

# PARAVAN®

PARAVAN WHEELCHAIR SERIES

## *Operating instructions* **PR 25**



 **EN** V1.40

Valid for the following models:

Publisher and Copyright:

Date of issue:

Document number:

Paravan PR 25

PARAVAN GmbH

1.7.2020

PR 25\_V1.40 EN

Dear Customer,

We would like to thank you for choosing our PARAVAN power wheelchair in the PR series. In these operating instructions you will receive all the important information and instructions regarding your new power wheelchair.

We would like to ask you to carefully read the following to ensure that your power wheelchair will continue to work without problems for many years to come. Keep these operating instructions “to hand” for future reference.

Our operating instructions contain the answers to questions which relate to the equipment, the operation and the care of the power wheelchair. However, if you still have questions or comments regarding the power wheelchair, do not hesitate to contact us.

Your PARAVAN Team

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# 1. Legal notice

## 1.1 Your manufacturer

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Registered office / headquarters / production



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Fig. 1: QR code



Many smartphones and tablets have built-in cameras and software which allows the interpretation of QR codes, and with these you can directly transfer our contact information into your address book.

## 1.1.1 Copyright

This documentation and all of its parts are protected by copyright. All rights arising from this copyright, especially those relating to the translation, reprint, presentation, use of illustrations and tables, radio broadcasting, microfilming or reproduction of information in other ways, and the storage of such information in data processing systems, also with regard to the use of specific extracts, remain reserved. The reproduction of this work or a part of this work, even in individual cases, is only permitted within the limits of the statutory provisions of the current version of the Copyright Act (Urheberrechtsgesetz) of the Federal Republic of Germany of 9 September 1965. Such reproduction is generally subject to a fee. Contraventions are subject to the penal provisions of the Copyright Act.

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## 1.1.2 Technical status of documentation

All technical data/specifications, illustrations and information in these operating instructions were correct at the time of printing in February 2020.

The operating instructions for the “PR 25” power wheelchair were produced in the German language and can be translated into other languages; however, in the case of any differences, the German version is legally binding.



## 2. Regarding these operating instructions



Fig. 2: Direction of travel

These operating instructions do not constitute a maintenance and repair manual and therefore are not suitable to use for the private carrying out of maintenance and repair work, or to provide instruction on this. You will receive information on the design and the operation of the product throughout its entire life cycle – from transport (delivery) to decommissioning (shutdown) of the power wheelchair. The most important product features are described and listed below. All the specified product features can be combined with one another in different variants and functions, and can potentially differ from the series-production standard.



These operating instructions are an essential part of the power wheelchair product and must always be kept near to the power wheelchair so that you can quickly access all important information. All information relating to sides and directions in this documentation is always specified from the point of view of the operator and in the direction of travel!

## 2.1 ***Exclusion of liability***

The operation of the power wheelchair without faults or malfunctions can only be guaranteed if the knowledge gained from these operating instructions is observed and implemented. PARAVAN GmbH assumes no liability or warranty for damage or operating faults resulting from non-compliance with these operating instructions or from modifications to the power wheelchair.

In order to be able to guarantee the fault-free operation of your power wheelchair, please observe the maintenance information or intervals.



See section “18 Maintenance and servicing”

## 2.1.1 Guarantee

Guarantee services are based entirely on the respective PARAVAN guarantee provisions.

Excluded from guarantee claims is damage which has occurred due to:

- > Wear
- > Improper operation or use, e.g. overloading
- > Incorrect/infrequent maintenance
- > Incorrect/infrequent care



See your personal “guarantee card”.

## 2.1.2 Technical modifications

All modifications to safety installations and technical modifications to the power wheelchair, even if minor, are strictly prohibited! All modifications must be authorised or carried out by PARAVAN GmbH.

PARAVAN GmbH reserves the right to undertake technical modifications and improvements to the product in the interest of our customers and progressive development.



Claims relating to the guarantee and warranty shall expire in the case of all modifications made to the power wheelchair not authorised by PARAVAN GmbH. Furthermore, dangerous malfunctions cannot be ruled out!



## WARNING

**Danger of injury** for persons operating a power wheelchair which does not correspond to the original or delivered condition.

**Material damage** to the power wheelchair by the use of non-authorized parts or incorrectly installed parts.

- > Do not make any technical modifications to the power wheelchair.
- > Only operate the power wheelchair in its original or delivered condition.
- > Use only original and approved replacement parts.
- > Check the operating status of the power wheelchair before each trip.

## 2.2 Target group

The operator must acquire or gain a level of knowledge relating to the following points before operating the power wheelchair:

- > Knowledge of the content of the operating instructions in order to safely operate and also be able to move the power wheelchair.
- > Knowledge of the safety and operating provisions listed herein in order to recognise potential dangers or dangerous situations and avert these for the user and his/her surroundings.



Only trained or instructed persons may operate a power wheelchair to ensure personal safety. As a user, please ensure you receive sufficient training when the product is supplied. If necessary, please contact us.



See section “1.1 Your manufacturer”



See section “23.4 Log of instructions upon supply”

## 2.3 Explanation of symbols

When reading the operating instructions you will encounter the following symbols and warning symbols.



### The “Caution Danger!” logo

highlights hazards. The protective measures specified in the respective text must be followed in all cases. This symbol is always used together with the appropriate signal word that describes the degree of danger:

- > **Danger!** - immediate danger to life and limb (irreversible).
- > **Warning** - potential danger to life and limb (irreversible).
- > **Caution** - potential danger to life and limb (reversible).
- > **Caution** - potential damage to the vehicle.



Additional information for the user e.g. in order to simplify the operation of the power wheelchair and/or to avoid damage to the power wheelchair.



This symbol refers the user to further sections or further documentation – e.g. also to annexes of these operating instructions.

## 2.3.1 Structure of safety notes

You can obtain the following information from the safety notes:

- Warning or danger symbol ①.
- Type and source of the danger ②.
- Signal word ③.
- Consequences of hazard occurring ④.
- Protective measures ⑤.

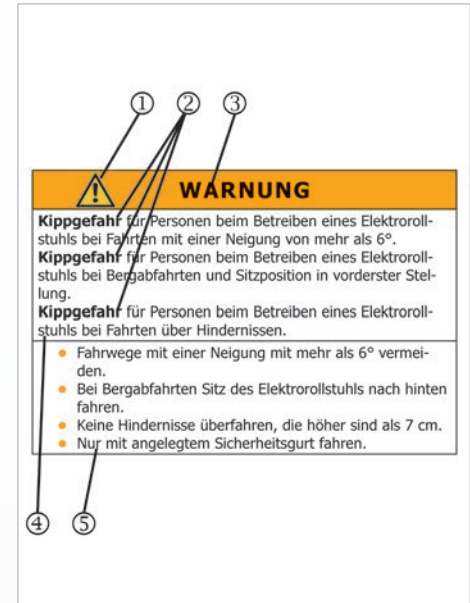


Fig. 3: Safety instruction



### 3. Safety notes

#### 3.1 Generally applicable safety notes

##### 3.1.1 Operation instructions

For your protection and for the protection of people in your vicinity and of the environment, the following safety instructions must be observed and followed at all times.



## DANGER!

**Danger of crushing** from touching moving parts, e.g. from the rotational movement of the drive wheels or the Lifting movement of the lifting arm and horizontal movement of the seat.

**Danger of falling** due to unintentional movement of the power wheelchair due to inactive braking mechanism.

**Danger of falling** from abrupt braking of the power wheelchair if the vehicle is without power.

- > Do not touch moving parts.
- > Assistants must not touch parts in the danger zones while operating the power wheelchair.
- > Brake lock release lever must be in the "LOCK" position.
- > Never switch the power of the power wheelchair off or shut it down while travelling.



## WARNING

**Danger of tipping** for persons operating a power wheelchair when travelling at an incline of more than 10°.

**Danger of tipping** for persons operating a power wheelchair when travelling downhill and if the sitting position is in the front position.

**Danger of tipping** for persons operating a power wheelchair when travelling across obstacles.

- > Avoid routes with inclines greater than 10°.
- > Put the seat of the power wheelchair at the back when travelling downhill.
- > Do not cross any obstacles which are higher than 60-70mm.
- > Only travel with your seatbelt fastened.



## WARNING

**Danger of injury** for persons operating a power wheelchair which does not correspond to the original or delivered condition.

**Material damage** to the power wheelchair by the use of non-authorized parts or incorrectly installed parts.

- > Do not make any technical modifications to the power wheelchair.
- > Only operate the power wheelchair in its original or delivered condition.
- > Use only original and approved replacement parts.
- > Check the operating status of the power wheelchair before each trip.



## WARNING

**Danger of injury** for persons while travelling with a power wheelchair on rough ground.

**Danger of falling and tipping** for persons while operating the power wheelchair on ground with diminished load bearing capacity.

**Material damage** to the power wheelchair from mechanical and physical influences while travelling on rough ground.

- > Avoid travelling on flat, slippery or greasy surfaces (e.g. ice, snow, wet grass, foliage, etc.).
- > Avoid travelling through water with a depth of 50mm or more.
- > Observe the gross load weight of the vehicle.
- > Observe the load bearing capacity (e.g. in the case of bridges or crosswalks) or condition of the ground.
- > Only travel with your seatbelt fastened.

### 3.1.2 Information regarding use



## CAUTION

**Material damage** to the power wheelchair from overloading the vehicle.

**Material damage** to the power wheelchair from the effect of high temperatures above 41°C.

**Material damage** to the power wheelchair from overcharging of the batteries when travelling downhill.

- > Only use the power wheelchair for its intended purpose.
- > Overloading the power wheelchair (e.g. with a second person or other loads) is not permitted.
- > Protect the power wheelchair from strong sunlight and other sources of heat.
- > Switch on the electricity consumers (e.g. the lights) when travelling downhill.

### 3.1.3 Information regarding transport



#### CAUTION

**Material damage** to the power wheelchair by it slipping from the ramp or from the lift while loading.

**Material damage** to the power wheelchair by improper securing or transport in the power wheelchair transporter.

- Secure the ramp against slipping.
- The ramp or power wheelchair transporter must be level and stand on solid ground.
- The ramp or lift must be clean and dry.
- The ramp must be wider than the power wheelchair and easily visible in order to facilitate corrective steering movements.
- Drive onto ramp and lift without pausing in order to avoid rolling backwards.
- Secure the power wheelchair in the power wheelchair transporter according to the standard legal provisions.
- Only use suitable and authorised slings.
- Shut down the power wheelchair during transport.

## 4. **Performance description**

### 4.1 **Manufacturing standard**

The PARAVAN power wheelchair is a multifunctional power wheelchair which is highly suitable for indoor and outdoor use due to its compactness and mobility.

The power wheelchair is designed and tested so that the highest possible level of safety is provided for the operator and their environment. Our products are checked for faults after their manufacture. If a fault with your power wheelchair nevertheless still arises, we request that you contact your dealer or PARAVAN GmbH directly so that the fault can be dealt with.

PARAVAN power wheelchairs are manufactured and tested in accordance with:

- > DIN EN 12184 Electrically powered wheelchairs, scooters and their chargers.

and are classified as Category B in this standard.

## 4.2 Correct use

The PARAVAN power wheelchair's function and design are intended to transport a person indoors and outdoors. The control panel including joystick or optional operating units in the case of/for special operation is the interface relating to user operation and the liability of the manufacturer for the power wheelchair.



The power wheelchair is only intended for the uses listed in the section “Usability of the vehicle”.



See section “3 Safety notes”



See section “4.2.1 Usability of the power wheelchair”



## 4.2.1 Usability of the power wheelchair

### - unproblematic

- Transport of a person with a maximum body weight of 160kg.
- Use as driver's or co-driver's seat, depending on the equipment variant.
- Use within the German road traffic regulations ("StVO"), assuming complete and intact lighting.



See section "13 Driving with the power wheelchair"

### - problematic or prohibited

- Use as a means of tractive transport of loads or of several people.
- Use of the power wheelchair in extreme climatic conditions (heat/cold/moisture).



See section "2.1 Exclusion of liability"



See section "3 Safety notes"

## 4.2.2 Clearance declaration for non-dangerous goods (storage battery)

PARAVAN GmbH uses storage batteries which are classified as “non-dangerous goods”, as long as these storage batteries are not mechanically damaged in any way.

The maintenance-free non-woven lattice storage batteries and the maintenance-free lead gel storage batteries are leak-proof, and in accordance with

- > IATA, regulation A 67
- > ADR, regulation 238 B
- > IMDG, regulation 238.2 and

UN 2800 Special Provisions are considered **not dangerous goods** and suitable for transport.



