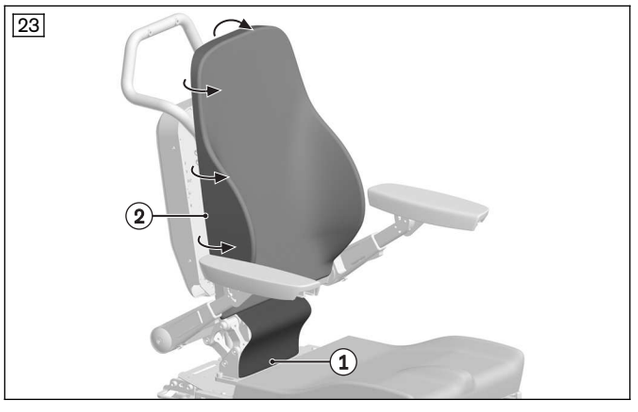
Detaching the seat pad

1) Hold the seat pad at the front and rear (see fig. 22).
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. 23, item 1).
3) Pull the back support pad cover down off the back plate (see fig. 23, 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. 23, item 2).
3) Attach the strap of the back support pad cover in the centre of the hook-and-loop fastener (see fig. 23, 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 Seat cushion

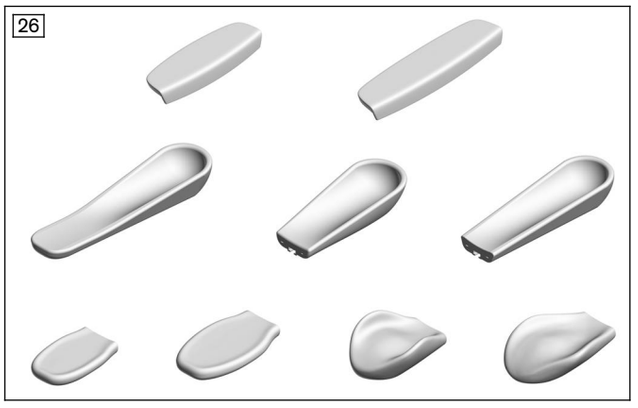
Wheelchair seat cushions are used for pressure redistribution while sitting. Depending on the version, the seat cushion contains a resilient foam base and possibly additional gel or air-filled inserts. The foam base is anatomically shaped in some cases.

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

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

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

7.10.5 Channel forearm support options



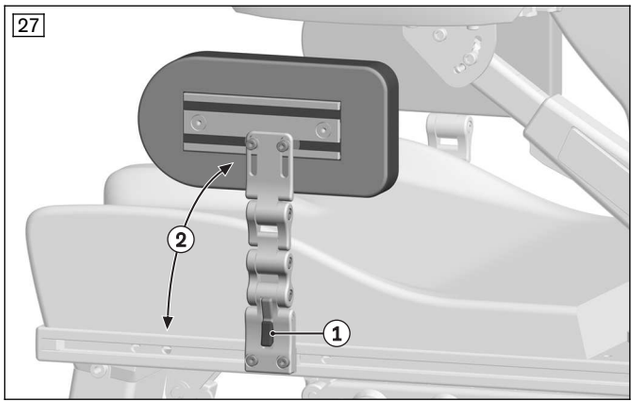
Depending on the order, different channel forearm support variants are mounted on the seat to meet the needs of the user:

- 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.

7.10.6 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. 27,item 1).
2) Fold the pad away to the side (see fig. 27, item 2).
3) After getting in or out, fold the pad up again until it engages securely.

7.10.7 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.

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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.

7.11 Power seat functions

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 51).
- ► 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.

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 45).
- ► Observe the instructions for use in the sections "Controlling power seat functions" (see page 49) and "Joystick functions" (see page 51).

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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.

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 45).
- ► Observe the instructions for use in the sections "Controlling power seat functions" (see page 49) and "Joystick functions" (see page 51).

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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 17).

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 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 45).
- ► Observe the instructions for use in the sections "Controlling power seat functions" (see page 49) and "Joystick functions" (see page 51).

