



# Juvo

EN Instructions for use (qualified personnel) .....	3
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# 1 Foreword

## INFORMATION

Last update: 2017-02-21

- ▶ Please read this document carefully before using the product.
- ▶ Follow the safety instructions to avoid injuries and damage to the product.
- ▶ Instruct the user in the proper and safe use of the product.
- ▶ Please keep this document in a safe place.

## INFORMATION

- ▶ New information regarding product safety and product recalls can be obtained from the Customer Care Center (CCC) at [oa@ottobock.com](mailto:oa@ottobock.com) or from the manufacturer's service department (see inside back cover or back page for addresses).
- ▶ You can request this document as a PDF file from the Customer Care Center (CCC) at [oa@ottobock.com](mailto:oa@ottobock.com) or from the manufacturer's service department (see inside back cover or back page for addresses). It is possible to increase the display size of the PDF document.

Initial adjustments to the product were made according to the order form. Nevertheless, fine adjustment may be required and settings may have to be made according to the medical conditions or the user's requirements.

These instructions for use provide the information necessary for adjusting the settings. This work should be closely coordinated with the user.

### Please note the following:

- The instructions for use (qualified personnel) are intended only for qualified personnel and remain with them.
- The operation of the product and functionality of the options are described in the instructions for use (user). These instructions for use must be given to the user.
- All users must be instructed in the use of the product by you or an attendant using the instructions for use (user).
- The manufacturer recommends checking the product settings regularly in order to assure an optimum fit over the long term. A review is required every six months for children and youths in particular.
- The installation and retrofitting of all optional components are generally described in the service manual.

## 2 Intended use

### 2.1 Indications for use

The wheelchair is intended solely for individual, indoor use by people who are unable to walk or have a walking impediment and is operated by the patient. An option is available to allow an attendant to control the power wheelchair using an attendant control.

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

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

The operational safety of the wheelchair can only be ensured if it is used properly in accordance with the information contained in these instructions for use. The user is ultimately responsible for accident-free operation.

The wheelchair is intended solely for everyday indoor and outdoor use by people who are unable to walk or have a walking impediment and can be operated by the patient or another person. An option is available to allow an attendant to control the power wheelchair using an attendant control.

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

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

The operational safety of the wheelchair can only be ensured if it is used properly in accordance with the information contained in these instructions for use (qualified personnel) and in the instructions for use (user). The user is ultimately responsible for accident-free operation.

### 2.2 Indications

The broad range of equipment options and the modular design allow the product to be used by people who are unable to walk or have a walking impediment, for example due to:

- Paralysis (paraplegia, tetraplegia)
- Loss of limbs (leg amputation)

- Defects or deformation of the limbs
- Joint contractures or damage
- Neurological and muscular diseases

The following aspects should also be considered for custom fittings:

- Body size and body weight (for the maximum load capacity of the product, see the section "Technical data")
- Physical and mental condition
- Age of the user
- Living conditions/environment

### **2.3 Contraindications**

Due to its dimensions, this wheelchair type should not be used for small children.

### **2.4 Qualification**

The installation and adjustments described below may only be carried out by qualified personnel.

## 3 Safety

### 3.1 Explanation of warning symbols

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

### 3.2 General safety instructions

<b>⚠ WARNING</b>	<p><b>Incorrect settings</b></p> <p>Risk of falling, tipping over or improper user posture due to incorrect settings</p> <ul style="list-style-type: none"> <li>▶ Settings may only be changed by qualified personnel unless otherwise prescribed.</li> <li>▶ Before testing setting changes with the user seated, all screw connections must be firmly tightened.</li> <li>▶ Check the product for safety and functionality after changing the settings.</li> </ul>
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<b>⚠ WARNING</b>	<p><b>Improper handling of packaging materials</b></p> <p>Risk of suffocation due to neglect of the duty to supervise</p> <ul style="list-style-type: none"> <li>▶ Packaging materials must be kept out of the reach of children.</li> </ul>
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<b>⚠ CAUTION</b>	<p><b>Use of unsuitable tools</b></p> <p>Pinching, crushing or damaging the product due to use of unsuitable tools</p> <ul style="list-style-type: none"> <li>▶ When completing the tasks, only use tools that are suitable for the conditions at the place of work and for which safety and the protection of health are assured with proper use.</li> <li>▶ Observe the specifications in the section "Required Tools".</li> </ul>
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<b>⚠ CAUTION</b>	<p><b>Wearing of unsuitable work clothing</b></p> <p>Chemical burns due to insufficient protection</p> <ul style="list-style-type: none"> <li>▶ Wear suitable work clothing (for example, gloves and protective eyewear) when working on the batteries.</li> </ul>
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<b>NOTICE</b>	<p><b>Improper preparation before making adjustments</b></p> <p>Damage to the product due to falling down and failure to follow setting instructions</p> <ul style="list-style-type: none"> <li>▶ When you work on the product, secure it so that it cannot tip over or fall down.</li> <li>▶ Turn the power wheelchair off and deactivate the circuit breaker before making any adjustments. Functional tests of the electrical components are excepted from this rule.</li> <li>▶ Before performing any work on the seat, ensure that the cushion is sufficiently protected against mechanical, chemical, and thermal effects.</li> </ul>
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<b>NOTICE</b>	<p><b>Use of unsuitable packaging</b></p> <p>Damage to the product caused by transportation using incorrect packaging</p> <ul style="list-style-type: none"> <li>▶ Use only the original packaging for delivery of the product.</li> </ul>
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### 3.3 Safety Instructions for Assembly

**⚠ WARNING**

**Exposed pinch points**

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

- ▶ While adjusting power seat options, note that 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 zone while you make adjustments to power seat options.

**⚠ CAUTION**

**Unsecured screw connections**

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

- ▶ After all adjusting/readjusting work, retighten the mounting screws/nuts firmly. Observe any torque settings which may be specified.
- ▶ Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite®241).

**⚠ CAUTION**

**Improper lifting**

Crushing, pinching, blows due to failure to observe safety instructions

- ▶ Some parts of the power wheelchair, such as the batteries, frame, seat, and motors, are very heavy. Ensure ergonomically correct lifting of these parts. Use sufficiently large hoisting devices or perform this work with a helper.
- ▶ If it is necessary to work underneath raised parts or equipment, make sure these are secured by suitable means so that they cannot come loose, shift, or fall down.
- ▶ When using lifting platforms, ensure that the power wheelchair is centred on the platform and that no parts protrude into the danger zone.

**⚠ CAUTION**

**Improper assembly after making adjustments**

Tipping over, falling of the user due to incorrect assembly and adjustment

- ▶ Verify that the anti-tipper has been installed and adjusted properly.

**⚠ CAUTION**

**Uncontrolled movement of components when making adjustments**

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

- ▶ Ensure that body parts, such as hands or head, are never in the danger zone.
- ▶ Perform the work with the aid of a helper for support.

### 3.4 Programming safety instructions

**⚠ WARNING**

**Incorrect configuration settings**

Falling, tipping over, collision due to programming errors

- ▶ Programming may only be performed by qualified personnel trained by the manufacturer. The manufacturer of the product and the control unit manufacturer are not liable in case of damage caused by programming which was not performed properly and/or which was not adjusted properly according to the user's abilities.
- ▶ Note that modified parameter settings in the configuration can lead to changes in driving characteristics. In particular, changes to the speed, acceleration, braking or joystick settings can lead to unexpected and therefore uncontrollable driving characteristics and cause an accident.
- ▶ After configuration/programming is complete, the user must test the driving characteristics of the product under the supervision of the qualified personnel.



### 3.5 Safety instructions regarding maintenance and repairs

#### ⚠ CAUTION

#### Damage to the product, unexpected noise or odours

Health problems for the user




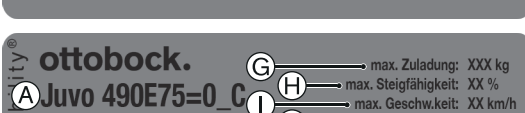
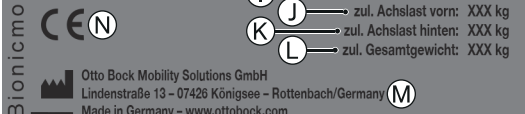
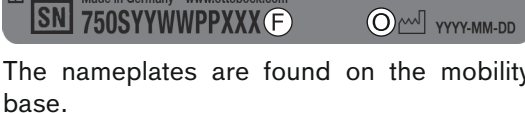

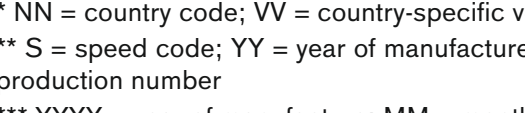
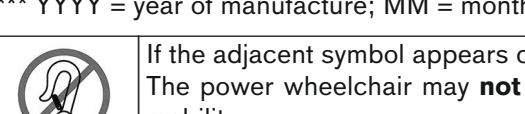
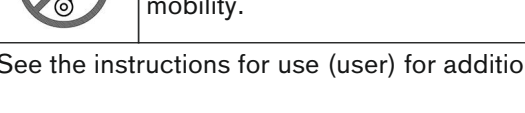

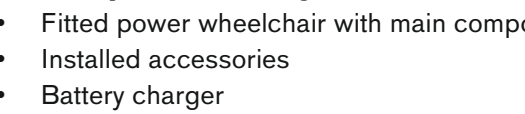
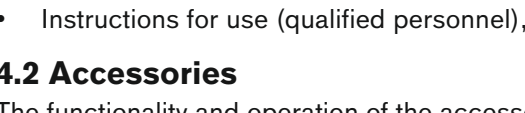
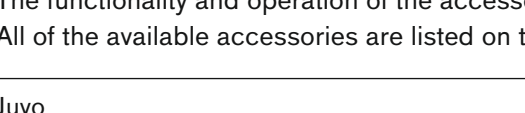

- ▶ Report damage to the product that may cause health problems for the user to Ottobock. This includes uncontrolled movements of the product as well as sounds that are unexpected or previously not noted or odours that deviate significantly from the state of the product at the time of delivery.