See “Clearance certificate for non-dangerous goods”



You will receive the respective appropriate certificate of no objection for your storage batteries when your power wheelchair is supplied.


### 4.3 Approvals, certifications

#### 4.3.1 EU approval as driver's seat

The seat belt anchorage is certified and approved according to 76/115/EEC, as is the seat in terms of its anchorage according to 74/408/EEC with the PARAVAN docking system.



Fig. 4: TÜV logo

 <b>DANGER!</b>
<p><b>Potential risk of injury or serious injury or death</b></p> <p>In combination with the Dahl docking system, the wheelchair was successfully subjected to a crash test compliant with ISO 7176-19:2008 - Mobility facilities on wheels for use as a seat in motor vehicles.</p> <p>The test was only carried out with the seat belt system anchored in the vehicle. The integrated 3- or 4-point seat belt should not be used or relied on for occupant restraint in a moving vehicle. Use a vehicle installed and approved 3 point belt instead.</p>

- Technical Reports No 08-00719-CP-GBM and 08-00723-CP-GBM.



See section "23 Annexes and technical documentation".

### 4.3.2 German regulations on assistive technology (Hilfsmittelverordnung, HMV no.)

PARAVAN power wheelchairs are approved in accordance with the assistive technology guidelines:

- > Kassenarztrecht in Nordwürttemberg – Richtlinien und Normen und Verordnungen und Leistungen (Panel doctors law in Northern Württemberg - guidelines and standards and regulations and services), page B 2 - 1 ff

As auxiliary equipment permitted under the German regulations on assistive technology, number:

- > HMV Nr. 18.99.06.1134

### 4.3.3 Definition of auxiliary equipment (incomplete excerpt)

Auxiliary devices are physical medical services i.e. things which succeed in making medical treatment safe by their compensatory, supportive or relieving effect, or which allow physical hindrances to be overcome. They include prostheses, orthopaedic and other auxiliary equipment, visual aids, physical tools or technical products...

#### 4.3.4 Indication

The power wheelchair with lift function is used for people who are unable to walk or have a severe walking disability:

- > Microsomia (dwarfism)
- > Paralysis
- > Joint contractions/joint damage (not on both arms)
- > other conditions

#### 4.3.5 Contraindication

The provision of power wheelchairs is unsuitable for persons with:

- > Severe balance disorders
- > Limited and inadequate vision
- > Severely limited cognitive abilities
- > Loss of both arms, or the inability to sit

## 5. Product-specific data

### 5.1 Trademark and type designation (type plate)



This information can be found on the type plate. It is very important to provide this in any correspondence with PARAVAN GmbH so that you receive relevant professional advice.

- > Model name ①
- > Series number, chassis no. ②
- > Production date ③
- > Max. speed ④
- > HMV number ⑤
- > Tare weight of the power wheelchair ⑥
- > Max. payload (body weight) ⑦

Fig. 5: Type plate



See section “5.3.1 Type plate of your power wheelchair”

## 5.2 Location of the type designation (type plate)

The type designation (type plate) is affixed to the PR 25 in a 1-fold design. The type designation (type plate) has dimensions of approx. 70mm x 40mm.

- > The type designation (type plate) is situated on the rear right of the battery box ① of the PR 25.



Fig. 6: Location of type plate

## 5.3 **Information on your power wheelchair**

Please ensure that this information is recorded upon the handover of the power wheelchair, or if necessary enter the information yourself, so that you always have it to hand.

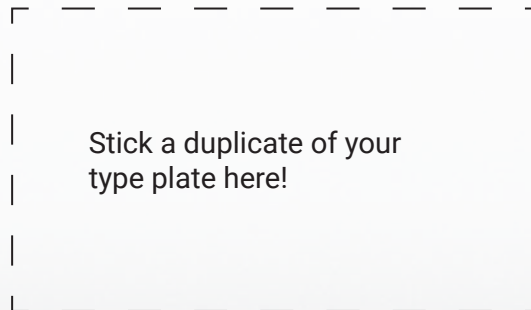
Day of delivery/supply



Supply by (dealer or branch)



### 5.3.1 The type plate of your power wheelchair





## 5.4 Accessories

### 5.4.1 Supplied accessories

- > Charger with charging cable.
- > Operating instructions.
- > Socket wrench with T-handle, SW 13.
- > Allen key, size 5.
- > Magnetic key, optional according to equipment.

### 5.4.2 Deliverable accessories

- > DAHL docking station for quick and easy fastening of the PR 25 in a vehicle.



Fig. 7: DAHL docking station



Fig. 8: DAHL Vario Dock (height adjustable)

## 6. **Description/function of the power wheelchair**

### 6.1 **The special orthopaedic seat K120**

The special orthopaedic seat K120 is an in-house development by PARAVAN GmbH that has been tailored to the precise needs of its customers. It is equipped with:

- > Integrated 3-point belt
- > Infinitely variable backrest tilt adjustment (adjustments are infinitely variable. By releasing the joystick the adjustment stops and remains fixed)
- > Infinitely variable seat height adjustment (adjustments are infinitely variable. By releasing the joystick the adjustment stops and remains fixed)
- > Handwheels on both sides
- > Manual seat depth adjustment
- > Side frame repositioning seat & back

Optionally available:

- > electric backrest
- > 4-point belt

General

Information

Prepare

Operate

Help

Technology

## 6.2 Joystick control

All of the power wheelchair's functions can be selected or accessed via the joystick, the control panel and the integrated control system, such as e.g.:

- > steering of the power wheelchair,
- > braking behaviour of the power wheelchair,
- > speed, control of the two drive motors,
- > secondary functions, depending on which control system or equipment is used.

## 6.3 Special control system

A multitude of special controls such as e.g.:

- > chin control,
- > environmental control,
- > etc.

can be implemented on the PARAVAN power wheelchair.



If you have requests or suggestions for us regarding this, do not hesitate to contact us. Thank you.

## 6.4 ***Tilt function (seat angle, optional)***

The PR 25 is optionally equipped with a tilt function. The tilting process can be interrupted and fixed in any direction of movement and at any position.

The seat tilt (angle) can be set as follows at the touch of a button:

- > forwards, thus also serving as a standing aid
- or**
- > backwards – for relaxing, preventing pressure sores, easing back pain and better weight distribution.



See section “11 The seat, operation”

## 6.5 ***Footrests with vibration damping***

- > Shock-absorbing, separate or joined to counteract spasticity.

## 6.6 Road-safe in accordance with The Road Traffic Licensing Act (StVZO)

The PR 25 is a road-approved vehicle that includes the following features as standard equipment:

- LED headlights for optimum illumination ①.
- LED direction indicator ②.
- LED rear lights for the best possible visibility ③.
- Identification by yellow reflectors on the side in the middle of the wheel.



Fig. 9: Illumination at the front

### 6.6.1 § 24 Special means of transportation



The Road Traffic Licensing Act (StVZO) makes reference to wheelchairs. In it, it is stated that:

- (1) Push and gripping wheelchairs, sledges, prams, scooters, children's bikes and similar means of transportation are not vehicles as defined in this Act.
- (2) Wheelchairs or other wheelchairs as defined in section 1 may be driven in places where there is pedestrian traffic, however only at walking speed.



Fig. 10: Illumination at the rear

## 7. Overview of the PARAVAN power wheelchair

### 7.1 Definition of terms for parts and their locations



The following terms for parts or individual parts are used in the operating instructions. Their location on the power wheelchair is shown in the illustration.

- > Control panel with joystick ①
- > Armrest axle adjustable ②
- > Back rest (electric) ③
- > Headrest ④
- > Footplate/footrests ⑤
- > Brake lock release lever, emergency release ⑥
- > Drive wheel, standard version puncture-resistant ⑦
- > Battery box ⑧
- > Casing ⑨
- > Rear wheel, standard version with suspension, puncture-resistant ⑩

Fig. 11: Wheelchair overview

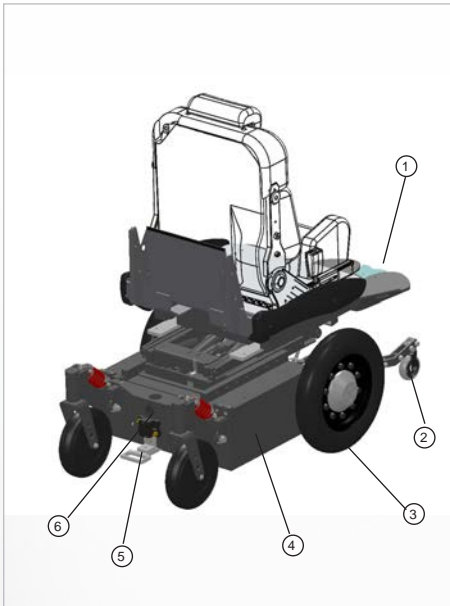
## 7.2 *Parts and their installation position, chassis*

The following terms for parts or individual parts are used in the operating instructions. The installation position on the power wheelchair's chassis is shown in the diagram.

- > Seat plate ①
- > Seat guides ②
- > Rear wheel ③
- > Battery box ④
- > Actuator module ⑤



Fig. 12: *Parts, chassis rear*



- Footplates ①
- Anti-tipper, support ②
- Drive wheel ③
- Control units ④
- Rigging eye ⑤
- Main fuse ⑥

Fig. 13: Parts, chassis front



## 8. ***Handover of the power wheelchair***

### 8.1 ***Receiving your new power wheelchair***

Check your power wheelchair for completeness and compare the items received with the delivery with your order documents. If anything is unclear, contact PARAVAN GmbH immediately!

Check (visually inspect) that the power wheelchair is in proper condition. Report damage which can be attributed to delivery or transport immediately and in writing to your

> dealer, forwarding agent or medical supply store

**and**

> PARAVAN GmbH.



See section "1.1 Your manufacturer"

### 8.2 ***Your power wheelchair is supplied to you in accordance with this procedure***

The power wheelchair is supplied to you in the following ready to drive and ready to operate condition:

- > Fully assembled and with equipment corresponding to your specifications upon ordering.
- > All attachments and control elements are preset to your body measurements in accordance with the order.
- > Precharged storage batteries.

## 9. Settings on the power wheelchair, electronic

General

Information

Prepare

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Technology

The setting and configuration of the PARAVAN control unit is very complex and, for your own safety, can only be undertaken by your service technician.

All parameters of the PARAVAN control unit can be subsequently set to your requirements and desires. These include:

- > All driving features such as e.g. moving off and braking.
- > Steering behaviour.



If an adjustment of the control parameters is necessary or desired, please contact your service provider or medical supply store.

## 10. Settings on the power wheelchair, mechanical

### 10.1 Receiving your new power wheelchair

All mechanical parts or equipment and control elements are set to your body dimensions. If adjustment is still needed however, this can be undertaken at any time. Your PARAVAN power wheelchair is designed in such a way that it can be adjusted to the body dimensions in all requirements.



For your own safety, only allow your service technician to carry out all mechanical settings or modifications to the equipment. The customer should not change these settings himself!



See section “23.4 Log of instructions upon supply”

## 10.2 The armrest pad



The angle of the armrest pad can be tilted. It can also be adjusted horizontally forwards or backwards, allowing it to be adapted for any purpose and to every body size.



When standing up or moving, please do not lean on the armrest on one side with your full body weight

### 10.2.1 Set the angle of the armrest pad.

These instructions apply to both the right and left sides.

- Loosen the hexagonal cap nut ①.
- Swing the armrest pad ② into the desired position.
- Tighten the hexagonal cap nut ①, approx. 8 Nm.



Fig. 14: Angle of armrest pad

## 10.2.2 Set the horizontal position of the armrest pad



Fig. 15: Position of the armrest pad

These instructions apply to both the right and left sides.

Proceed as follows to check and set the position of the armrest pad:

- > Loosen the wing bolt ①.
- > Push the armrest pad ② forwards or backwards to the desired position.
- > Tighten the wing bolt ① hand-tight.

## 10.3 Armrest

The armrest is multi-horizontal in all directions (projection) and can be vertically adjusted or adjusted at an angle, and thus can be adapted to every body measurement.



Changing the position of the armrest potentially involves using another setting!

Proceed as follows to check and set the position of the armrest:

- > Height ① of the armrest.
- > Angle ② of the armrest
- > Projection ③ of the armrest.
- > If required, correction of the armrest pad.