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.

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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 46).

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. 12).

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.

7.11.6 Controlling power seat functions

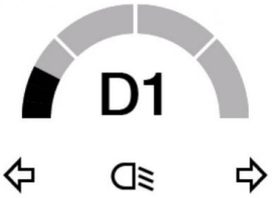
7.11.6.1 ICON hand module

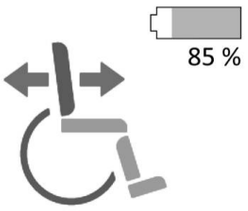
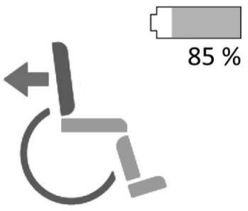
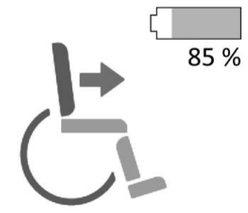
Procedure when using the ICON hand module (standard configuration)*

- The “Seat functions” section is accessed by pressing the [Mode] button (see fig. 13). The LCD screen shows the symbol for the first seat function (see page 51).
- 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 51). 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.

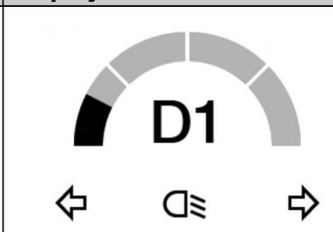
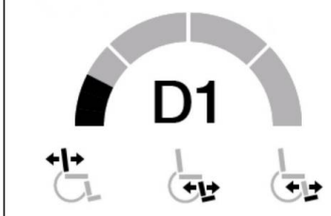
Step	Display	Action	Effect
2		Joystick right/left	Switches between seat functions (example: back support angle adjustment)
3		Joystick backwards	Seat function is adjusted as appropriate
4		Joystick forwards	Seat function is adjusted as appropriate
5	--	Press [Mode] button multiple times	Control device 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
2 – 6	See above		

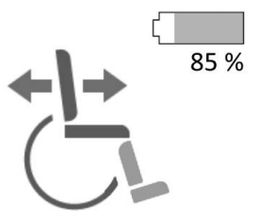
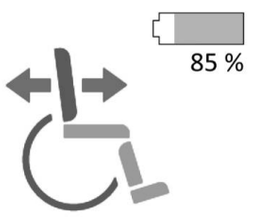
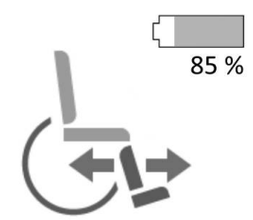
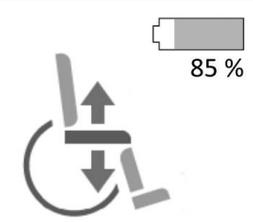
Selecting a seat function using the softkey buttons

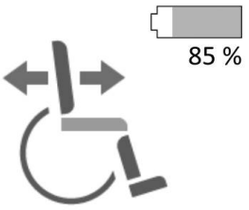
Step	Display	Action	Effect
1		Press the [Change softkey functions] button multiple times	Switches to the “Seat functions” softkey section
2		Press a [Softkey] button	Accesses the assigned seat function
3 – 6	See above		

7.11.7 Joystick functions

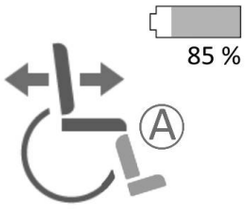
The following power seat functions can be controlled with the input device (e.g. joystick):

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 36).

[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.