### 3.6 Further information

#### INFORMATION

The serial number required for further inquiries and orders is found on the nameplate (see section "Nameplate").


### 3.7 Nameplate

Label	Meaning
	<b>A</b> Product; product reference number
	<b>B</b> Read the instructions for use before using the product. Observe safety information in the instructions for use.
	<b>C</b> Symbol for separate collection of electrical and electronic devices. Components of the power wheelchair and batteries may not be disposed of in household waste.
	<b>D</b> European article number (EAN)
	<b>E</b> Product version*
	<b>F</b> Serial number**
	<b>G</b> Maximum load capacity (see section "Technical data")
	<b>H</b> Maximum climbing ability (see section "Technical data")
	<b>I</b> Maximum speed (see section "Technical data")
	<b>J</b> Allowable axle load, front
	<b>K</b> Allowable axle load, rear
	<b>L</b> Maximum gross weight
	<b>M</b> Manufacturer information/address
	<b>N</b> CE marking – product safety in accordance with EU directives
	<b>O</b> Manufacturing date***

\* NN = country code; VV = country-specific version; C = configuration

\*\* S = speed code; YY = year of manufacture; WW = week of manufacture; PP = production site; XXX = sequential production number

\*\*\* YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

	If the adjacent symbol appears on the nameplate, this indicates the following: The power wheelchair may <b>not</b> be used as a seat in vehicles for transporting persons with reduced mobility.
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See the instructions for use (user) for additional warning labels.

## 4 Delivery

### 4.1 Scope of delivery

- Fitted power wheelchair with main components
- Installed accessories
- Battery charger
- Instructions for use (qualified personnel), instructions for use (user)

### 4.2 Accessories

The functionality and operation of the accessories are described in more detail in the instructions for use (user). All of the available accessories are listed on the order form.

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

### 4.3 Accessories from other manufacturers

As per the order for the power wheelchair, some components from third-party manufacturers had to be installed prior to delivery to the user. Please observe the information in the section "Installing accessories from other manufacturers" (see Page 13).

### 4.4 Storage

#### NOTICE

##### Deep discharge

Battery damage due to standby current

- ▶ Deactivate the circuit breaker if the wheelchair is not used for more than 3 days.
- ▶ For deactivating the circuit breaker, see the section "Circuit breaker" in the instructions for use (user).

#### INFORMATION

To remove the fuse, see the section "Preparation for use" > "Initial operation".

#### Storage conditions

- Maintain an ambient temperature between **-15 °C and +40 °C (5 °F and +104 °F)** and relative humidity between **45 % and 85 %**.
- Store the power wheelchair in a dry, enclosed room with sufficient air circulation and protection from external influences.
- Protect the wheels against ground frost, e.g. by relieving them completely through assembly blocks or wooden boards.
- Maintain sufficient clearance from sources of heat. If the product is parked for an extended period of time or the tyres overheat (e.g. in the vicinity of radiators or in case of exposure to strong sunlight behind glass), the tyres may become permanently deformed.
- Fill pneumatic tyres with slight overpressure.
- Rotate the wheels weekly to prevent flat tyres from extended standing.
- For extended storage, store the power wheelchair so the wheels are not in contact with the ground.

#### Note regarding the tyres

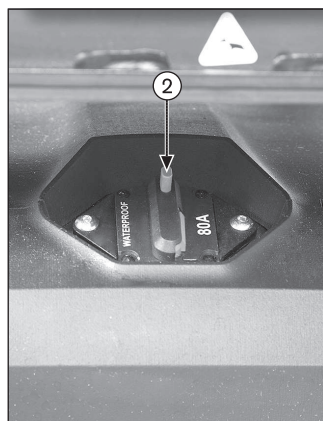
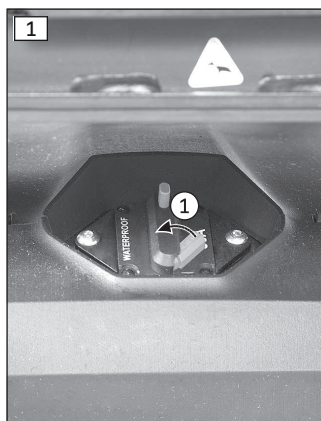
- If the power wheelchair is not moved for several days, permanent colour changes may occur where the wheelchair comes into contact with the surface it is standing on. Therefore a suitable mat should be used when parking it for extended periods of time.
- Tyres contain chemical substances that can react with other chemical substances (such as cleaning agents, acids, etc.).
- Black tyres contain soot particles. They may leave black marks where they come into contact with the ground. Therefore the manufacturer recommends grey tyres if the wheelchair 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 changed when the tread is less than **1 mm (0.04")** to ensure safe driving behaviour.
- The tyres should be replaced every **2 years** regardless of wear and tear.
- When power wheelchairs with PU tyres are parked for long periods, the tyres may become deformed (flat spots). This deformation will go away on its own over time while driving.

## 5 Preparation for use

### 5.1 Activating the circuit breaker

The automatic circuit breaker has to be activated before the power wheelchair can be switched on.

It is located under the seat between the drive wheels.



### Activating the circuit breaker

- ▶ Close the reset lever, which is at an angle (see fig. 1, 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. 1, item 2).
- The circuit breaker is deactivated.



### Activating the circuit breaker

- ▶ Close the reset lever, which is at an angle (see fig. 2, 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. 2, item 2).
- The circuit breaker is deactivated.

## 5.2 Inserting the batteries

### ⚠ WARNING

#### Exposed pinch points and instability when replacing batteries

Pinching, crushing of limbs (e.g. fingers), tipping of the power wheelchair due to lack of caution when folding up the seat

- ▶ To safely fold up the seat, grasp the seat by the seat frame, by the backrest or by the legrest adapter. Never use the legrests themselves to fold up the seat as these do not provide a firm handhold.
- ▶ After folding up the seat, shake it to verify that it is firmly locked. A seat which is not firmly locked could fall back to its starting position and result in severe crushing injuries.

### NOTICE

#### Short circuit

Damage to the electrical/electronic components due to improper battery handling

- ▶ Deactivate the circuit breaker before performing any work on the battery.
- ▶ Only use insulated tools to perform maintenance work on the batteries.
- ▶ Ensure correct polarity when you connect the battery cables. Connect the black cable to the negative terminal and the red cable to the positive terminal.

The power wheelchair is usually delivered with the batteries installed.

If required, batteries which have been delivered separately can be installed as follows:



### Folding up the seat

- 1) Loosen the mounting screws on the front side of the seat (see fig. 3, left).
- 2) Pull out the seat locking bolt (see fig. 3, right).
- 3) Slightly lift the seat out of the front lock.
- 4) Fold the seat up and back until it engages firmly.



### Inserting the batteries

- 1) Loosen the battery cover closures and lift the battery cover up and off.
  - 2) Correctly position the batteries and set them into the battery tray.
  - 3) Connect and firmly screw in the battery cables. Observe the connection diagram in the battery cover.
- NOTICE! Make sure the polarity is correct and avoid pinch points.**
- 4) Put on the battery cover, push it down and let the latches engage.
  - 5) Loosen the seat locking bolt (see fig. 3, right).
  - 6) Fold the seat down until the front lock engages.
  - 7) Tighten the mounting screws on the front side of the seat (see fig. 3, left).

## 5.3 Charging the batteries

### ⚠ WARNING

#### Incorrect charging or use of the battery

Risk of injury due to fire or explosion, battery damage, short circuit

- ▶ Observe the safety instructions in the instructions for use (user), chapter "Usage" > "Batteries/Charging Process" > "Safety Instructions".