Fig. 16: Position check of the armrest

## 10.4 Set the height of the armrest



Fig. 17: Height of armrest

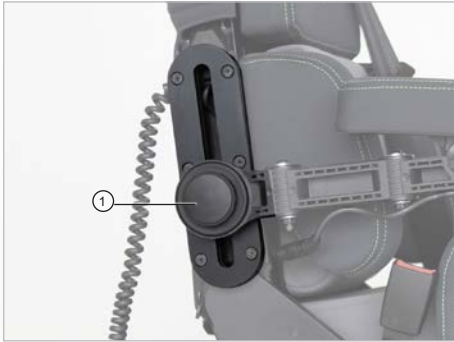
These instructions apply to both the right and left sides.

Turning the hand-operated wheel to the left releases the armrest, thereby enabling its height to be adjusted.

When the desired height is reached, turn the hand-operated wheel to the right and pull it tight.

- > Armrest is locked or fixed.

## 10.5 Set the angle of the armrest



The armrest is pivoted on the attachment point. This allows the complete armrest to be swung upwards for comfortable sitting and standing or moving from the wheelchair's seat.

Fig. 18: Armrest angle



## 10.6 Set the projection of the armrest

This work instruction applies to the right and left sides; it is possible that the rotational direction of the screw connection is reversed!

Proceed as follows to check and set the projection of the armrest:

- Loosen the hexagonal cap nut ①.
- Loosen the hexagonal cap nut ③.
- Move the armrest ② into the desired position.
- Tighten hexagonal cap nuts ① and ③, approx. 8 Nm.



Fig. 19: Armrest projection

## 10.7 *Setting the mobility of the control panel*



Fig. 20: Swivel mechanism

The horizontal swivel mechanism of the control panel can be set in relation to the degree of hardness (response behaviour or the mobility of the joints).



The degree of hardness can only be set via your service technician!

# 11. The special orthopaedic seat K120, operation

## 11.1 Adjusting the backrest

### 11.1.1 Adjusting the backrest angle

The backrest or the backrest angle can be adjusted electrically via the PARAVAN control panel.

- > Select menu in the control unit.
- > Select the settings.



See section "15 Control"



Fig. 21: Backrest angle

## 11.2 Adjusting the headrest

If you need to adjust the headrest in the head area, you can adjust the height of the headrest individually in 5 incremental steps.

The following setting options are available:

Tilt adjustment:

- Push the headrest ① to the desired tilt → Push the top of the headrest backwards or forwards.

Height adjustment in 5 incremental steps:

- Push the headrest ① to the desired setting → Pull the headrest up or push it down. The headrest supports ② have 5 incremental settings.



Fig. 22: Headrest



To remove the headrest (e.g. at the hairdresser's), pulled it upwards beyond the end position and remove it. Mounting is performed in the reverse order.

## 12. Attaching and removing the chassis trim

### 12.1 Attaching and removing the rear trim



Fig. 23: Rear trim



Fig. 24: Rear light, cable

The chassis trim can be removed for maintenance / servicing or cleaning.

To attach and remove the rear trim, proceed as follows:

- > Loosen and unscrew the knurled screws①.



Set the knurled screws and plastic shims to one side.

- > Disconnect the tail lights cable (rear light) ② at the coupling.
- > Remove the rear trim.
- > Attachment is in the reverse order.

## 12.2 Attaching and removing the side trim

The chassis trim can be removed for maintenance / servicing or cleaning.

To attach and remove the side trim, proceed as follows:

- > Loosen and unscrew the knurled screws ①.
- > Remove the rear trim.



See section “12.1 Attaching and removing the rear trim”

- > Lift up the rear side trim.
- > Disconnect the cable for the front headlights and direction indicator ② at the coupling.
- > Remove the side trim towards the front.
- > Attachment is in the reverse order.



Note the presence of the plastic shims. These protect the chassis components from damage.



Fig. 25: Side trim



Fig. 26: Front headlights, cable


## 13. *Driving with the power wheelchair*

### 13.1 *Insurance, liability insurance*

We recommend that you speak with your insurance advisor before starting to use the power wheelchair so that its use is included in your insurance - in particular in your liability insurance.



Please note that a legal requirement may exist to insure the power wheelchair during use in road traffic within the context of the respective legal provisions.

 <b>WARNING</b>	
<p><b>Danger of injury</b> for persons operating a power wheelchair which does not correspond to the original or delivered condition.</p> <p><b>Material damage</b> to the power wheelchair by the use of non-authorized parts or incorrectly installed parts.</p>	
<ul style="list-style-type: none"> <li>&gt; Do not make any technical modifications to the power wheelchair.</li> <li>&gt; Only operate the power wheelchair in its original or delivered condition.</li> <li>&gt; Use only original and approved replacement parts.</li> <li>&gt; Check the operating status of the power wheelchair before each trip.</li> </ul>	

## 13.2 *Function check before the trip*

Before commencing each trip, the following points must be checked for your own safety:



It might be necessary to draw on the expertise of a second person for the check.

- > Function check of the brakes.



The brake lock release lever ① must be set to **“LOCK”**, i.e. point upwards.

- > Charging status of the storage batteries.
- > Function check of the lighting installation.



See section “13.10.1 Operation of the brake lock release lever (emergency release)”



See section “20 Electrical Equipment”



Fig. 27: Brake lock release lever (emergency release)



### 13.3 Putting on the seatbelt



Fig. 28: Putting on the seatbelt, logo



Listen for an audible engagement of the lock tongue ② in the belt buckle ① when putting on the seatbelt.



Fig. 29: Belt buckle

The function of the belt buckle is the same on all belt versions such as:

- > 2-point belt (lap belt)
- > 3-point belt in driver or passenger version.
- > 4-point belt (harness belt)
- > Multi-point belt (special belts with multiple anchor points).

## 13.4 Controlling the power wheelchair, directions of travel



The power wheelchair is controlled via the joystick on the control panel.

The following basic control options are available if you put the joystick into the position below:

- Joystick forwards → The power wheelchair travels forwards.
- Joystick left or right → The power wheelchair changes the direction of travel in accordance with the position selected.
- Joystick backwards → The power wheelchair travels backwards.
- Joystick in neutral position (middle) → The brakes are active, the wheelchair does not travel.



Do not carry out any sudden movements (driving commands) on the joystick in order to avoid unwanted movements of the power wheelchair!



First, practice controlling the wheelchair on safe and accessible terrain.



Fig. 30: Joystick

## 13.5 Navigating bends, turning corners



The PARAVAN power wheelchair is equipped with front-wheel drive. This means that the rear swings out during steering motions, i.e. turning corners.

This is how you navigate a bend:

- > Push the joystick into the required travelling position (forwards or backwards).

And at the same time,

- > push the joystick into the required travelling direction (left or right).

### Example:

- > Push the joystick into the position, from the point of view of the operator, at the top right (2 pm position) → The power wheelchair turns right.



See section “3 Safety notes”

## 13.6 **Braking with the power wheelchair**

### 13.6.1 Braking systems on the power wheelchair

Two independently working braking systems (safety systems) are used in the PARAVAN power wheelchair in order to guarantee the greatest possible level of safety. The functions of the individual safety systems are as follows:

Safety during the trip:

- > By releasing the joystick (the joystick always returns to its neutral position in the middle) in driving mode, the motor brake automatically switches itself on and brakes the power wheelchair.

Safety in the case of a power cut or interruption:

- > If there is an interruption to the power supply e.g. due to a discharged storage battery, the safety magnet brake locks and the power wheelchair comes to a standstill. If this is the case, it can only be mechanically unlocked and manually moved.



See section “13.10.1 Operation of the brake lock release lever (emergency release)”

## 13.7 *Braking the power wheelchair*

The braking distance i.e. the distance from initiating the braking process until the power wheelchair comes to a standstill, is heavily dependent on factors such as:

- > Ground or condition of the road.
- > Total weight (vehicle and driver) of the power wheelchair.



When braking from full speed at approx. 6 km/h, your power wheelchair has a braking distance of approx. 1 metre!



During the braking process from high speeds, especially in the case of downhill travel, the power wheelchair can lurch from side to side or swerve. For this reason, avoid sharp braking!

## 13.8 Travelling on hills, up and downhill travel

You must observe the following rules for your own safety when travelling up and downhill:

- Put the longitudinal seat adjustment mechanism into the furthest back position in order to avoid slipping.
- Only travel with your seatbelt fastened.
- Avoid sharp braking during downhill travel so that the power wheelchair does not lurch from side to side or swerve.
- When travelling up and downhill, select a low movement level or speed so that you do not lose control over the power wheelchair at any time.
- When travelling up and downhill from an incline of more than 7°, the stability of the power wheelchair cannot be guaranteed, or there can be a danger of the power wheelchair tipping.
- The power generated during downhill travel is diverted into the battery. If the battery is fully charged upon commencing the trip, the safety system switches to emergency stop in order to avoid damage due to the overloading of the electronics. If this is the case, switch an electricity consumer (light) on in order to run down the battery, and then continue your trip.



The brake lock release lever must be set to **“LOCK”** when travelling up or downhill. The motor brake is only effective when set to **“LOCK”**. The result of this would be travelling downhill without braking!



See section “13.10.1 Operation of the brake lock release lever (emergency release)”

## 13.9 The drive programs / movement levels

The PARAVAN power wheelchair has five different movement programmes or levels. You can select the desired movement level or final speed of the power wheelchair on the control panel.

The maximum final speed in the respective movement level is reached by moving the joystick as far as it will go.

The functions of the individual movement levels are as follows:

- > Movement level 1: Highest degree of control over the power wheelchair, 20% of the final speed, driving indoors.
- > Movement level 2: 40% of the final speed.
- > Movement level 3: 60% of the final speed.
- > Movement level 4: 80% of the final speed.
- > Movement level 5: Only for practised drivers/operators, max. final speed.



See section "15 Control"

## 13.10 Manual driving, push mode

### 13.10.1 Operation of the brake lock release lever (emergency release)

- > If you want to push the power wheelchair, you must set both brake lock release levers ① on the left and right drive side to “UNLOCK” (downwards).
- > **CAUTION:** In push mode, the control panel **must** be switched off in order to prevent damage to the motors and the control panel.



Do not set to “UNLOCK” on a gradient! In this position, the drive motor is unable to brake!

#### Positions of the brake lock release lever ①

##### LOCK

- > Move the lever upwards → Braking system is active!

##### UNLOCK


- > Push the lever downwards → Braking system is deactivated!



Fig. 31: Brake lock release lever (emergency release)



## 13.11 Information regarding roads, types of ground

 <b>WARNING</b>	
<p><b>Danger of tipping</b> for persons operating a power wheelchair when travelling at an incline of more than 10°.</p> <p><b>Danger of tipping</b> for persons operating a power wheelchair when travelling downhill and if the sitting position is in the front position.</p> <p><b>Danger of tipping</b> for persons operating a power wheelchair when travelling across obstacles.</p>	
<ul style="list-style-type: none"> <li>&gt; Avoid routes with inclines greater than 10°.</li> <li>&gt; Put the seat of the power wheelchair at the back when travelling downhill.</li> <li>&gt; Do not cross any obstacles that are higher than 60-70mm.</li> <li>&gt; Only travel with your seatbelt fastened.</li> </ul>	

### 13.11.1 Forging ability, driving through water

- > When driving through water, damage to the electronic parts (motors, control units etc.) as well as to the storage batteries due to the ingress of water can occur.

### 13.11.2 Climbing / traversing ability

- ▶ When travelling over obstacles that are higher than approx. 60-70 mm, you could touch the ground and get stuck or tip over with your power wheelchair with the battery box.

### 13.11.3 Load bearing capacity

- ▶ Do not travel across grounds on which there is a danger that you could fall and therefore could become stuck or tip over. Keep the total weight of the vehicle in mind.



See section “21.1 Technical data and dimensions”

### 13.11.4 Rough ground or terrain

- ▶ When travelling on rough ground or terrain, there is a danger that you could get stuck or tip over with your power wheelchair.

### 13.11.5 Slippery ground, traction

- ▶ When travelling over slippery ground (e.g. uncoated ramps, wet grass, snow, ice etc.), your power wheelchair can lose traction. This means that the drive power or the braking power is not transferred.

## 14. Loading and transporting the power wheelchair



The power wheelchair must always be shut down and correctly secured or fastened for transport in the vehicle. When loading the power wheelchair, loading aids such as

- > ramps, lifts and hoists

with sufficient load-bearing capacity must be used.