7.12 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

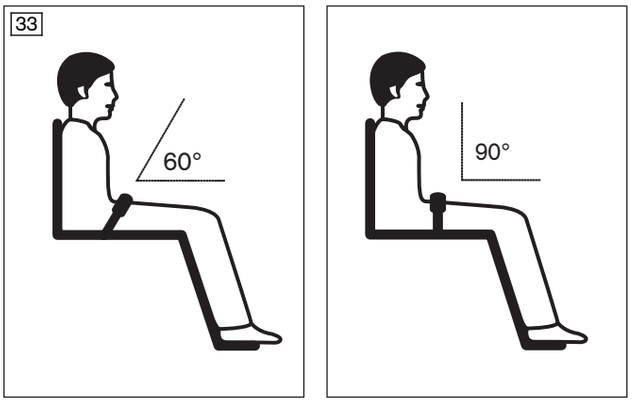
Improper adjustments

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.

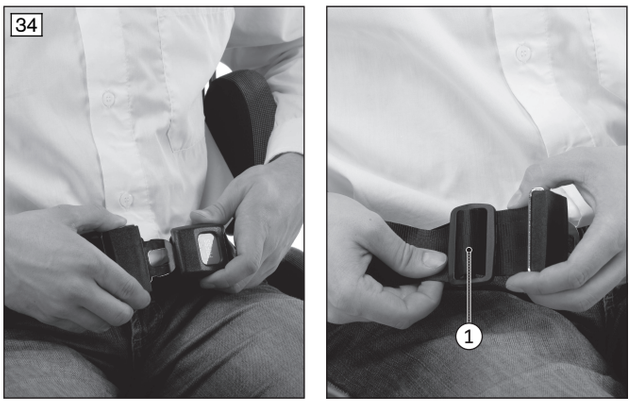


Positioning the user in the seat

- 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. 34, 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.

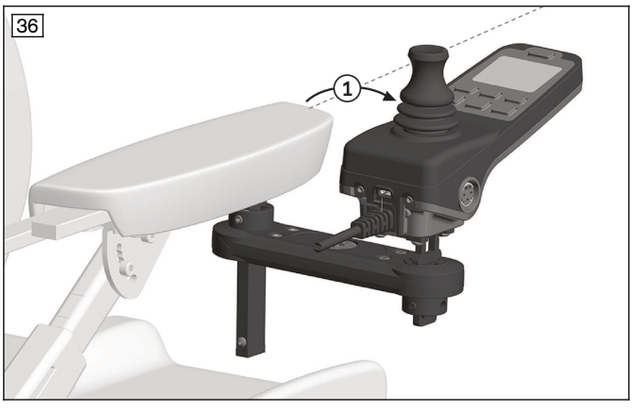
Additional cleaning instructions

- 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 Additional options

7.13.1 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.



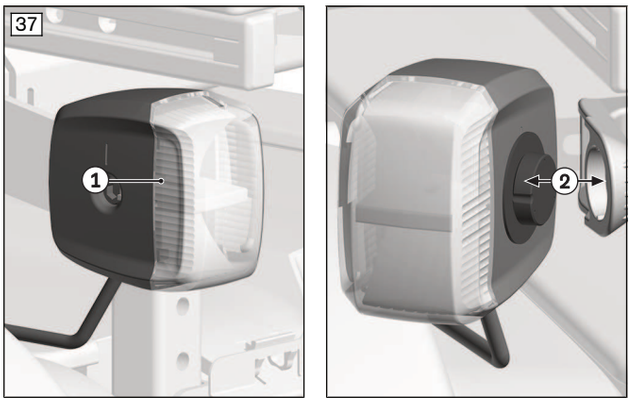
Swivelling away the hand module holder

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.

7.13.2 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. 37, item 1).

The rear lighting consists of two LED rear lights with integrated direction indicators.

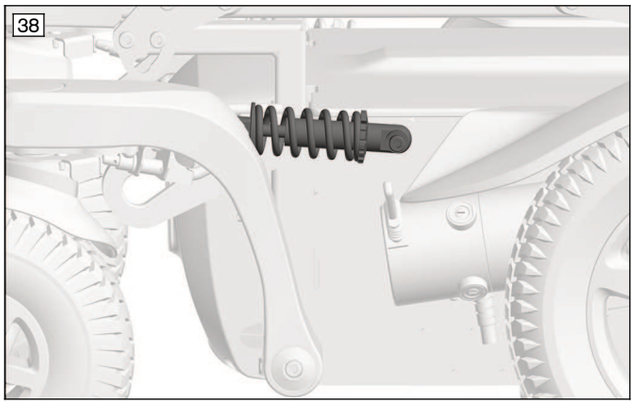
To prevent damage when manoeuvring in confined spaces, the lighting is magnetically attached to the wheelchair.