### NOTICE

#### Insufficient ventilation of the battery charger while charging

Damage to the battery charger through user error

- ▶ Avoid overheating of the battery charger during charging.
- ▶ Ensure that the cooling fins/ventilation slots on the back of the device are not covered.

See the power wheelchair instructions for use (user) for all information regarding the charging process. The power wheelchair must be handed over to the user with fully charged batteries.

## 5.4 Folding the backrest up/down

After unpacking, the backrest must be folded up and attached.

See the power wheelchair instructions for use (user) for more detailed information.

## 5.5 Installing enclosed accessories

### 5.5.1 Installing the hand heater

Detailed information regarding installation can be found in the enclosed instructions for use. These must be provided to the user at delivery.

## 5.6 Installing accessories from other manufacturers

- Accessories from other manufacturers must be intended for use on wheelchairs and must fulfil all currently applicable legal requirements under the Medical Devices Act as well as further applicable standards.
- The work required to attach the accessories from other manufacturers must be performed only by qualified personnel with the appropriate training.
- The installation/manufacturer's instructions for the relevant accessories must be strictly observed when attaching accessories from other manufacturers.
- Ottobock assumes no liability for combinations with medical devices and/or accessories from other manufacturers not included in Ottobock's modular system.

## 6 Settings

### 6.1 Prerequisites

#### **⚠ WARNING**

##### **Incorrect settings**

Risk of falling, tipping over or improper user posture due to incorrect settings

- ▶ Adjustments may only be carried out by qualified personnel instructed by the manufacturer.
- ▶ Check for safe function before delivering the product.

#### **⚠ CAUTION**

##### **Unsecured screw connections**

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

- ▶ After all adjusting/readjusting work, retighten the mounting screws/nuts firmly. Observe any torque settings which may be specified.
- ▶ Any time you loosen a screw connection with thread lock, replace it with a new screw connection with thread lock or secure the old screw connection with medium strength thread locker (e.g. Loctite®241).

Fine fitting/adjusting work should always be performed with the user. The user should sit upright in the power wheelchair while adjustments are made.

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

The tools required for adjustments and maintenance tasks as well as the torque values for screw connections are listed in the section "Appendices" (see Page 29).

### 6.2 Basic settings

The following fitting tasks are described in more detail in the included Instructions for use (user):

- Adjusting the side panels
- Adjusting the lower leg length
- Adjusting the back angle
- Adjusting the position of the control panel

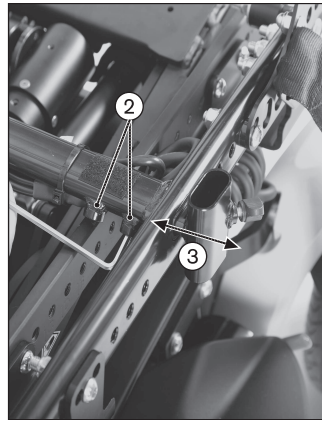
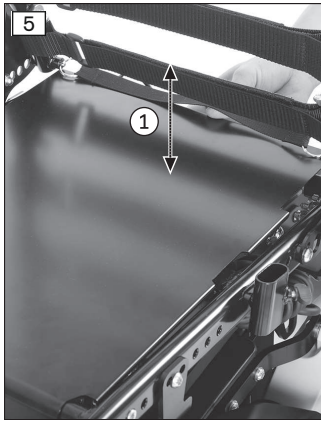
### 6.3 Adjusting the standard seat

#### 6.3.1 Adjusting the Side Panels

#### **INFORMATION**

Additional information regarding adjustment of the armrest height, the forearm length and the clothing protector can be found in the enclosed instructions for use (user).



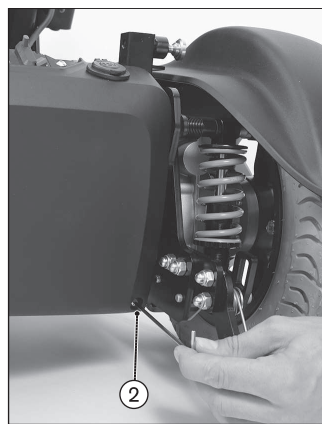
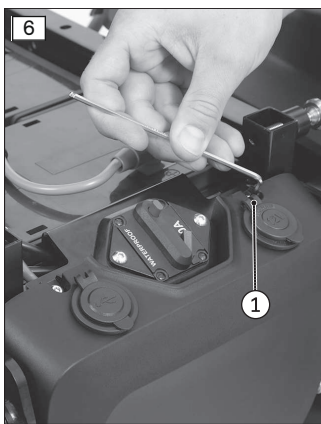


### Adjusting the side panel width

- 1) Remove the seat plate. Do this by reaching under the seat plate from behind and pushing it up and off the seat frame (see fig. 5, item 1).
- 2) Loosen the mounting screws on the seat frame (see fig. 5, item 2).
- 3) Slide the side panel mounting to the desired position (see fig. 5, item 3).
- 4) Tighten the mounting screws to **10 Nm** (see fig. 5, item 2).
- 5) Engage the seat plate on the seat frame at the front and push it down onto the seat plate at the back (see fig. 5, item 1).

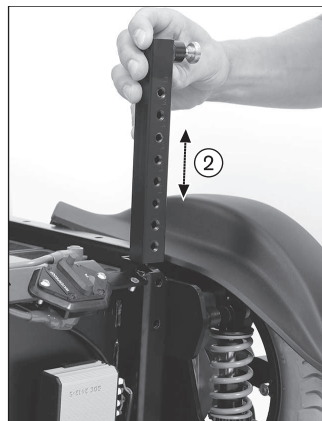
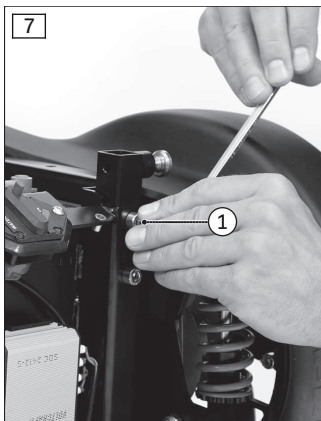
### 6.3.2 Setting the pre-tilt

The pre-tilt of the seat bottom can be subsequently changed.



### Preparatory work

- 1) Fold up the seat (see Page 11).
- 2) Remove the cover on the automatic circuit breaker. Do this by loosening the mounting screws (see fig. 6, item 1/2).
- 3) Remove the cover.



### Adjusting the pre-tilt

- 1) Loosen the 2 Allen head screws on the adjustment tubes on both sides (see fig. 7, item 1).
- 2) Adjust the height of the adjustment tubes on both sides (see fig. 7, item 2). Ensure they are at the same height.
- 3) Firmly retighten the Allen head screws on the adjustment tubes to **25 Nm** (see fig. 7, item 1).
- 4) Reinstall the cover (see fig. 6).
- 5) Fold down the seat (see Page 11).

### 6.3.3 Adjusting the Back Upholstery

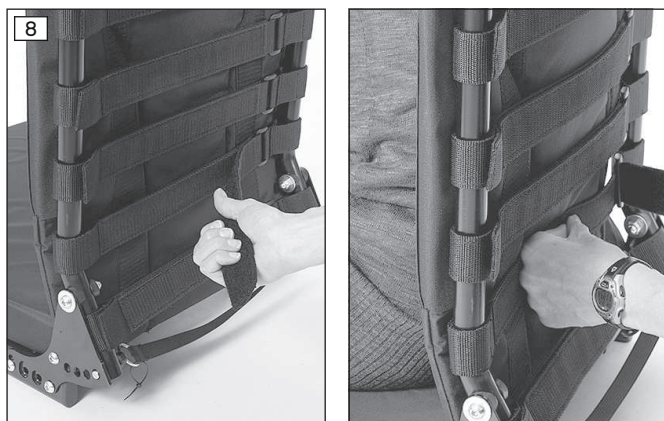
#### INFORMATION

A well adjusted backrest provides lasting comfort and reduces the risk of secondary damage and pressure zones.

#### INFORMATION

Ensure that the user's pelvis is positioned as far back in the seat as possible, i.e. between the backrest tubes.

The adaptable back upholstery of the standard seat can be adjusted in segments to the needs of the user. In order to properly adjust the upholstery, the user must be sitting in the standard seat during the adjustment process.



### Adjusting the back upholstery

- 1) Pull the fabric of the back pad off the hook and loop straps of the back upholstery and fold it up.
- 2) Open and loosen the hook and loop straps one after the other (see fig. 8).
- 3) From the bottom to the top, adjust the tension of the hook and loop straps to the weight and anatomical condition of the user and fasten the straps one after the other.

**INFORMATION:** The two ends of the hook and loop strap have to overlap by at least 100 mm in each case.

**INFORMATION:** Adjust the respective lower hook and loop straps somewhat tighter. Deviating adjustments may be required in specific cases; this is the responsibility of the attending therapist.