### 14.1 Rules for loading wheelchairs

The following rules must be observed for and during loading:

- > The maximum support height specified on the ramp must be greater than the height from the ground to the support edge to be cleared (e.g. in the case of a car, the car boot area).
- > Check the loading capacity of the ramp(s), of the lift or the hoist.
- > Due to safety reasons, the power wheelchair may only be loaded into cars or on split ramps when unoccupied (without baggage or a person).
- > Loading may only be carried out by a person who can safely operate and control your power wheelchair.
- > A power wheelchair which is unfit to drive may only be loaded by your authorised specialist workshop. This workshop is the only entity aware of the possible danger situations and how to counter them.

## 14.2 Securing and fastening the power wheelchair

The power wheelchair must be connected or tied to the transport vehicle with tightening straps, hooks or loops in order to prevent slipping. The power wheelchair must be fastened in accordance with the guideline

- DIN 75078 (parts 1 and 2) "Vehicles for the transportation of persons with reduced mobility".

The power wheelchair has the following attachment points:

- At the front, two rigging eyes ①
- At the rear, one rigging eye ②

In combination with the Dahl docking system, the wheelchair was successfully subjected to a crash test compliant with ISO 7176-19:2008 - Mobility facilities [Wheelchairs] for use as a seat in motor vehicles.



If your vehicle is equipped with a DAHL Docking Station, further fastening is not necessary.



See section "5.4.2. Deliverable accessories"



Fig. 32: Attachment point at the front



Fig. 33: Attachment point at the rear

### 14.3 Putting on the seatbelt in a moving vehicle



#### WARNING

The 3 or 4-point belts integrated into the wheelchair should not be used as personal restraints in a moving vehicle. Instead, an approved seatbelt system anchored into the vehicle should be used to safeguard the passenger.



#### DANGER

The seatbelt must not be held away from the body by wheelchair components such as armrests or wheels.



Fig. 34: Illustration of an inadequate belt system



#### DANGER

The belt straps should have full contact with the shoulder, chest and pelvis. The belts should sit low on the lap, close to the connection between the upper thigh and lower abdomen.

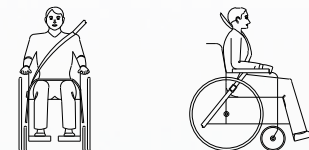


Fig. 35: Illustration of the correct position of the belt system

## 14.4 Securing the wheelchair with a 4-point belt restraint system

Tension belts compliant with ISO 10542-1 are only tested up to 85 kg plus the weight of the person.

It is recommended that a 4-point belt restraint system be used that is designed for the total weight of the wheelchair including all options, 2 at the front and 2 at the rear, which comply with ISO 10542-1. If using a standard 4-point tension belt to secure a wheelchair that is heavier than 85 kg, 6 belts must be used to secure the wheelchair in place: 2 at the front and 4 at the rear.

Recommended angle for tension belts.

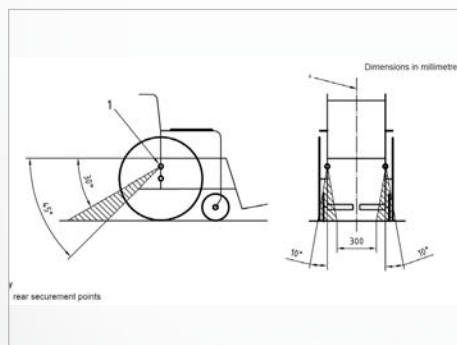


Fig. 36: Rear attachment points

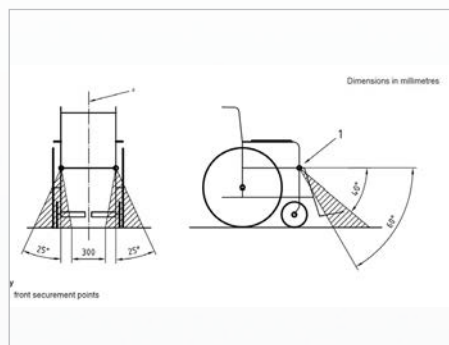


Fig. 37: Front attachment points

## 14.5 Instructions for securing passengers

- Use a personal restraint system anchored into the car to protect passengers.
- Both lap and upper body restraint belts must be used to safeguard passengers in order to reduce the risk of head injury.
- The seatbelts must also not be held away from the body by wheelchair components such as armrests or wheels. The belts must be attached to the relevant pillar in the car and must not be held away from the body by wheelchair components such as armrests or wheels.

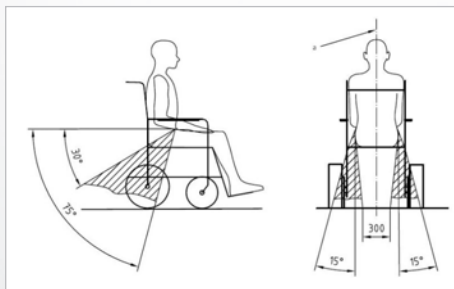


Fig. 38: Positioning of the 4-point belt system

Loading and transporting the power wheelchair



### WARNING

Positioning of the restraint system with a 4-point belt system

- The lap belt must sit low over the front of the pelvis so that the angle of the lap belt lies within the preferred zone of 30° – 75° to the horizontal.

- The upper body restraining belt must pass over the shoulder and chest, as shown in Fig. 47.
- The belt strap of the restraining belt must not be twisted during use.
- When putting on the passenger restraint system, care must be taken to ensure that the belt buckle is positioned so that the release button is not touched by wheelchair components in the event of a collision.

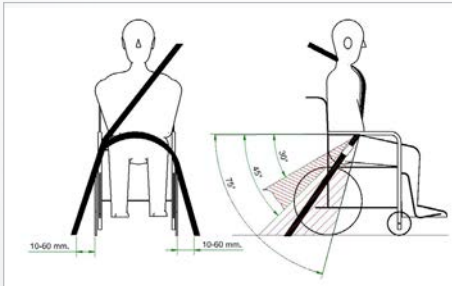


Fig. 39: Positioning of the safety belt when used with the Dahl Docking Station



## WARNING

Positioning of the safety belt only when used with the Dahl docking system

- If the Dahl docking system is used, the floor anchoring points for the safety belts must be located 10 - 60 mm outside the wheels of the wheelchair. The lap belt must sit flat over the front of the pelvis so that the angle of the lap belt lies within 30° - 75°. As shown, a steeper (higher) angle within the zone of 45° - 75° is preferred, i.e. closer to, but never more than, 75°.



## 14.6 *Unlocking the Docking Station*

- > 1. When the vehicle has come to a standstill, remove the seat belt.
- > 2. To unlock it, move the wheelchair forward slightly to release the pressure on the locking pin. Next, press the red release button on the control panel. The locking pin is triggered/released for approx. 5 seconds, after which the locking pin is automatically locked/activated again. Do not attempt to reverse out of the Docking Station before the red LED on the control module, which indicates the unlock position, lights up.



### **WARNING**

Moving the wheelchair backwards before the red LED lights up will cause the Docking Station's locking mechanism to lock. Driving backwards is then impossible. If this happens, repeat the unlocking procedure described above.

- > 3. Move the wheelchair out of the Docking Station within the 5-second period.

## 14.7 Installing the Dahl Docking Station

According to ISO 7176-19:2008, the Dahl Docking Station MK II and VarioDock™ are suitable for Paravan's power wheelchair models PR50, PR 40, PR 25, PR Piccolino, PR Biolution and PR Heavy Duty.

The following instructions explain how to install the Dahl Docking Station MK II and VarioDock™ on the wheelchair using the PARAVAN adaptation kit. Please also refer to the Dahl Engineering's instructions for the installation, use and maintenance of the vehicle.



Fig. 40: Dahl Docking Station



Trouble-free and fault-free operation of the power wheelchair can only be guaranteed if the knowledge gained from these installation instructions is observed and implemented. PARAVAN GmbH assumes no liability or warranty for damage or operating faults resulting from non-compliance with these installation instructions or from modifications to the power wheelchair.



## WARNING

**Risk of injury** due to incorrect handling of the batteries.

**Material damage** due to improper handling of the batteries.

- > Handle the batteries with particular care.
- > Coupling and uncoupling may only be carried out by qualified personnel.
- > Keep away from fire.
- > Dispose of damaged batteries properly.

## 14.7.1 Contents of the Dahl Docking Stations

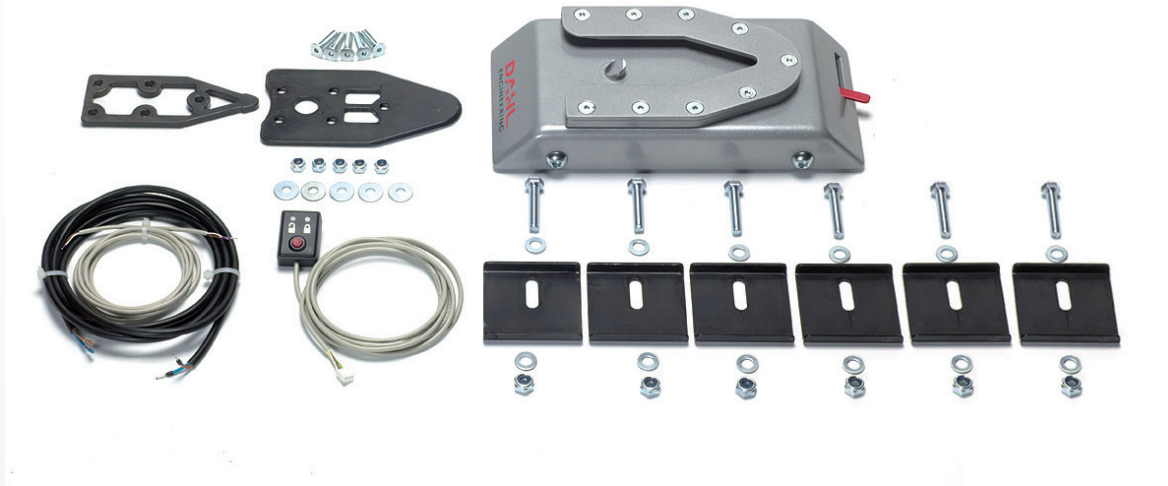


Fig. 41: Contents of Dahl Docking Station MK II Standard Set # 501750



Fig. 42: Contents of the Dahl VarioDock™ Standard Set # 503600

## 14.7.2 Attaching the Dahl locking plate to the wheelchair

An additional wheelchair-specific adaptation kit is required for the installation of the Dahl locking plate. It contains special nuts and plastic spacers to be placed inside the battery box.

**DAHL Docking Station installation kit locking plate 503125 (PV art. No.: 000043535) and DAHL adaptation set for DAHL Docking Station 502064 (PV art. No.: 000044508):**

- ① Countersunk screw with Torx TX27 - ISO 14581 M8x35 14.9 (PV art. No.: 000043534)
- ② Locking plate with screws for Docking Station 10069 (PV art. No.: 000020667)
- ③ 8 mm intermediate piece for locking plate for 10069 DAHL (PV art. No.: 000010131)
- ④ DAHL spacer 502071 (PV art. No.: 000044507)
- ⑤ DAHL nut 500759 (PV art. No.: 000044506)

To install the Dahl locking plate, use the DAHL Adaptation kit, article 502064

- You need a Torx key TX 27 to install the adapter set. Tighten the Torx screws with a torque of 16-18 Nm.

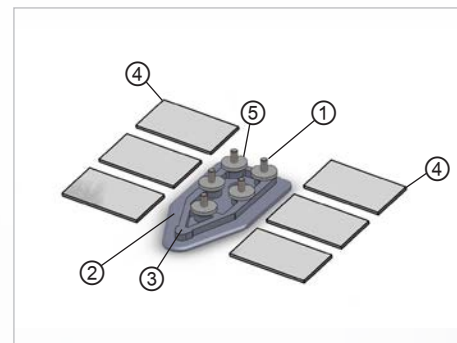


Fig. 43: Dahl Adaptionkit for Dahl Docking Station



Fig. 44: Torx TX 27

The trim must first be removed to attach the Dahl Docking Station to the Paravan wheelchair.

- > To remove the cover, loosen the six knurled screws ①. If a main isolating switch is installed on the rear, the key of this switch must first be removed ②.
- > Remove the rear trim ③ and the side trims. The order is not important.
- > To open the cover of the battery box, the two front hexagonal screws must be removed with a 10 mm spanner. The battery box can then be tilted backwards using the hinges - be careful: the entire weight of the superstructure rests on the lid!