If the lighting has become disconnected from the holder, it can be simply reinserted in its previous position (see fig. 37, item 2).

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

The lighting angle is secured by latches.

7.13.3 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.

7.14 Disassembly and transport

7.14.1 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

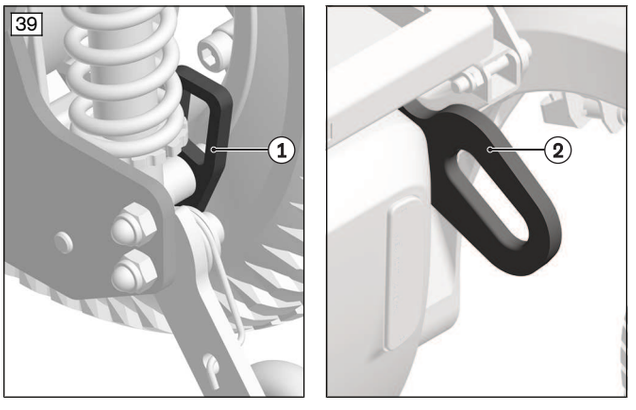
- ► Hoisting devices used for transportation must have a sufficient capacity. For more information about weight, see the section "Technical data" (see page 71).
- ► Do **not** attach the hoisting devices on moveable or adjustable components.
- ► Ensure that the seat is lowered all the way and the backrest is in a vertical position prior to loading and for transporting the power wheelchair.

7.14.2 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.

7.14.3 Preparing for transport



Transporting the power wheelchair

1) Position the power wheelchair in its transport location.
2) Turn the control device off (see page 19 ff.).
3) Verify brake locking. It should not be possible to push the power wheelchair.
   If needed: lock the brake (see page 37).
4) Fasten the power wheelchair with 4 cargo straps to the 4 transport eyebolts on the front/rear of the transport vehicle (see fig. 39, item 1/2).

7.15 Use in vehicles for transporting persons with reduced mobility

⚠ WARNING

Use in vehicles for transporting persons with reduced mobility

Serious injuries in case of accidents due to user error

- ► Always use the seats and personal restraint systems in the vehicle for transporting persons with reduced mobility first. This is the only way to ensure optimum protection of passengers in the event of an accident.
- ► The product may be used as a seat in a vehicle for transporting persons with reduced mobility if the safety elements provided by the manufacturer and appropriate fastening and personal restraint systems are used. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- ► 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 60).

⚠ 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 71).

7.15.1 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

7.15.2 Using the product in a vehicle

⚠ WARNING

Positioning in vehicles for transporting persons with reduced mobility

Serious injuries in case of accidents due to user error

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

⚠ WARNING

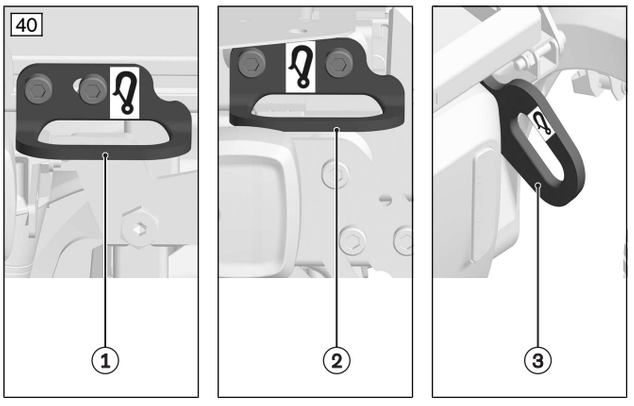
Inadequate transportation safety

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:



Attachment point positions

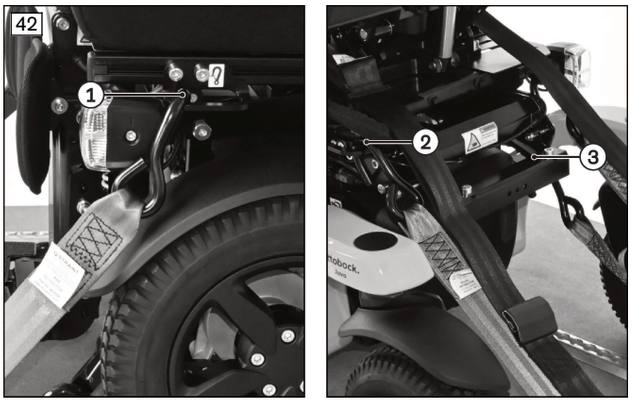
The front attachment points for securing the product in vehicles for transporting persons with reduced mobility are on the front section of the side rails of the APS seat (see fig. 40, item 1).

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. 40, item 2).

The eyebolts on the frame must also be used to tighten the vehicle side wheelchair restraint belts (see fig. 40, item 3).

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 32).
3) Verify brake locking. Engage the brakes if needed (see page 37).
4) Attach the vehicle side wheelchair restraint belts (see next illustration).

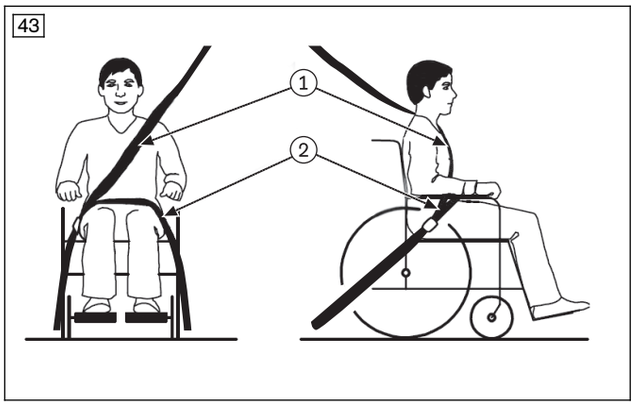


Attaching vehicle side wheelchair restraint belts

1) Engage the hooks of the vehicle side wheelchair restraint belts from the outside in the two front belt eyes (see fig. 42, 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. 42, 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. 42, item 3, slightly concealed).
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. 43 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. 43, 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.

7.15.3 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

7.15.4 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.

7.16 Care

7.16.1 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.

7.16.2 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.

7.16.3 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 62).
- 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

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 19). 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 35). 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 19). 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 66). 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.
 **# 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

Display	Degree of severity	Description
	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 message 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 If the error persists, contact qualified personnel
4	Error	Brake 2 not connected	
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	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

Error code	Error type	Meaning	Correction
21	Error	Battery overvoltage (batteries may be overcharged)	1. Turn off the control device; 2. Wait 5seconds 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
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.**

Error code	Error type	Meaning	Correction
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 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

Error code	Error type	Meaning	Correction
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 If the error persists, contact qualified personnel
82	Error	Overcurrent in motor M2	
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 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

Error code	Error type	Meaning	Correction
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

8.4 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 27)

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.

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.

Application class (according to DIN EN 12184)
Class B

Drive type
Front-wheel drive

Front-wheel drive weight	
Maximum weight	172 kg (379 lbs)

Load	
Maximum load	160 kg (352.7 lbs); the load is reduced depending on equipment

User weight*	
Maximum user weight (User + luggage)	120 kg (264.5 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.

** Reduced to **136 kg** if equipped with the Dahl docking system mounting kit.

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

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 – 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 function (power)	
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 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	
Wheel size	14"
Tyre type	PU tyres

Caster wheels	
Wheel size	9"
Tyre type	PU tyres

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 %)
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 LED rear light	 12 V, maintenance-free 12 V, maintenance-free
Automatic circuit breaker	100 A

Electrical circuit*	
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).

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

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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