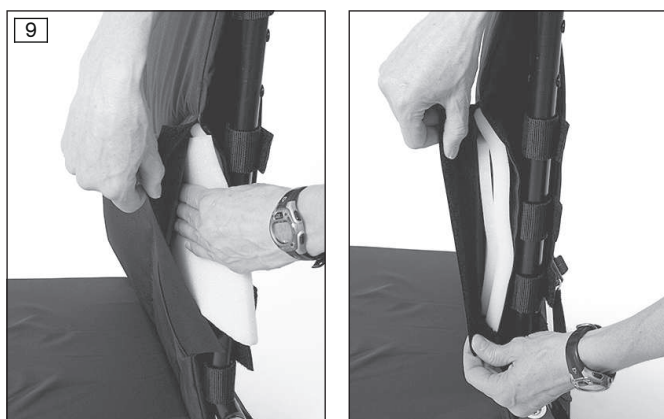
- 4) Fold the fabric of the back pad back over the hook and loop straps and press it into place.

### 6.3.4 Inserting foam elements

#### INFORMATION

Please note that the correction pads are not included in the scope of delivery and cannot be ordered from Ottobock. Please use corresponding foam elements from your inventory.

The sitting position can be fine-tuned by using various correction pads in the backrest.



### Fine-tuning the backrest

- 1) Open the side of the back pad. In order to do so, loosen the hook-and-loop closures of the side openings.
- 2) Select the correction pads as required. These can be positioned by turning/sliding to offer additional lateral guidance for the user.
- 3) Insert the correction pads as required.
- 4) Fasten the hook-and-loop closures on the side openings again.

## 6.4 Adjusting the VAS seat

### 6.4.1 Preparatory work

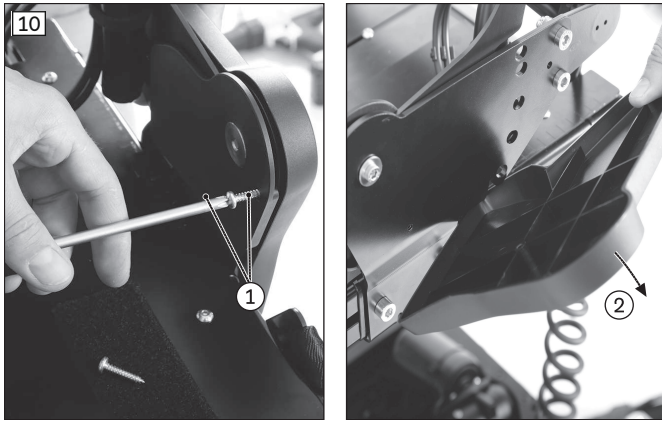
#### NOTICE

#### Incorrect cable routing

Damage to cables due to pinching

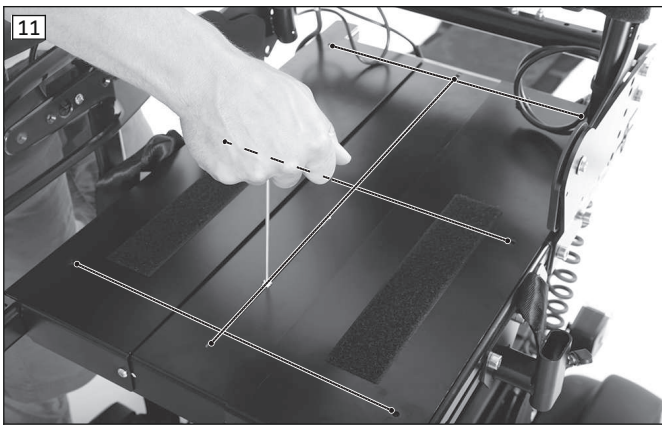
- ▶ Take note of the cables attached to the seat frame with cable ties.
- ▶ Carefully cut the cable ties with side-cutting pliers or a knife if necessary. Ensure that you do not damage the cables during this process.
- ▶ When positioning the cables make sure that they cannot be pinched. Pay particular attention to the placement of the cables in the seat adjustment area.

The covers on the backrest and the seat plates must be removed as needed to allow you to carry out the seat adjustments described below.



**Removing/installing the cover**

- 1) Loosen the mounting screws on the cover (see fig. 10, item 1).
- 2) Remove the cover (see fig. 10, item 2).
- 3) Reinstall the cover following completion of the adjustment work. Do so by hand-tightening the mounting screws.

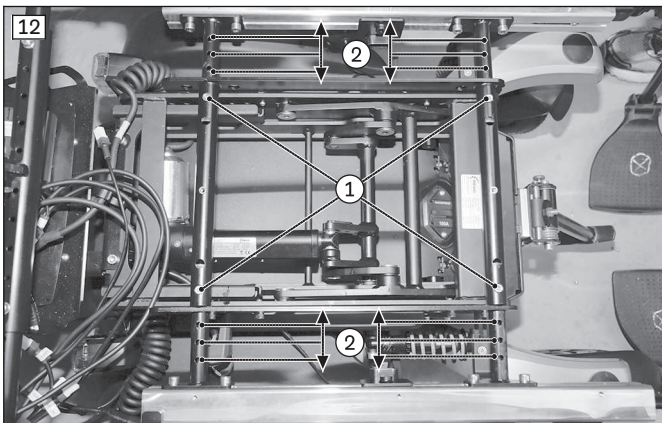


**Removing/installing the seat plates**

- 1) Loosen all mounting screws on the seat plates (see fig. 11).
- 2) Slightly loosen the mounting screws on the backrest if necessary to access the seat plates (see Page 17).
- 3) Remove the seat plates.
- 4) The seat width and centre of gravity can now be adjusted (see following section).
- 5) Install the seat plates and tighten the mounting screws to **4 Nm** (see fig. 11).
- 6) If necessary, tighten the mounting screws on the backrest to **25 Nm** (see Page 17).

**6.4.2 Adjusting the seat width**

The width of the seat bottom can be adapted to the width of the cushion that is used.



**Adjusting the seat width**

- 1) Remove the seat plates (see previous section).
- 2) Loosen the Allen head screws on the adjustment tubes (see fig. 12, item 1).
- 3) Adjust the seat width symmetrically (see fig. 12, item 2).

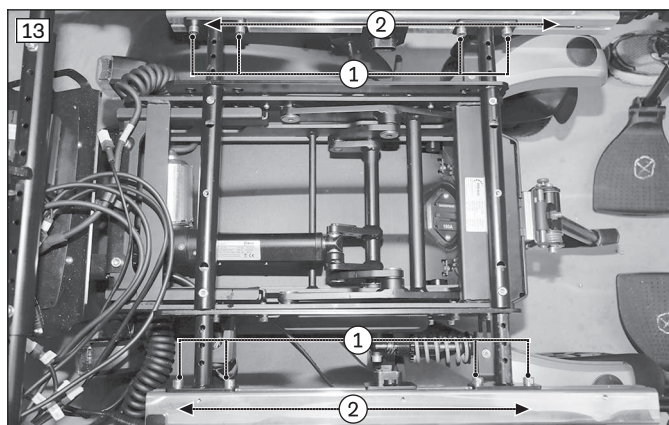
**INFORMATION: If necessary, adjust the seat's centre of gravity prior to the next step (see following section).**

- 4) Firmly retighten all Allen head screws on the adjustment tubes to **10 Nm**.
- 5) Reinstall the seat plates (see previous section).

**6.4.3 Adjusting the centre of gravity**

The seat's centre of gravity can be adjusted by sliding the seat bottom relative to the drive system platform.





#### Adjusting the centre of gravity

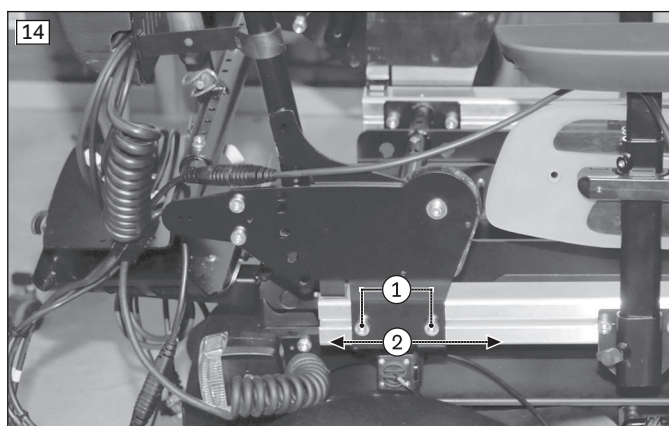
- 1) Remove the seat plates (see Page 15).
- 2) Loosen the Allen head screws on the seat profiles (see fig. 13, item 1).
- 3) Adjust the centre of gravity by sliding (see fig. 13, item 2).