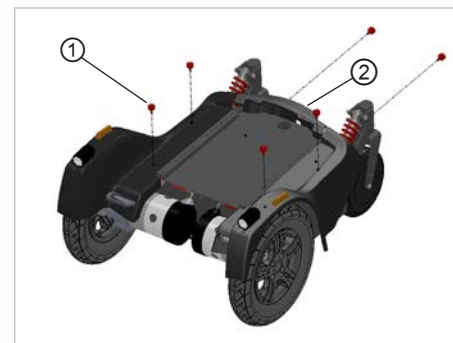


Fig. 45: Paravan knurled screws

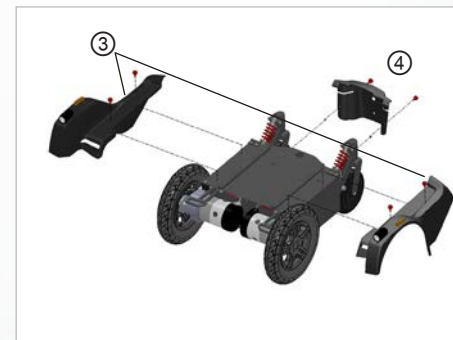


Fig. 46: Paravan rear and side trim

### 14.7.3 Attaching the Dahl locking plate to the wheelchair

#### Removing the batteries:

- Disconnect the main cable plug on the left and right of the batteries.
- Remove the left and right batteries.



Fig. 47: Main cable battery

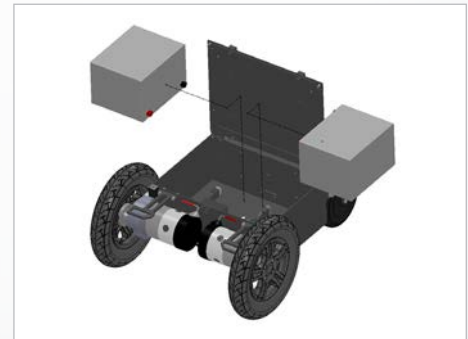


Fig. 48: Remove batteries



## Attaching the DAHL system:

- > Position the locking plate 503125 on the bottom of the wheelchair. The holes for positioning are already provided in the battery box.
- > Now, fix the locking plate inside the battery box with the adaptation set 502064 and screw the five countersunk screws from below with the DAHL nuts 500759. Adjust the height of the locking rail (1.2).
- > Additional spacers (1mm, 2mm, 3mm, 8mm, 10mm) may be required for this purpose. Fine adjustment is carried out when the wheelchair is adjusted in the DAHL Docking Station in the vehicle. Finally, glue the six spacers 502071 to the bottom of the battery box so that the batteries lie flat and cannot slip when inserted. If using the power height adjustable Dahl VarioDock, additional spacers will not be needed for adjusting the height.
- > Once you have adjusted the height of the locking rail, screw in the pan-head screws medium tight with a screw lock.

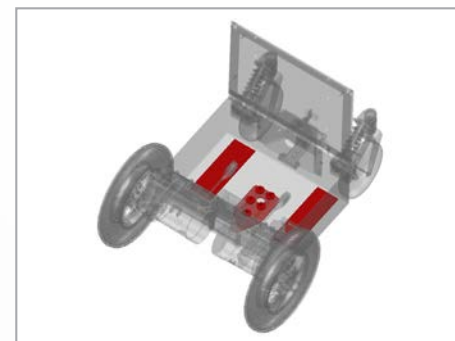


Fig. 49: Position of the Dahl system

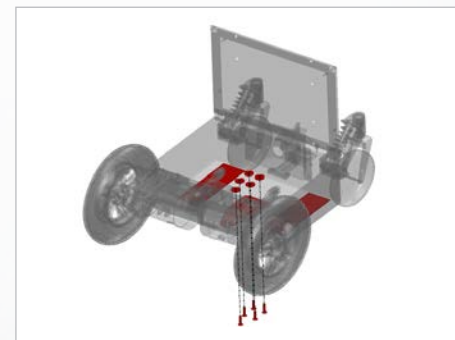


Fig. 50: Attaching the Dahl System

After the Dahl system has been attached to the wheelchair chassis, replace the batteries and reattach the cover in the reverse order.

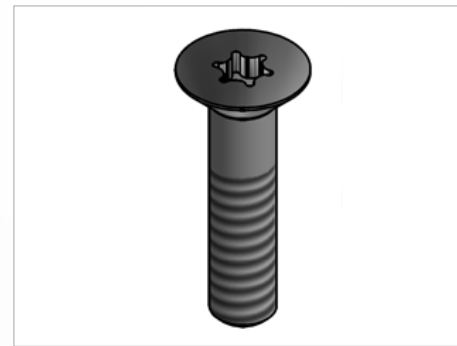


The PARAVAN adapter set can also be pushed further forwards or backwards and attached accordingly, depending on the position of the counterpart in the vehicle.



Installation of the Dahl docking system in the vehicle: Only professional companies involved in the conversion or construction of wheelchair accessible vehicles can order the docking system from Dahl Engineering. The installation must be carried out by a qualified and experienced technician. Dahl Engineering can provide vehicle-specific installation instructions for a wide range of vehicles, which must be followed by the fitter. Please contact Dahl Engineering for more information on approved vehicles and installation locations.

Use the screws supplied to attach the Dahl Docking Station to the wheelchair.



## DANGER

**Possible risk of injury or serious injury or death due to the use of incorrect screws.**

- > Only use the screws supplied
- > Do not use screws other than those supplied by Dahl Engineering (order No. 502800, quality 14.9 with TorxTX 27 wrench). Standard screws are not strong enough in the event of a collision.

## 14.7.4 Functions of the Dahl Docking Station

- ① Dahl Docking Station
- ② Locking plate and spacer
- ③ Locking bolt
- ④ LED display red
- ⑤ LED display green
- ⑥ Control panel
- ⑦ Unlock button
- ⑧ Manual emergency release lever
- ⑨ Manual operating lever

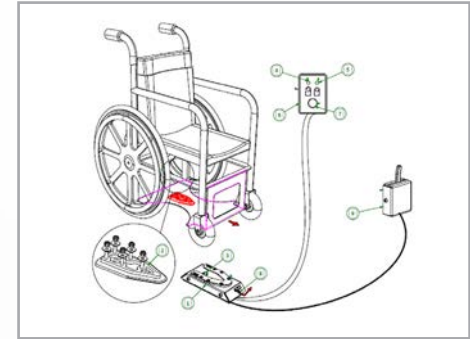


Fig. 51: Dahl system functions



Please refer to the Dahl Engineering Installation and User Manual for height adjustable VarioDock™ systems.

## 14.7.5 Securing the wheelchair in the Docking Station

- Drive the wheelchair slowly and in a uniform direction over the Docking Station. The locking plate under the wheelchair helps to guide the wheelchair into the Docking Station. When the locking plate is fully engaged in the Docking Station, a spring-loaded locking pin automatically secures the locking plate.
- The Docking Station is equipped with a control switch that indicates whether the locking plate is correctly fixed in the Docking Station. As soon as the locking plate comes into contact with the securing pin, a warning tone (a high-pitched whine) is heard and the red diode/light (LED) in the control panel lights up until either the locking plate is fully engaged or the wheelchair is removed from the Docking Station.
- As a sign that the wheelchair is properly secured, the warning tone goes out, the red lamp (LED) in the control panel also goes out and the green lamp (LED) lights up.
- Do not forget to fasten your seat belt for the drive.



Please refer to the Dahl Engineering Installation and User Manual for height adjustable VarioDock™ systems.



## DANGER

**Possible risk of injury or serious injury or death! Do not move the vehicle:**

- > While the wheelchair is being moved into position in the Docking Station
- > If the wheelchair and the wheelchair user are not properly secured.
- > If the warning tone sounds and/or the red warning lamp (LED) in the control panel flashes or lights up!

Always check that the locking plate is properly locked in the Docking Station by trying to pull the wheelchair out of the Docking Station before driving. (It must not be possible to drive the wheelchair backwards out of the Docking Station without pressing the red release button on the control panel).

## 14.7.6 Unlocking the Dahl Docking Station

- When the vehicle has come to a standstill, remove the seat belt.
- The unlocking process begins by moving the wheelchair forwards slightly to reduce the pressure on the locking pin. Next, press the red release button on the control panel. The locking pin is triggered/released for approx. 5 seconds, after which the locking pin is automatically locked/activated again. Do not attempt to reverse out of the Docking Station before the red LED on the control module, which indicates the unlock position, lights up.
- Move the wheelchair out of the Docking Station within this 5-second period.



Please refer to the Dahl Engineering Installation and User Manual for height adjustable VarioDock™ systems.



### WARNING

Moving the wheelchair backwards before the red LED lights up will cause the Docking Station's locking mechanism to lock. Driving backwards is then impossible. If this happens, repeat the unlocking procedure described above.

## 14.8 Manual release in the event of an electrical fault

- 1. In the event of an electrical failure, a manual emergency release is located at the front edge of the Docking Station. Move the wheelchair forwards to release the pressure on the locking pin and slide the red release arm to the side and hold it there while the wheelchair moves backwards out of the Docking Station.
- 2. A wired hand control can also be fitted (accessory). The red release arm must be pushed to the side and should be held there while the wheelchair is moved away.
- 3. If the described manual release procedure fails, an emergency release tool made of red plastic is included with each Docking Station. Move the wheelchair forwards to release the pressure on the locking pin and place the emergency release tool in the gap between the locking plate and the Docking Station. Push the unlocking tool forwards until the locking pin is pressed down - then the wheelchair can be moved backwards out of the Docking Station.



See also the separate instructions for the Dahl docking system regarding operation and emergency release procedures.



Fig. 52: Manual unlocking step 1

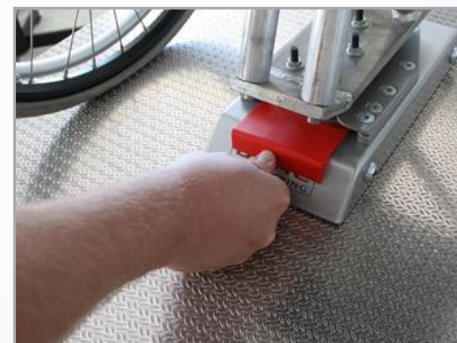


Fig. 53: Manual unlocking step 2



# 15. Controls

## 15.1 Control panel R-NET CJSM2

### 15.1.1 Overview of the control elements



Fig. 54: Control panel R-NET CJSM2

With the control panel (joystick) built into your power wheelchair, you can control all of the power wheelchair's driving, steering and braking processes. All additional functions which are equipped with displacement motors, such as the lifting arm and the sitting functions, must also be operated via the control panel.

- > “On/off” key ①  
Selection of profile (movement levels)/mode (seat functions)
- > “Direction indicator, right/left” keys ②
- > Brightness sensor ③ LCD Diagnostic LED
- > Display ④ (colour)
- > MODE key ⑤ for switching function – drive program/seat functions
- > PROFILE key ⑥ (selection of movement levels)
- > Joystick ⑦ (determination of travel direction)
- > “Horn” key ⑧
- > Function key ⑨ for selecting/drilling down to movement levels
- > “Hazard lights” key ⑩
- > “Light” key ⑪
- > Charging status indicator for storage battery ⑫

General

Information

Prepare

Operate

Help

Technology

## 15.1.2 Status display

The function keys are used to select the specific functions displayed in the assigned fields on the display.

Symbols of the status indicator:

- > Charging status of the storage batteries ①
- > Direction indicator, left ②
- > “On/off” light ③
- > System status ④ (“tortoise” → speed control active)
- > Direction indicator, right ⑤
- > Time ⑥
- > Hazard lights “on/off” ⑦
- > Current seat function / Current driving profile ⑧



Symbols ② + ⑤ play an active part in the “hazard lights” function!



Fig. 55: Function keys



Fig. 56: Status display

### 15.1.3 Start, switch off



Fig. 57: "On / off" key

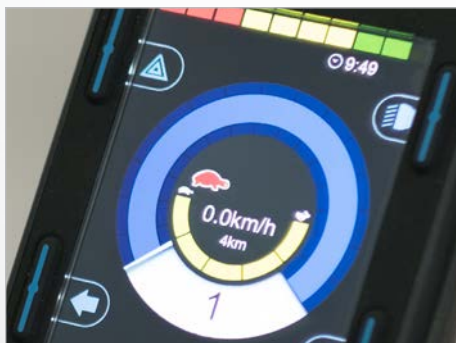


Fig. 58: Speed control (tortoise) active

#### Start

Push the "on/off" switch ① upwards.

- > The status display briefly flashes and the last selected function in terms of movement level/seat function is shown.
- > Press the switch ① downwards again to:
  - Select movement levels 1 to 5
  - Then switch to the seat functions

#### Switch off

Push the "on/off" switch ① upwards.