**INFORMATION: If necessary, adjust the seat width prior to the next step (see previous section).**

- 4) Firmly retighten all Allen head screws on the seat profiles to **25 Nm**.
- 5) Reinstall the seat plates (see Page 15).

#### 6.4.4 Adjusting the seat depth

The seat depth can be adjusted by repositioning the backrest to the front or back.



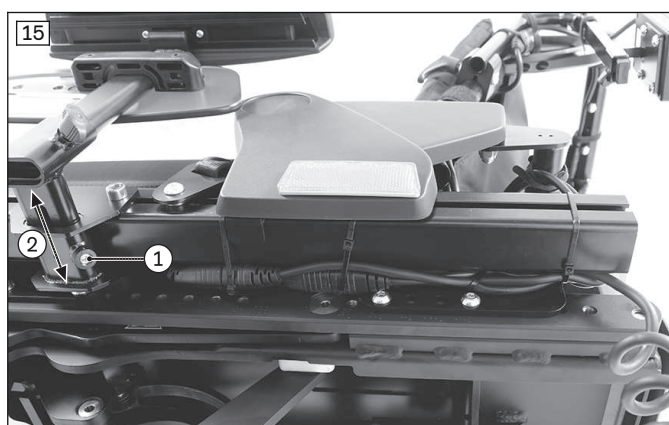
#### Repositioning the backrest

- 1) Remove the cover (see Page 15).
- 2) Loosen the backrest mounting screws (see fig. 14, item 1).
- 3) Reposition the backrest symmetrically (see fig. 14, item 2). Use the scale on the frame tube for guidance.
- 4) Tighten the mounting screws to **25 Nm**.
- 5) Reinstall the cover (see Page 15).

#### 6.4.5 Adjusting the Side Panels

##### INFORMATION

Additional information regarding adjustment of the armrest height, the forearm length and the clothing protector can be found in the enclosed instructions for use (user).

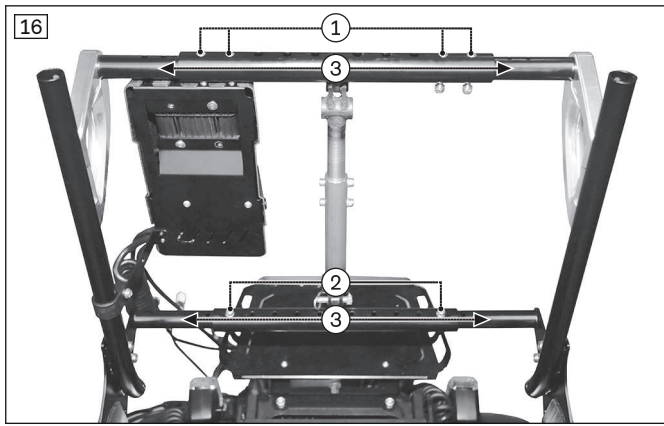


#### Adjusting the side panel width

- 1) Loosen the mounting screw on the seat frame (see fig. 15, item 1).
- 2) Slide the side panel mounting to the desired position (see fig. 15, item 2).
- 3) Tighten the mounting screws to **10 Nm** (see fig. 15, item 1).

#### 6.4.6 Adjusting the back width

The width of the back can be adjusted in parallel to the seat bottom width.

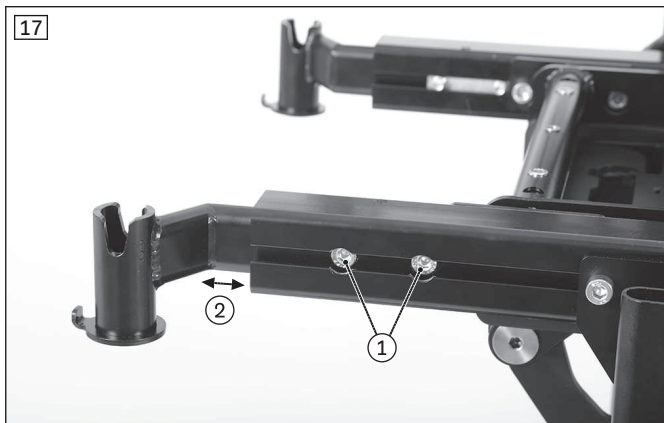


### Adjusting the backrest width

- 1) Remove the back plate (not illustrated).  
**Alternative:** Open the back upholstery (procedure same as for standard seat: see Page ).
- 2) Loosen the Allen head screws on the upper connecting tube (see fig. 16, item 1).
- 3) Loosen the Allen head screws on the lower connecting tube (see fig. 16, item 2).
- 4) Adjust the width of the backrest (see fig. 16, item 3).
- 5) Firmly retighten all Allen head screws on the adjustment tubes to **10 Nm**.
- 6) Install the back plate. In doing so, tighten the mounting screws to **6 Nm**.  
**Alternative:** Adjust the back upholstery.

### 6.4.7 Adjusting the legrests

The depth of the legrest and the lower leg length can be adjusted.



### Adjusting the legrest

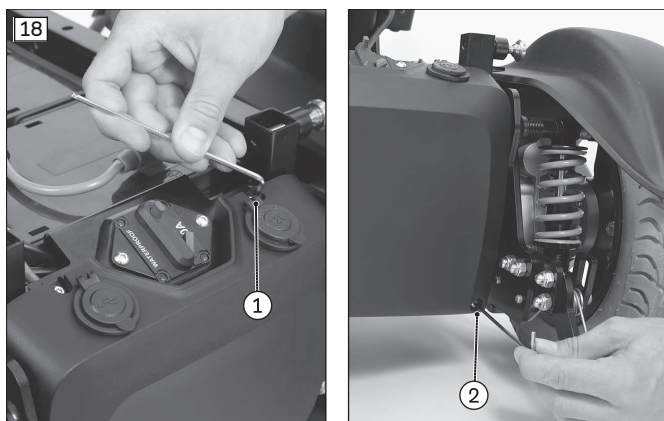
- 1) Loosen the Allen head screws on the seat profiles (see fig. 17, item 1).
- 2) Adjust the depth of the legrests by sliding (see fig. 17, item 2).
- 3) Hand-tighten the Allen head screws.

### Adjusting the lower leg length

This setting is described in the instructions for use (user).

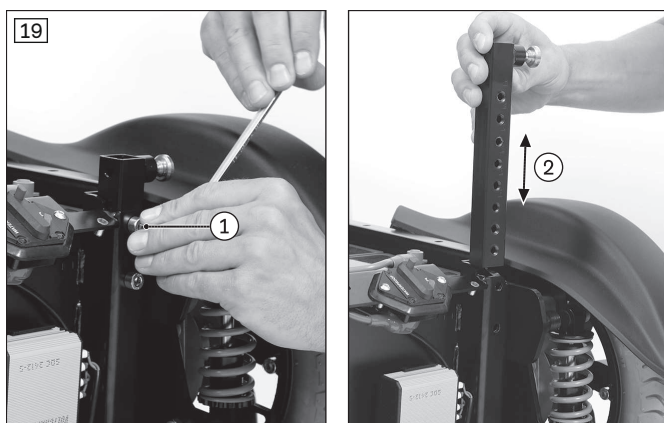
### 6.4.8 Setting the pre-tilt

The pre-tilt of the seat bottom can be subsequently changed.



### Preparatory work

- 1) Fold up the seat (see Page 11).
- 2) Remove the cover on the automatic circuit breaker. Do this by loosening the mounting screws (see fig. 18, item 1/2).
- 3) Remove the cover.



### Adjusting the pre-tilt

- 1) Loosen the 2 Allen head screws on the adjustment tubes on both sides (see fig. 19, item 1).
- 2) Adjust the height of the adjustment tubes on both sides (see fig. 19, item 2). Ensure they are at the same height.
- 3) Firmly retighten the Allen head screws on the adjustment tubes to **25 Nm** (see fig. 19, item 1).
- 4) Reinstall the cover (see fig. 18).
- 5) Fold down the seat (see Page 11).

## 6.4.9 Adjusting the Back Upholstery

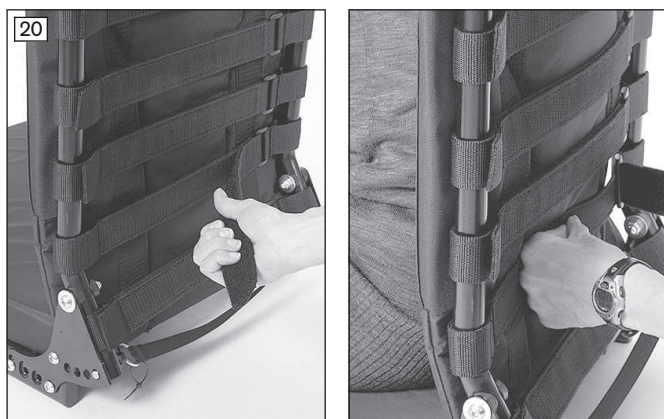
### INFORMATION

A well adjusted backrest provides lasting comfort and reduces the risk of secondary damage and pressure zones.

### INFORMATION

Ensure that the user's pelvis is positioned as far back in the seat as possible, i.e. between the backrest tubes.

The adaptable back upholstery of the standard seat can be adjusted in segments to the needs of the user. In order to properly adjust the upholstery, the user must be sitting in the standard seat during the adjustment process.



### Adjusting the back upholstery

- 1) Pull the fabric of the back pad off the hook and loop straps of the back upholstery and fold it up.
- 2) Open and loosen the hook and loop straps one after the other (see fig. 20).
- 3) From the bottom to the top, adjust the tension of the hook and loop straps to the weight and anatomical condition of the user and fasten the straps one after the other.

**INFORMATION: The two ends of the hook and loop strap have to overlap by at least 100 mm in each case.**

**INFORMATION: Adjust the respective lower hook and loop straps somewhat tighter. Deviating adjustments may be required in specific cases; this is the responsibility of the attending therapist.**

- 4) Fold the fabric of the back pad back over the hook and loop straps and press it into place.

## 6.5 Adjusting the ADI back (Baxx line)

The ADI aluminium flat top back system (Baxx line) is an option for installation on Ottobock power wheelchairs.

Detailed information regarding the adjustments can be found in the enclosed instructions for use. These must be provided to the user at delivery.

## 6.6 Adjusting the belt length

### 6.6.1 Safety instructions

#### CAUTION

##### **Incorrect approach to the adjustment process**

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

- ▶ The qualified personnel is responsible for individual positioning and fitting of the belt system.
- ▶ Excessively tight adjustment of the belt system may lead to unnecessary pain or illness of the user.
- ▶ Adjusting the belt system too loosely can cause the user to slide into a dangerous position. In addition, the fastening snaps could open unintentionally if they slide against hard parts of clothing (e.g. buttons).

#### CAUTION

##### **Lack of instruction**

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

- ▶ The qualified personnel is responsible for making sure that the user and/or attendant/nursing staff has understood the proper adjustment, use, maintenance and care of the belt system.
- ▶ In particular, ensure that the user and/or attendant/nursing staff knows how to quickly loosen and open the product to avoid delays in case of emergency.

### 6.6.2 Adjusting the lap belt

Notes on the correct positioning of the user in the seat/seating system and on adjusting and applying the lap belt are found in the instructions for use (user) for this power wheelchair.

### 6.6.3 Adjusting other belt systems

Notes on the correct positioning of the user in the seat/seating system are found in the instructions for use (user) for this power wheelchair.

Notes on correct adjustment and application are found in the enclosed instructions for use for the belt system.

## 7 Changing control unit parameters

#### WARNING

##### **Incorrect configuration settings**

Falling, tipping over, collision due to programming errors

- ▶ Programming may only be performed by qualified personnel trained by the manufacturer. The manufacturer of the product and the control unit manufacturer are not liable in case of damage caused by programming which was not performed properly and/or which was not adjusted properly according to the user's abilities.
- ▶ Note that modified parameter settings in the configuration can lead to changes in driving characteristics. In particular, changes to the speed, acceleration, braking or joystick settings can lead to unexpected and therefore uncontrollable driving characteristics and cause an accident.
- ▶ After configuration/programming is complete, the user must test the driving characteristics of the product under the supervision of the qualified personnel.

### 7.1 Programming accessories

This power wheelchair was ordered and delivered with programming accessories.

The programming accessories (handheld programming device; programming software) facilitate programming of the wheelchair control unit. Further information on programming can be found in the 647G2002 service manual or the SK77981 R-Net Technical Manual.

### 7.2 Wheelchair control options

If necessary, the pre-programmed wheelchair control system can be adjusted to the specific user requirements.

Information on operation and troubleshooting of the wheelchair control unit can be found in the instructions for use (user).

The following programming information is included in the instructions for use (user):

- Programming of environmental control via Bluetooth with the TEN° control panel for operating PCs (Windows) and tablets/smartphones (iDevices; Android 4.0 or higher)
- Programming of environmental control via infrared with the TEN° control panel (e.g. TV, audio, video, projectors etc.)



Further information on programming can be found in the service manual.

### 7.3 Attendant control

The power wheelchair was ordered and equipped with an attendant control. It may be necessary to fit the already installed attendant control to the actual body size of the attendant.

The instructions for use (user) contain information on operating and troubleshooting the attendant control.

### 7.4 Special controls

The power wheelchair was ordered and equipped with special controls.

When special controls are installed, the control functions are not carried out using the standard joystick on the control panel but using modular components (such as sip and puff control, chin control, mini/midi joystick control).

Special controls which are already pre-programmed may have to be adapted to the user's specific requirements.

Further information can be found in the enclosed instructions for use, "R-Net special controls and environmental control".

## 8 Delivery

### 8.1 Final inspection

A final inspection must be performed before delivery of the power wheelchair:

- Are all options installed according to the order form?
- Was the product fitted optimally to the physical and mental condition of the user (seat, armrests, footrests, control panel, additional controls)?
- Are the batteries charged?
- Is the tyre pressure correct (see tyre sidewall and the section "Technical data" for information)?
- Do all manual and power functions work properly?
- Do all control functions work properly?
- Do the brakes work?
- If intended: Are all options required to take part in road traffic installed and fully functional (e.g. warning triangle, lights, warning flashers)?

### 8.2 Transport to the customer

#### ⚠ 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

#### Improper transport

Damage to the product due to failure to observe transportation instructions

- ▶ 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.
- ▶ Only use sufficiently large hoisting devices to transport the power wheelchair (see section "Technical data" for the weight of the power wheelchair).

#### NOTICE

#### Use of unsuitable packaging

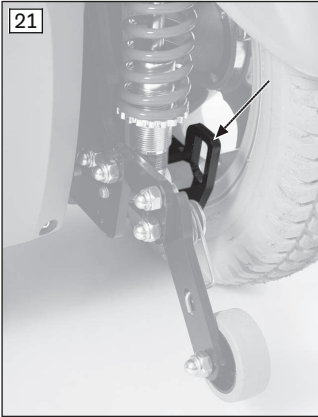
Damage to the product caused by transportation using incorrect packaging

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

#### 8.2.1 Reducing the transportation size

The instructions for use (user) contain information on reducing the transportation size.

### 8.2.2 Preparing for transport



#### Transporting the power wheelchair

- 1) Position the power wheelchair in its transport location.  
**INFORMATION: To lift or carry the power wheelchair, use the eyebolts in the front and back on the frame.**
- 2) Turn the control unit off.
- 3) Verify brake locking. It should not be possible to push the power wheelchair.  
**If needed: Lock the brake.**
- 4) Use the eyebolts and cargo straps to attach the power wheelchair to the transport vehicle (see fig. 21, arrows).

### 8.3 Handing over the product

**⚠ WARNING**  
**Lack of instruction**  
Tipping over, falling of the user due to lack of knowledge  
▶ Instruct the user or the attendant in the proper use of the product when handing it over.

The following steps must be performed for the safe handover of the product:

- Have the user get into the product and perform a trial seat fitting. Pay special attention to proper positioning according to medical considerations.
- The user and any attendants must be instructed in the safe use of the product. In particular, the enclosed instructions for use (user) are to be used.
- The instructions for use (user) must be issued to the user or an attendant during handover of the wheelchair.
- The user or attendant should acknowledge that they have been instructed in how to use the product and were informed of the residual risks.

## 9 Maintenance and repair

The manufacturer recommends regular maintenance of the product every **12 months**.

The instructions for use (user) contain further information on cleaning/disinfection as well as maintenance/repair by the user.

Detailed information on repairs and programming/troubleshooting of the control unit can be found in the service manual.

## 10 Disposal

### 10.1 Disposal Information

**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.

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

### 10.2 Information on Re-use

**⚠ CAUTION**  
**Used seat padding**  
Functional and/or hygienic risks due to re-use  
▶ Replace the seat padding if the wheelchair is to be re-used.

The product is suitable for re-use.

Similar to second-hand machines or vehicles, products that are being re-used are subject to increased strain. Features and functions must not change in a way that could endanger users or other persons within the product's lifespan.

The product must first be thoroughly cleaned and disinfected before it can be re-used. Then the product must be examined by an authorised specialist to check the condition and to look for wear and possible damage. All worn and damaged parts as well as components which do not fit or are unsuitable for the new user must be replaced.

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

## 11 Legal information

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

### 11.1 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 disregard of this document, particularly due to improper use or unauthorised modification of the product.

### 11.2 CE Conformity

This product meets the requirements of the European Directive 93/42/EEC for medical devices. This product has been classified as a class I device according to the classification criteria outlined in Annex IX of the directive. The declaration of conformity was therefore created by the manufacturer with sole responsibility according to Annex VII of the directive.