- > The power wheelchair switches itself off (assuming it is already switched on).

## 15.1.5 Switch direction indicator on and off

Press key ① or ② for the respective direction indicator, left or right.

- The selected direction indicator will flash.
- Press once more → direction indicator switches off.



Fig. 60: Turn signal right / left

## 15.1.4 Switch light on and off

Press the key ① for the “light on” function.

The lighting installation switches itself on and the light symbol lights up blue.

Press once more:  
→ Light off



Fig. 59: Light on and off



Fig. 61: Light symbol (colour)

## 15.1.6 Switch hazard lights on and off

Press the “hazard lights” key ① for the “hazard lights on” function.

- The hazard lights switch themselves on, while the hazard lights symbol flashes red and both direction of travel symbols flash green.
- Press the key again → The hazard lights / hazard lights symbol switch themselves off.



Fig. 62: Hazard lights on / off

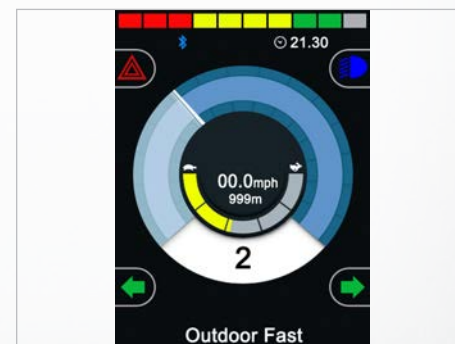


Fig. 63: Symbols (colour)

## 15.1.7 Driving functions overview



Fig. 64: Driving functions



Fig. 65: Charging status indicator (driving function blocked)

Overview of the driving functions shown on the display of the control panel during driving, steering and braking actions of the power wheelchair.

- > Selected drive program/movement level ①
- > Respective setting (having drilled down) for the selected movement level (1 to 5) fast/slow ②
- > ③ (Profile) key for switching to a higher or lower drive program (1 to 5).
- > Key ④ to change speed in the drive program. Drilling down the respective drive program.
- > Display of the current speed (km/h) ⑤
- > “Trip” display in kilometres ⑥

Display turns black when a charging device is connected.

- > If the wheelchair is switched on, the charging status indicator is the only thing shown.
- > First connect the charging lead for the charging device at the joystick, then plug the power cable for the charging device into the socket.



If the power wheelchair is being charged via the charging socket on the control panel, driving mode is automatically blocked.

## 15.1.8 Select drive program, drive

The power wheelchair must be in driving mode.

- > The last selected drive program is shown on the display (profiles 1 to 5). Drive profiles 1 to 5 are further divided into 5 levels once you drill down.

Press the switch upwards ① or downwards ② to switch to a higher or lower sub-level.

- > The selected drive program and sub-level will appear on the display.

Push the joystick in the direction in which you wish to travel.

- > The power wheelchair moves in the selected direction.
  - ① Move forwards
  - ② Turn to the right
  - ③ Move backwards
  - ④ Turn to the left



See section “3 Safety notes”



Fig. 66: Select drive program



Fig. 67: Joystick travelling direction

## 15.1.9 Electrical seat adjustment



Fig. 68: Display of seat functions

Use the MODE key to switch from the drive program to the seat functions. Select the desired seat function by moving the joystick “← left/right →”.  
> The adjustment functions menu will appear on the display.



Only the released or available functions can be selected.

To make the desired setting:  
adjust the seat, seat position, lifting of seat, backrest, tilting of seat, angle for legs, legroom or electric footrest via the joystick (by moving it forwards or backwards).

Switch back to the drive program with the profile key.

> The power wheelchair is ready to drive.



See section “3 Safety notes”



### 15.1.10 Electric seat-floor lowering (seat-lift function)

The seat lowering function allows the entire seating unit to be lowered to floor level. Use the Mode key to switch from the drive program to the “Seat Down” functions. Select the desired degree of lowering using the joystick “↑Up/Down↓”.

Push the joystick forward (“↑Up”) until the seat is lowered to the floor. The anti-tip supports move down automatically.

- > By pushing the joystick backwards (“↓Down”), the seat moves back up into the driving position. The anti-tip supports automatically move upwards again.

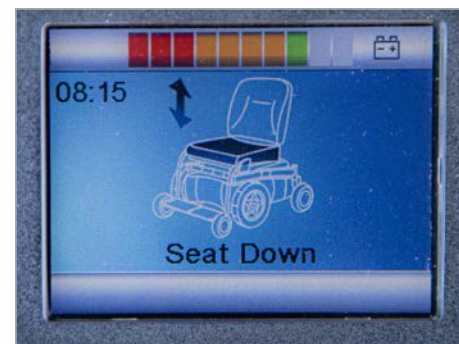


Fig. 69: Seat lowering function display



It is not possible to drive the wheelchair with the seat unit lowered.

Switch back to the drive program with the profile key.

- > The power wheelchair is ready to drive.



See section “3 Safety notes”



Fig. 70: Lowered PR 25 seat

### 15.1.11 Set time/date

Press and hold the “hazard lights” key to access the “Settings” menu.

➤ The special functions menu will appear on the display.

Move the joystick → left/right to access the options “year, month, date, day of the week, hours and minutes”. Select the desired option by moving the joystick “← Left/Right →”.

The precise adjustment is made using the “↑Up/Down↓” joystick movement. To save and quit the menu, go to “Quit” and close it by moving the joystick “↑Up/Down↓”.



Fig. 71: “Set time” function menu



Fig. 72: Setting the time and date

## 15.1.12 Show/hide clock, configure 12h/24h display



Fig. 73: Set clock to visible/invisible

Select the program function:

- > Press and hold the “hazard lights” key.
- > The “Settings” menu appears.
- > Use the joystick to select “Set time”. Move the joystick “← left/right →”.
- > By moving the joystick “← Left/Right →”, select “12h/24h display” or “Off”.
- > To save → quit the program. Move the joystick “← left/right →”.

### 15.1.14 Adjust display brightness

Select the program function:

- Press and hold the “hazard lights” key.
- Select “Back lighting” from the settings.
- Move the joystick “← Left/Right →” to select the intensity of the lighting (0 to 100% in 10% increments)
- To save → quit the menu.

### 15.1.13 Adjust display brightness, automatic (recommended)



The display brightness is automatically adjusted to lighting conditions by the factory. Menus may be arranged slightly differently, depending on the software version.

Select the program function:

- Press and hold the “hazard lights” key.
- Select “Auto Backlight” from the settings.
- By moving the joystick “← Left/Right →”, select “On/Off”.
- To save, quit the menu.



Fig. 74: Setting the display brightness



Fig. 75: Autom. display brightness


### 15.1.15 Block the controls (with the wheelchair switched on)

- Turn the control panel off and press and hold the ON/OFF button ① until you hear a beeping sound
- Move the joystick forwards until you hear a beeping sound
- Move the joystick backwards until you hear a beeping sound
- Immobiliser is activated



Fig. 76: Blocking the controls

### 15.1.16 Release the controls (with the wheelchair switched off)

- Switch on → and a “padlock symbol”  appears.
- Move the joystick forwards until you hear a beeping sound
- Move the joystick backwards until you hear a beeping sound
- The “Functions” menu is now available – the last function selected is shown

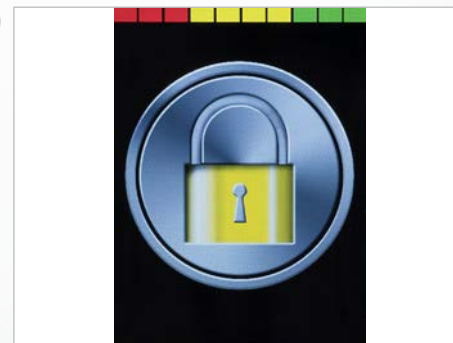


Fig. 77: Lock symbol

## 15.2 Control panel R-NET CJSM-L

### 15.2.1 Overview of the control elements



Fig. 78: Control panel R-NET CJSM-L

With the control panel (joystick) built into your power wheelchair, you can control all of the power wheelchair's driving, steering and braking processes. All additional functions which are equipped with displacement motors, such as the lifting arm and the sitting functions, must also be operated via the control panel.

- > “On/off” key ①
- > “Direction indicator, right/left” keys ②
- > Display showing the signal currently active (light, indicator) ③
- > Display ④ (colour)
- > MODE key ⑤ for switching function – drive program/seat function
- > PROFILE key ⑥ (selection of movement levels)
- > Joystick ⑦
- > “Horn” key ⑧
- > Function key ⑨ for selecting/drilling down to movement levels
- > “Hazard lights” key ⑩
- > “Light” key ⑪
- > Charging status indicator for storage battery ⑫

## 15.2.2 Status display

The function keys are used to select the specific functions displayed in the assigned fields on the display.

Symbols of the status indicator:

- > Charging status of the storage batteries ①
- > Direction indicator, left ②
- > "On" light ③
- > System status ④ ("tortoise" → Speed control)
- > Direction indicator, right ⑤
- > Time ⑥
- > Hazard lights ⑦



Symbols ② + ⑤ play an active part in the "hazard lights" function!



Fig. 79: Function keys



Fig. 80: Status display

## 15.2.3 Start and switch off



Fig. 81: "On / off" key

### Start

Push the "on/off" switch ①.

- > The last selected function in terms of movement level/seat function is shown.

### Switch off

Push the "on/off" switch ①.

- > The power wheelchair switches itself off (assuming it is already switched on).



Fig. 82: Speed control (tortoise) active



### 15.2.4 Switch light on and off

Press key ① or ② for the respective direction indicator, left or right.

- > The selected direction indicator will flash.
- > Press once more → direction indicator switches off.



Fig. 84: Turn signal right / left

### 15.2.5 Switch direction indicator on and off

Press the key ① for the "light on" function.

The lighting installation switches itself on and the light symbol lights up blue. Press once more: "light off".



Fig. 83: Light on and off



Fig. 85: Light symbol (colour)

## 15.2.6 Switch hazard lights on and off

Press the “hazard lights” key ① for the “hazard lights on” function.

- The hazard lights switch themselves on, while the hazard lights symbol flashes red and both direction of travel symbols flash yellow.
- Press the key again → The hazard lights / hazard lights symbol switch themselves off.



Fig. 86: Hazard lights on / off



Fig. 87: Symbols (colour)

## 15.2.7 Driving functions overview



Fig. 88: Driving functions

Overview of the driving functions shown on the display of the control panel during driving, steering and braking actions of the power wheelchair.

- > Selected drive program/movement level ①
- > Maximum speed in the selected drive program ②
- > Key ③ to switch to a higher (+) or lower (-) drive program
- > Key ④ to change speed in the drive program
- > Display showing "trip" in kilometres and current speed (km/h) ⑤



Fig. 89: Driving function blocked

Display is blank when a charging device is connected.

- > If the wheelchair is switched on, the charging status indicator is the only thing shown.
- > First connect the charging lead for the charging device at the joystick, then plug the power cable for the charging device into the socket.



If the power wheelchair is being charged via the charging socket on the control panel, driving mode is automatically blocked.

## 15.2.8 Select drive program, drive

The power wheelchair must be in driving mode.

- The last selected drive program is shown on the display.

Press the profile key ① to select/switch to one of the 5 movement levels (profiles).

- The selected drive profile will appear on the display.

Press the relevant key to select a higher ② or lower ③ maximum end speed in the respective drive profile.

- The preference within the drive profile will appear on the display.

Push the joystick in the direction in which you wish to travel.

- The power wheelchair moves in the selected direction.

- ① Move forwards
- ② Turn to the right
- ③ Move backwards
- ④ Turn to the left



See section “3 Safety notes”



Fig. 90: Select drive program



Fig. 91: Joystick travelling direction

## 15.2.9 Electrical seat adjustment



Fig. 92: Display of seat functions

Use the “Mode key” to switch from the drive program to the seat functions. Move the joystick “← Left/Right →” to select the seat function.

- > The respective seat function will appear on the display.



Only the functions present from the factory can be selected.

The required setting is carried out:  
adjust the seat, seat position, lift, backrest, tilting, angle for legs via the joystick (by moving it forwards or backwards).

Switch back to the drive program with the profile key.

- > The power wheelchair is ready to drive.



See section “3 Safety notes”

## 15.2.10 Electric seat-floor lowering (seat-lift function)

The seat lowering function allows the entire seating unit to be lowered to floor level. Use the Mode key to switch from the drive program to the “Seat Down” functions. Select the desired degree of lowering using the joystick “↑Up/Down↓”.