The product meets the requirements under the RoHS Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

### 11.3 Warranty

Further information on the warranty terms and conditions is available from the manufacturer's service (see inside back cover for addresses).

### 11.4 Trademarks

All product names mentioned in this document are subject without restriction to the respective applicable trademark laws and are the property of the respective owners.

All brands, trade names or company names may be registered trademarks and are the property of the respective owners.

Should trademarks used in this document fail to be explicitly identified as such, this does not justify the conclusion that the denotation in question is free of third-party rights.

## 12 Technical data

### INFORMATION

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

### Application class (according to DIN EN 12184)

Class A

### Application class (according to DIN EN 12184)

Class B

### Drive type

Front-wheel drive

### Drive type

Rear-wheel drive

<b>Mobility base</b>	
Size 1	

<b>Mobility base</b>	
Size 2	

<b>Weight (minimum/maximum)</b>	
Front-wheel drive	Minimum: 100 kg (220 lbs) Maximum: 200 kg (441 lbs)
Rear-wheel drive	Minimum: 100 kg (220 lbs) Maximum: 200 kg (441 lbs)

<b>Weight*</b>	
Equipped with mobility base 1 + standard seat	from 110 kg (from 242.5 lbs)
Equipped with mobility base 2 + standard seat	from 125 kg (from 275.5 lbs)
Equipped with mobility base 1 + VAS seat	from 115 kg (from 253.5 lbs)
Equipped with mobility base 2 + VAS seat	from 130 kg (from 286.5 lbs)

\* The specified weights vary according to the accessories and selected model.

<b>Load capacity</b>	
Maximum load capacity (User weight + luggage)	See nameplate for precise information

**Please note:** When the power wheelchair is equipped with a standard seat, Junior, the maximum load capacity is reduced to 75 kg (user weight + luggage).

<b>Dimensions – standard seat Junior</b>	
Effective seat depth*	340–400 mm (13.4"–15.7")
Effective seat width*	340–400 mm (13.4"–15.7")
Anterior seat height*	410–570 mm (16.1"–22.4")
Lower leg length**	150–540 mm (5.9"–21.2")
Back height	370/420/470 mm (14.6"/16.5"/18.5")

\* In increments of 20 mm

\*\* In increments of 10 mm

<b>Dimensions – standard seat, small</b>	
Effective seat depth*	380–460 mm (15"–18.1")
Effective seat width*	380–420 mm (15"–16.5")
Anterior seat height*	410–570 mm (16.1"–22.4")
Lower leg length**	150–540 mm (5.9"–21.2")
Back height	450/500/550 mm (17.7"/19.7"/21.6")

\* In increments of 20 mm

\*\* In increments of 10 mm

<b>Dimensions – standard seat, large</b>	
Effective seat depth*	420–500 mm (16.5"–19.7")
Effective seat width*	440–480 mm (16.9"–18.9")
Anterior seat height*	410–570 mm (16.1"–22.4")
Lower leg length**	150–540 mm (5.9"–21.2")
Back height	450/500/550 mm (17.7"/19.7"/21.6")

\* In increments of 20 mm

\*\* In increments of 10 mm

<b>Dimensions – standard seat, XL</b>	
Effective seat depth*	420–500 mm (16.5"–19.7")
Effective seat width*	500–560 mm (19.7"–22")
Anterior seat height*	410–570 mm (16.1"–22.4")



<b>Dimensions – standard seat, XL</b>	
Lower leg length**	150–540 mm (5.9"–21.2")
Back height	450/500/550 mm (17.7"/19.7"/21.6")

\* In increments of 20 mm

\*\* In increments of 10 mm

<b>Dimensions – VAS seat (all types)</b>	
Effective seat depth*	380–580 mm (14.6"–22.8")
Effective seat width*	380–540 mm (15"–21.3")
Anterior seat height**	430–570 mm (16.9"–22.4")
Lower leg length***	150–540 mm (5.9"–21.3")
Back height	450/500/550 mm (17.7"/19.7"/21.6")

\* Continuous

\*\* In increments of 20 mm

\*\*\* In increments of 10 mm

<b>Dimensions – Recaro® seat</b>	
Effective seat depth	380–560 mm (15"–22.8")
Seat width*	Inside: 320–340 mm (12.6"–13.4") Outside: 450–480 mm (17.7"–18.9")
Seat height**	410–570 mm (16.1"–22.4")
Lower leg length	280–540 mm (11"–21.2")
Back height	620 mm (24.4")

\* Inner seat width = effective seat width

\*\* In increments of 20 mm

<b>Dimensions and weights (front-wheel drive; mobility base = size 1)</b>	
Armrest height (telescoping armrest)	Standard seat: 205–275 mm (8.1"–10.8") Standard seat, Junior: 185–225 mm (7.3"–8.8") VAS seat: 185–255 mm (7.3"–10")
Armrest length (standard)	260 mm (10.2")
Foremost point of the side panel (measured to back)	Minimum: 300 mm (11.8"); maximum: 580 mm (22.8")
Overall width (standard motor / high performance motor)*	596 / 612 mm (23.5" / 24.1")
Overall height (equipped with standard seat)	850–1110 mm (33.4"–43.7")
Overall height (equipped with VAS seat)	850–1110 mm (33.4"–43.7")
Overall length (without legrest)	908 mm (35.75")
Overall length (with legrest)	Minimum: 1050 mm (41.3"); maximum: 1250 mm (49.2")
Transport weights**	See "Weight", thereof weight of removable components: Legrest (standard): approx. 2.2 kg (4.9 lbs) Detachable side panel: approx. 3 kg (6.6 lbs) Legrest (power, with aluminium footplate): approx. 6.5 kg (14.3 lbs)
Minimum turning radius	965 mm (38")
Ground clearance	80 mm
Caster wheel tyre size	9"/10"
Drive wheel tyre size	14"

\* Might be larger due to seat width adjustment. Overall width +180 mm in the assembled state.

\*\* Weight of the heaviest component

<b>Dimensions and weights (front-wheel drive; mobility base = size 2)</b>	
Armrest height (telescoping armrest)	Standard seat: 205–275 mm (8.1"–10.8") Standard seat, Junior: 185–225 mm (7.3"–8.8") VAS seat: 185–255 mm (7.3"–10")
Armrest length (standard)	260 mm (10.2")

<b>Dimensions and weights (front-wheel drive; mobility base = size 2)</b>	
Foremost point of the side panel (measured to back)	Minimum: 300 mm (11.8"); maximum: 580 mm (22.8")
Overall width (standard motor / high performance motor)*	626 mm (24.6")
Overall height (equipped with standard seat)	850–1110 mm (33.4"–43.7")
Overall height (equipped with VAS seat)	850–1110 mm (33.4"–43.7")
Overall length (without legrest)	968 mm (38.1")
Overall length (with legrest)	Minimum: 1050 mm (41.3"); maximum: 1250 mm (49.2")
Transport weights**	See "Weight", thereof weight of removable components: Legrest (standard): approx. 2.2 kg (4.9 lbs) Detachable side panel: approx. 3 kg (6.6 lbs) Legrest (power, with aluminium footplate): approx. 6.5 kg (14.3 lbs)
Minimum turning radius	965 mm (38")
Ground clearance	80 mm
Caster wheel tyre size	9"/10"
Drive wheel tyre size	14"

\* Might be larger due to seat width adjustment. Overall width +180 mm in the assembled state.

\*\* Weight of the heaviest component

<b>Dimensions and weights (rear-wheel drive; mobility base = size 1)</b>	
Armrest height (telescoping armrest)	Standard seat: 205–275 mm (8.1"–10.8") Standard seat, Junior: 185–225 mm (7.3"–8.8") VAS seat: 185–255 mm (7.3"–10")
Armrest length (standard)	260 mm (10.2")
Foremost point of the side panel (measured to back)	Minimum: 300 mm (11.8"); maximum: 580 mm (22.8")
Overall width (standard motor / high performance motor)*	596 / 612 mm (23.5" / 24.1")
Overall height (equipped with standard seat)	850–1110 mm (33.4"–43.7")
Overall height (equipped with VAS seat)	850–1110 mm (33.4"–43.7")
Overall length (without legrest)	850 mm (33.5")
Overall length (with legrest)	Minimum: 1050 mm (41.3"); maximum: 1250 mm (49.2")
Transport weights**	See "Weight", thereof weight of removable components: Legrest (standard): approx. 2.2 kg (4.9 lbs) Detachable side panel: approx. 3 kg (6.6 lbs) Legrest (power, with aluminium footplate): approx. 6.5 kg (14.3 lbs)
Minimum turning radius	965 mm (38")
Ground clearance	80 mm
Caster wheel tyre size	9"/10"
Drive wheel tyre size	14"

\* Might be larger due to seat width adjustment. Overall width +180 mm in the assembled state.

\*\* Weight of the heaviest component

<b>Dimensions and weights (rear-wheel drive; mobility base = size 2)</b>	
Armrest height (telescoping armrest)	Standard seat: 205–275 mm (8.1"–10.8") Standard seat, Junior: 185–225 mm (7.3"–8.8") VAS seat: 185–255 mm (7.3"–10")
Armrest length (standard)	260 mm (10.2")
Foremost point of the side panel (measured to back)	Minimum: 300 mm (11.8"); maximum: 580 mm (22.8")
Overall width (standard motor / high performance motor)*	642 mm (25.3")

<b>Dimensions and weights (rear-wheel drive; mobility base = size 2)</b>	
Overall height (equipped with standard seat)	850–1110 mm (33.4"–43.7")
Overall height (equipped with VAS seat)	850–1110 mm (33.4"–43.7")
Overall length (without legrest)	870 mm (34.3")
Overall length (with legrest)	Minimum: 1050 mm (41.3"); maximum: 1250 mm (49.2")
Transport weights**	See "Weight", thereof weight of removable components: Legrest (standard): approx. 2.2 kg (4.9 lbs) Detachable side panel: approx. 3 kg (6.6 lbs) Legrest (power, with aluminium footplate): approx. 6.5 kg (14.3 lbs)
Minimum turning radius	965 mm (38")
Ground clearance	80 mm
Caster wheel tyre size	9"/10"
Drive wheel tyre size	14"

\* Might be larger due to seat width adjustment. Overall width +180 mm in the assembled state.

\*\* Weight of the heaviest component

<b>Transportation size (storage length x storage width x storage height)</b>	
Storage length	1100 mm (43.3")
Storage width	Minimum: 596 mm (23.5"); maximum: 630 mm (24.8")
Storage height	500 mm (19.7")

<b>Seat and back adjustment</b>	
Seat tilt*	Minimum: 0°; maximum: 45°
Set pre-tilt of the seat	-3°/0°/3°/6°/9° (depending on order)
Back angle**	Minimum: 90°; maximum: 120°
Legrest angle***	Minimum: 90°; maximum: 165°

\* Maximum value only with power seat tilt option; specifications do not take set pre-tilt into account

\*\* Specifications do not take set pre-tilt into account

\*\*\* \* Maximum value only with power legrest option + manually adjustable legrests; specifications do not take set pre-tilt into account

<b>Power seat functions</b>	
Back angle adjustment*	Continuously adjustable by up to 30°
Seat tilt*	Adjustable by up to 45° (with centre of gravity shift)
Seat height adjustment*	Adjustable by up to 350 mm (13.8"); max. load capacity: 160 kg (353 lbs)
Combined seat height adjustment/seat tilt*	Seat height adjustment: adjustable by up to 350 mm (11.8"); seat tilt: adjustable by up to 45°; max. load capacity: 160 kg (353 lbs)
Legrests	Continuously adjustable by up to 75°

\* Depending on equipment

<b>Seat function (manual)</b>	
Back angle adjustment	Adjustable by up to 30°

<b>Seat function (manual)</b>	
Legrests	Adjustable by up to 75°

<b>Tyres</b>	
Tyre type	PU tyres

<b>Tyres</b>	
Tyre type	Pneumatic tyres
Tyre pressure	Adjust the tyre pressure according to the specifications on the tyre sidewall to prevent injuries or damage to the product:

Tyres	
	<ul style="list-style-type: none"> <li>• 14" drive wheel: 3.5 bar/350 kPa/50 PSI</li> <li>• 10" caster wheel: 3.5 bar/350 kPa/50 PSI</li> <li>• 9" caster wheel: 3.5 bar/350 kPa/50 PSI</li> <li>• 9" caster wheel (Impac): 5.2 bar/520 kPa/75 PSI</li> </ul>

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); 14 km/h (8.7 mph)
Dynamic stability going downhill**	10° (17.5 %) (approved climbing ability with lowered seat functions, upright backrest and lowered legrests)
Static stability – uphill and downhill; side-ways	10° (17.5 %)
Maximum obstacle height	With front-wheel drive: 75 mm (3") With rear-wheel drive: 50 mm (2"); with curb climbing assist: 100 mm (4")
Braking distance (according to DIN EN 12184:2014)***	At 6 km/h (3.7 mph): 1000 mm (39.4") – horizontal At 7.2 km/h (4.4 mph): 1200 mm (47.2") – horizontal At 10 km/h [6.2 mph]: 2100 mm (82.7") – horizontal At 14 km/h [8.7 mph]: 3900 mm (153.5") – horizontal

\* The specified speed can vary by ±10%.

\*\* The control unit and the motors have to 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 driving style of the user. In individual cases, the continuous climbing ability can be significantly lower than the value specified.

\*\*\* 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.

Range (on level surfaces)*	
Battery with 53 Ah (C5) / 62 Ah (C20)	approx. 26 km (16 miles)

\* The specified range was determined under defined conditions according to ISO 7176-4. In practice the range can be reduced by up to **50%**. For information on this, see the section "Range" in the instructions for use (user).

Range (on level surfaces)*	
Battery with 63 Ah (C5) / 74 Ah (C20)	Approx. 35 km (22 miles)

\* The specified range was determined under defined conditions according to ISO 7176-4. In practice the range can be reduced by up to **50 %**. For information on this, see the section "Range" in the instructions for use (user).

Range (on level surfaces)*	
Battery with 75 Ah (C5) / 80 Ah (C20)	approx. 40 km (24.8 miles)

\* The specified range was determined under defined conditions according to ISO 7176-4. In practice the range can be reduced by up to **50%**. For information on this, see the section "Range" in the instructions for use (user).

Electrical system	
IP protection rating (according to DIN EN 60529)	IP44
Operating voltage	24 V DC
Lighting	
LED front light	24 V, maintenance-free
LED rear light	24 V, maintenance-free
Automatic circuit breaker	80 A; 100 A (see inscription on automatic circuit breaker)
Battery charger	For more information see the included battery charger instructions for use

Battery	
Batteries	2 x 12 V; 53 Ah (C5)/62 Ah (C20); AGM; maintenance-free

<b>Battery</b>	
Batteries	2 x 12 V; 63 Ah (C5)/74 Ah (C20); AGM; maintenance-free
<b>Battery</b>	
Batteries	2 x 12 V; 63 Ah (C5)/73 Ah (C20); gel; maintenance-free
<b>Battery</b>	
Batteries	2 x 12 V; 75 Ah (C5)/80 Ah (C20); AGM; maintenance-free
<b>Battery (not delivered by Ottobock)</b>	
Required specifications	2 x 12 V; up to max. 75 Ah (C5)/ up to max. 92 Ah (C20); gel or AGM; maintenance-free
<b>Battery charger (not delivered by Ottobock)*</b>	
Required minimum specifications	<p>Maximum current: 10 A; voltage: 220 V</p> <p>Isolation (class 2) according to IEC 335-2-29: 2010-11; protection rating: IP21 (Ottobock recommends battery chargers with a protection rating of IPX4)</p> <p>The battery charger fulfils the normative requirements of EN 12184:2014.</p> <p>This also includes the requirements according to ISO 7176-14:2008 (battery charger with reverse polarity protection; battery charger charges batteries to at least 80% within 8 hours; battery charger includes information regarding nominal capacity and the possibility of charging overnight; battery charger indicates that the battery is properly connected)</p> <p>The device fulfils the normative requirements of ISO 7176-21: 2009</p>
* For further details, see the instructions for use supplied with the battery charger.	
<b>Control unit</b>	
Model	VR2
Max. output current per motor	70 A
Seat functions that can be controlled	Maximum 2
Force for operating the joystick on the standard control panel	1.6 N
<b>Control unit</b>	
Model	R-Net (controller and control panel)
Max. output current per motor	90 A (1 x integrated seat function, direct control)
Force for operating the joystick on the standard control panel	1.6 N
<b>Control unit</b>	
Model	R-Net (controller and control panel)
Max. output current per motor	120 A (seat functions are controlled via the separate seat module)
Force for operating the joystick on the standard control panel	1.6 N
<b>Allowable environmental conditions</b>	
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)
<b>Corrosion protection</b>	
Corrosion protection	Cathodic dip coating / powder coating

## 13 Appendices

### 13.1 Required Tools

The following tools are required for adjustments and maintenance work:

- Allen wrenches in sizes 3, 4, 5, 6

- Ring and open-ended wrenches in sizes 10, 11, 13, 19 and 24
- Torque wrench (measurement range 5-50 Nm)

### **13.2 Torque values of the screw connections**

Unless otherwise specified, screw connections are tightened with the following torque values:

- Thread diameter M4: 3 Nm
- Thread diameter M5: 5 Nm
- Thread diameter M6: 10 Nm
- Thread diameter M8: 25 Nm

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