- Push the joystick forward (“↑Up”) until the seat is lowered to the floor. The anti-tip supports move down automatically.
- By pushing the joystick backwards (“↓Down”), the seat moves back up into the driving position. The anti-tip supports automatically move upwards again.



It is not possible to drive the wheelchair with the seat unit lowered.

Switch back to the drive program with the profile key.

- The power wheelchair is ready to drive.



See section “3 Safety notes”



Fig. 93: C.JSM seat lowering function display



Fig. 94: Lowered PR 25 seat

## 15.2.11 Set time/date

Press and hold the “slower” ① and “faster” ② speed keys to access the “Settings” menu.

> The special functions menu will appear on the display.

Move the joystick → right to access the options “year, month, date, day of the week, hours and minutes”. Move the joystick “← Left/Right →” to select the desired option.

The precise adjustment is made using the “↑Up/Down↓” joystick movement. To save and quit the menu, go to “Quit” and close it by moving the joystick “↑Up/Down↓”.



Fig. 95: “Set time” function menu



Fig. 96: Setting the time and date

## 15.2.12 Show/hide clock, configure 12h/24h display



Fig. 97: Set clock to visible/invisible

Select the program function:

- Press and hold the keys ①+②.
- The “Settings” menu appears.
- Use the joystick to select “Display time”.
- By moving the joystick “← Left/Right →”, select “12h/24h display” or “Off”.
- To save → quit the program.



### 15.2.13 Adjust the display background and brightness

Select the program function:

- > Press and hold the “slower” ① and “faster” ② speed keys.
- > Select “Back lighting” from the settings.
- > By moving the joystick “← Left/Right →”, select the percentage intensity of the lighting
- > To save → quit the menu.

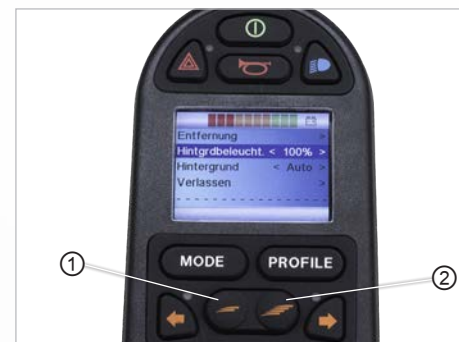


Fig. 98: Setting the display brightness

### 15.2.14 Adjust display brightness

Select the program function:

- > Press and hold the “slower” ① and “faster” ② speed keys.
- > Move the joystick “← Left/Right →” to select the desired option.
- > To save, quit the menu.



Fig. 99: Setting the display background

### 15.2.15 Block the controls (with the wheelchair switched on)

- Turn the control panel off and press and hold the ON/OFF button ① until you hear a beeping sound
- Move the joystick forwards until you hear a beeping sound
- Move the joystick backwards until you hear a beeping sound
- Immobiliser is activated



Fig. 100: Blocking the controls

### 15.2.16 Release the controls (with the wheelchair switched off)


- Switch on → and a “padlock symbol”  appears.
- Move the joystick forwards until you hear a beeping sound
- Move the joystick backwards until you hear a beeping sound
- The “Functions” menu is now available – the last function selected is shown.



Fig. 101: Controls blocked – block symbol

## 16. *Moving from the power wheelchair*

The following points must be followed for your own safety in order to independently move from the seat of your power wheelchair:

- > You should be able to safely carry your own weight.
- > You should be able to push yourself off from the power wheelchair with both arms simultaneously using the same amount of strength.
- > You should have a safe position to support yourself, one from which you cannot slip.
- > You should have practised everything often enough in the presence of another person.
- > You should consider all eventualities in case you fall on the floor and there is no one present with you.



We recommend that you enlist the help of another person. However, you should point out the dangers to this person. In all cases, discuss the implementation process together. Never support yourself on the control panel. The power wheelchair could be accidentally activated and start following uncontrolled commands.



If you want to move to the seat of another power wheelchair, the brake lock release lever must be set to **“LOCK”** (upwards) and the power wheelchair must be switched off.



See section “13.10.1 Operation of the brake lock release lever (emergency release)”

## 16.1 Procedure when moving sideways out of the seat

When moving sideways out of the seat, proceed as follows:

- Position the power wheelchair sideways
- Adjust the seat to the required height
- Switch the power wheelchair off
- Fold up ① footrests
- Swing ② armrest upwards
- Move from the seat



Fig. 102: Move from the seat, footrests

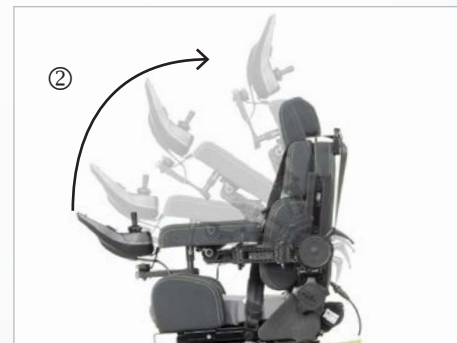


Fig. 103: Move from the seat, armrest

## 17. **Maintenance and servicing**

When using and operating the PARAVAN power wheelchair according to its intended purpose, it is subject to a recommended annual maintenance plan. All driven parts and in particular the lift arm are designed so that the operation of the power wheelchair is guaranteed to be low-maintenance and fault-free.

However, in order to guarantee its perfect functioning, the power wheelchair must nonetheless:

- > be handled with care,
- > be kept clean,
- > be serviced periodically on an annual basis.

### 17.1 **Service partner**

If problems occur, please contact your medical supply store or your dealer.



See section “1.1 Your manufacturer”



In order to have maintenance work carried out, please contact your medical supply store or your dealer. Maintenance and servicing works must only be carried out by trained persons.

## 17.2 *Cleaning and care*



You must not use a high-pressure cleaner to clean the power wheelchair. Avoid contact of the electronic parts with water.

To clean the frame and the plastic components (lacquer set), only

- mild soapy water without scouring agents

may be used.

Commercial surface disinfectants

- can be used for the disinfection of
- covers, the seat and the back cover.

The power wheelchair itself and its individual components are technically durable. In most cases, recyclable and harmless raw materials were used for its design and manufacture. After it has been taken out of service, the power wheelchair is suitable for the correct recycling procedure and economically sustainable disposal.



National and regional waste disposal provisions must be complied with.

The power wheelchair can be dismantled into the following main parts for purposes of recycling:

- > metals,
- > plastic or composite materials,
- > electronic waste,
- > storage batteries.

A top-end recycling procedure in accordance with the type and character of the waste should be sought (“Closed Substance Cycle and Waste Management Act”). This is economically viable if the costs associated with recycling are not disproportionate to the costs which would be incurred for waste disposal.

## 18.1 Packaging material

The packaging consists of largely recyclable material which is harmless to the environment, such as:

- wood, e.g. pallets or outer packaging,
- metal, e.g. tightening straps,
- bubble wrap.



Take advantage of the opportunity to recycle the packaging in an environmentally-friendly way. Recycling of rubbish should take priority over its disposal.

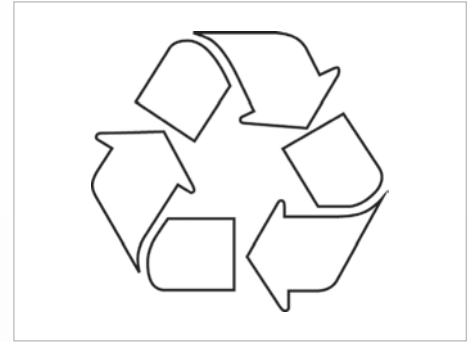


Fig. 104: Recycling



## 18.2 *Recommissioning*

If the power wheelchair has been out of service for a long time, the following work steps must be carried out before it is recommissioned again:

- > check protective devices, repair if necessary,
- > complete maintenance or review,
- > complete cleaning.



The power wheelchair must be completely cleaned and approved for use after a thorough inspection by a service technician authorised by PARAVAN GmbH.



See section “18 Maintenance and servicing”

### 18.3 **Information regarding transfer of the product**

When transferring the PARAVAN power wheelchair you must also pass on all the necessary technical documents for safe handling and operation, such as:

- > operating instructions,
- > proofs of maintenance

to the new user.



See chapter “17 Maintenance and servicing”

## 19. Troubleshooting

### 19.1 Status indicator on the control panel

Error message	Meaning
Centre joystick / Joystick zentrieren	The most common cause of this error is that the joystick is not centred when the control system is switched on. "Joystick off-centre" will appear on the display for five seconds. If the joystick is not released within this time, an error will be generated. Please ensure that the joystick is centred and then switch the control system on. When switching on the control system, make sure that you do not touch the joystick button with your hand.
Low battery / Batteriestand niedrig	This message appears when the control system detects that the battery voltage has dropped below 16 V. Check the state of the batteries and the connections in the control system. High battery / Hohe Batteriespannung This message appears when the control system detects that the battery voltage has risen above 35 V. The most common reason for this is that you have overcharged the battery or there is a bad connection between the control system and the batteries. Check the state of the batteries and the connections in the control system.
System lock active / Sperre aktiv	This message appears when one of the blocking inputs is active and locked. Switch the control system off and on again. This will remove the system lock and may get rid of the error. Check all cables and switches on the corresponding blocks.

Error message	Meaning
Brake error / Bremsen	<p>This message appears when the control system detects a problem with the magnetic brakes or their connections. Check the magnetic brakes, cables and connections in the control system. Check that the motor brakes have not come uncoupled.</p> <p>Motor error / Motorfehler This message appears when the control system detects that the connection to a motor has been interrupted. Check the motors, cables and connections in the control system.</p>
Gone to sleep / Ruhemodus	<p>This message appears when the control system has been inactive for longer than the [time] period defined by the "SleepTimer" parameter.</p> <p>Gyro disconnected / Gyro ni. angeschl This message appears when the control system detects that the gyro module is no longer connected. Reconnect the gyro module and restart the system.</p> <p>Bad cable / Kabelfehler This message appears when the control system detects an error in the cabling that enables the modules to communicate with one another. Check whether the cables or connections have been interrupted or squashed/jammed. If there is any visible damage to the cables, replace them and switch the control unit off and on again. Please speak to customer service about any replacements you may need.</p>

## 20. **Electrical system**

### 20.1 **Automatic fuses**

The PARAVAN PR 25 standing wheelchair is equipped with an automatically triggering fuse and an overload protection device. These are described in more detail below:

- > **Main fuse:** This protects the complete electrical system in the event of overloading by PR 25 electrical consumers – the response is an instant and complete electrical shut-down of the entire power wheelchair.



See section “20.2 Main fuse”

- > **Overload protection:** The power generated during downhill travel is diverted into the storage batteries. If the storage batteries were already charged, the safety system switches to emergency stop.



See section “20.3 Overload protection”

## 20.2 Main fuse



The main fuse is located at the rear of the power wheelchair.



An active (triggered) main fuse is signalled by the swung out green lug.

### 20.2.1 Reset triggered main fuse

- > Push the lug ① of the active main fuse ② back into its original position ③. The lug must audibly or visibly lock into place.
- > The PR 25 is ready for operation again.

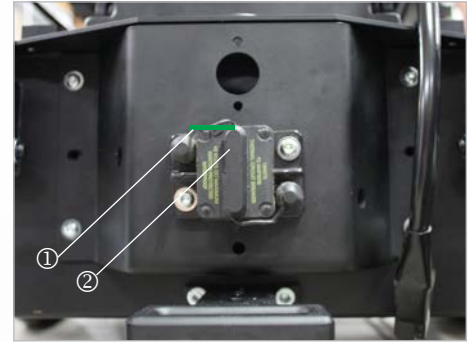


Fig. 105: Main fuse, active

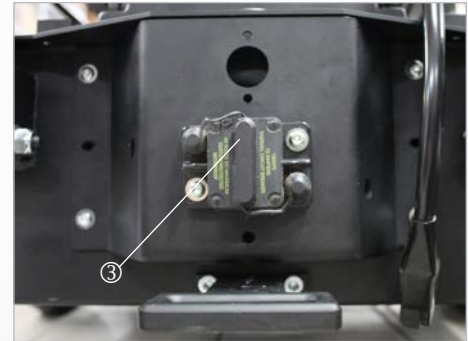


Fig. 106: Main fuse

## 20.3 Overload protection



While travelling downhill, the generated power is diverted into the storage batteries – the drive motors work like a generator in this case. If you have fully charged your PR 25 before travelling downhill, the security system switches to emergency stop in order to avoid damage to the electrical system (control, electronics, etc.).



Active (triggered) overload protection is indicated by gradual braking until the PR 25 comes to a standstill.

### 20.3.1 Reset the triggered overload protection:

- > Switch on the power generators, e.g. lighting. The generated excess power is now immediately used again.
- > The PR 25 is ready for operation again.

## 20.4 Connection option for auxiliary units



The PARAVAN PR 25 offers the option of connecting different auxiliary units with a voltage of 12 volts or 24 volts to the PR 25 on-board power supply.

If you require special equipment, e.g. a respirator, for this connection, please contact PARAVAN GmbH. The external connections are individually adjusted for the respective consumer and the cable harness is cut to size or moved in position.



## 20.5 The lighting installation

The PARAVAN PR 25 is equipped with a lighting installation featuring LED technology that is fully approved for road traffic. Due to the LED lamps used, the wearing out or maintenance of this installation is practically impossible/unnecessary.

To switch on the lighting installation, proceed as follows:

- > Select menu in the control unit.
- > Switch on the lighting installation.



See section “15 Control”

Parts of the lighting installation:

- > LED front headlamps ①
- > LED direction indicator ②
- > LED rear light ③



Fig. 107: Illumination at the front



Fig. 108: Illumination at the rear

## 20.6 *Maintenance-free storage batteries*

Your PARAVAN power wheelchair is equipped with high quality and powerful storage batteries. These maintenance-free storage batteries are completely sealed. Refilling or topping up the electrolyte (battery acid) is therefore not intended or possible.

The charging status or the capacity of the storage batteries can be read on the control panel.

- > **Red zone:** low capacity, immediate recharging necessary.
- > **Yellow zone:** energy is still sufficient, recharging if the opportunity arises.
- > **Green zone:** Storage battery fully charged, full capacity.



See section “15 Control”



See section “20.8 Charging the Power Wheelchair”

## 20.7 Information regarding storage batteries



Sealed storage batteries must never be opened. Opening the storage batteries will result in irreparable damage to them and could lead to a complete power failure.



See section “23.1 Handling sealed storage batteries”



The storage batteries must be recharged after every use (even if they have only been minimally discharged) with the supplied charger. Always connect the charger during periods of non-use of the power wheelchair. The supplied charger automatically switches to “trickle charging” and thus guarantees the full use of the storage battery's functions, and that the storage battery is always ready to use in the power wheelchair. If you leave the storage batteries uncharged for too long they will deep-discharge and recharging will no longer be possible, meaning the battery should be replaced.



See section “20.8.2. Charger”



When disposing of storage batteries, please observe the current regulations relating to waste disposal. For information regarding these, please contact the responsible city council or municipal authority, or contact a disposal company directly.



See section “18 Disposal and Environmental Protection”

## 20.8 *Charging the PR 25*



Only charge the storage batteries with the charger supplied by us.

### Care tips:

- > Always ensure that the storage batteries have full charging capacity.
- > Daily overnight charging is recommended.
- > The PR 25 should be charged for at least 8 hours uninterrupted.
- > The charging cycle ends when the green lamp is lit up.
- > Always connect the charger during periods of non-use (trickle charging).



If you observe these care tips, the performance and service life of the storage batteries will be maximised.



See section “20.6 Maintenance-free storage batteries”



See section “20.7 Information regarding storage batteries”

## 20.8.1 Procedure for charging the PR 25



Fig. 109: Plug in the charging cable

- > Turn off the PR 25.
- > Put the charger on a heat-insensitive surface, e.g. on the footrests.
- > Put the charger plug ① into the charging socket on the control panel.
- > Connect the charger to the power supply & The charging process starts.
- > Check the charging status. & Are the storage batteries at full capacity? The charging process is complete.
- > Disassembly in reverse order.



After the charging process, terminate the connection between the power at the power socket and the charger.

## 20.8.2 The charger

The purpose of the charger is to automatically charge the storage batteries. The charger is housed in splash-proof sheet-steel casing. It complies with the guidelines and protection requirements of the:

- Low Voltage Directive 2006/95/EC,
- Electromagnetic Compatibility Directive 2004/108/EC.



Read the operating instructions included separately with the charger.

## 20.8.3 Installing the charger, installation location

- Only install in dry rooms.
- Do not cover casing openings.
- Ensure sufficient ventilation.
- Do not install near to radiant heaters (e.g. under lamps, on heaters etc.)



During the charging process, put the charger on the foot supports of the wheelchair.



Fig. 110: Set up charger


## 21. Technical equipment

### 21.1 Technical data and measurements

<b>K120 / K110 orthopaedic seat</b>	
Seat height with lift function, with seat cushion adapted to light anatomy	120 - 750 mm
Tilt	21° forwards, 50° backwards
Side frame repositioning	Thoracic area 30 mm / side Seat pad 50 mm / side
Lumbar support, 4 levels	Height adjustment 70 mm Curvature 0 mm - 25 mm
Seat length adjustment, optional	270 mm
Seat width	240 - 430 mm, adjustable
Seat depth	300 - 380 mm, adjustable
Backrest height	420 - 560 mm, adjustable
Backrest angle, manually adjustable	0° (vertical) - 37° backwards
Knee angle, electrically adjustable (optional)	0° - 90°
Headrest	5 positions
Armrest	6-axis with 12-way adjustability
<b>Weights</b>	
Weight when empty including storage batteries, without seat	116 kg
Maximum load	55 kg (standard)

<b>Dimensions</b>	
Total width of chassis without seat (standard seat is within the chassis width)	640 mm
Total length without footplate, forwards movement	1080 mm
Total length without footplate, backwards movement	990 mm
Total height with a standard seat, including headrest	1200 mm
Total height with a standard seat, without headrest	950 mm
<b>Electrical equipment</b>	
Storage batteries	2 x 12 Volt
Lighting	LED direction indicators LED front and rear lights
Range	30 km*
<b>Chassis / tyres</b>	
Spacer width at the drive axle	560 mm
Spacer width at the rear axle	370 mm
Wheelbase	640 mm
Measurements of front wheel	3.00 - 8
Measurements of rear wheel	2.00 x 50



Driving features	
Ground clearance	70 mm
Maximum obstacle clearance	60 mm
Turning circle	780 mm
Maximum (upward) climb	12° = 21%**
Maximum slope (downward)	10° = 17%**
Maximum camber	6° = 11%**
Speed	Standard 6 km/h, optional max. 10 km/h*
* Depending on: weight, ambient temperature, incline, slope, functions used.	
** When travelling on steep slopes, do not travel at maximum speed or use the seat height adjustment, tilt or seat length adjustment functions. Check uneven ground such as grass, ice or snow before travelling over it – there is a risk of sinking into it!	
 See section “3 Safety notes”	

## Details regarding the pads on the arm supports, seat and rear, description of the frame

General

Information

Prepare

Operate

Help

Technology

Arm support pads	
Pad material:	PV foam
Thickness:	20mm
Compression hardness:	7.2 kPa
Density:	56 kg/m <sup>3</sup>
Cover:	BC 12 / Floridas



Seat pads	
Pad material:	PR foam / MOI system
Thickness:	50 - 110 mm
Compression hardness:	-
Density:	340 +/- 25 N
Cover:	Matt black



Seat pad and backrest are moulded foam parts. Therefore not measurable in volumetric weight. Moulded parts are measured in accordance with DIN standards. Measurement is made in N.

## Details regarding the pads on the arm supports, seat and rear, description of the frame



<b>Back pads</b>	
Pad material:	PR foam / MOI system
Thickness:	30 - 50 mm
Compression hardness:	77 kg/m <sup>3</sup> ± 5%*
Degree of hardness:	340 +/-25 N*
Density:	260 +/- 25 N
Cover:	Matt black

\* These are not cut foam cuboids and are therefore foamed as moulded parts. And therefore measured in N in accordance with DIN ISO 2439.

<b>Frame</b>	
Pad material:	S2 235 JR / S3 55 M2
Coating:	Galvanisation
Corrosion protection:	Galvanisation



Seat pad and backrest are moulded foam parts. Therefore not measurable in volumetric weight. Moulded parts are measured in accordance with DIN standards. Measurement is made in N.

## 21.2 Spare parts



Replacing original parts with non-original parts or parts made in the style of the original (copied) is strictly prohibited/forbidden! Only obtain your replacement parts from your dealer or PARAVAN GmbH.



See section “1.1 Your manufacturer”



### WARNING

**Danger of injury** for persons operating a power wheelchair which does not correspond to the original or delivered condition.

**Material damage** to the power wheelchair by the use of non-authorised parts or incorrectly installed parts.

- > Do not make any technical modifications to the power wheelchair.
- > Only operate the power wheelchair in its original or delivered condition.
- > Use only original and approved replacement parts.

## 22. **Electromagnetic compatibility (EMC)**

### 22.1 **Information regarding electromagnetic compatibility**

- ➔ The installation and maintenance of the device may only be carried out by specialist staff.
- ➔ Only the charging station supplied by the manufacturer may be used.
- ➔ The connector must be securely installed. Electronic components and cables must not be damaged.
- ➔ The use of longer cables lengths can result in increased emitted interference or reduced interference immunity.
- ➔ Only the original accessories supplied by the manufacturer may be used.
- ➔ In special cases, e.g. if highly sensitive equipment is being used in the direct vicinity of the device, additional remedial action might need to be taken so that the electromagnetic interference emission is further lowered below the set limit values.

## 22.2 Compliance level

The interference immunity levels in accordance with IEC 60601 are fulfilled.

### Manufacturer's declaration – electromagnetic interference

The PR 25 is designed to be operated under the electromagnetic conditions specified below. The customer or the user of the device should ensure that it is used under these conditions.

Emission measurements	Compliance	Electromagnetic conditions – guidelines
HF emissions in accordance with CISPR11	Group 1	The PR 25 only uses HF energy for its internal functions. Therefore its HF emissions are very low, and it is unlikely that adjacent electronic devices will be disturbed by these.
HF emissions in accordance with CISPR11	Class B	The device is designed to be used in all set-ups including living areas and those which are directly connected to a public power grid that also supplies power to buildings being used for living purposes.
Emission of harmonics in accordance with IEC61000-3-2	Class A	
Emission of voltage fluctuations/flickers in accordance with IEC61000-3-3	fulfilled	

Table 201 in accordance with DIN EN 60601-1-2, 6.8.3.201

## Manufacturer's declaration – electromagnetic immunity

The PR 25 is designed to be operated under the electromagnetic conditions specified below. The customer or the user of the device should ensure that it is used under these conditions.

Interference immunity tests	IEC 60601 – test level	Compliance level	Electromagnetic conditions – guidelines
Electrostatic discharge (ESD), in accordance with IEC 61000-4-2	± 6 kV Contact discharge ± 8 kV Air discharge	± 6 kV Contact discharge ± 8 kV Air discharge	Floors should be made from wood or concrete, or have ceramic tiles. If the flooring is made from synthetic material, the relative humidity must be at least 30%.
Fast transient electric bursts in accordance with IEC 61000-4-4	± 2 kV for power supply cables ± 1 kV for input and output cables	± 1 kV for input and output cables	The quality of the supply voltage should correspond to that of a typical business or hospital environment.
Surges in accordance with IEC 6100-4-5	± 1 kV differential mode voltage ± 2 kV common-mode voltage	Not usable	The quality of the supply voltage should correspond to that of a typical business or hospital environment.

Voltage dips, short interruptions and in the case of fluctuations, the power supply in accordance with IEC 61000-4-11	< 5% UT (>95% dip of UT) for 0.5 periods 40% UT (60% dip of UT) for 5 periods 70 % UT (30% dip of UT) for 25 periods < 5% UT (>95% dip of UT) for 5 seconds	Not usable	The quality of the supply voltage should correspond to that of a typical business or hospital environment. If the movanimo user requires continued functionality in the event the power supply is interrupted, it is recommended that the movanimo be connected to an interruption-free power supply or a battery.
Magnetic field in the power supply frequency (50/60 Hz) in accordance with IEC 61000-4-8	3 A/m	3 A/m	Magnetic fields in the mains frequency should correspond to the typical values which are present in a business and hospital environment.
NOTE UT is the mains voltage before using the test level			

Table 202, in accordance with DIN EN 60601-1-2, 6.8.3.201



### 23.1 Handling of sealed storage batteries

When charging sealed storage batteries by water electrolysis at the positive electrode, the oxygen released is guided through a glass mat from the positive to the negative electrode and converted back to water again after a series of chemical reactions. During charging, part of the oxygen also enters the shared gas compartment. The housing of sealed storage batteries is designed to act as a pressure vessel through which reinforced walls prevent the excess oxygen from escaping until complete recombination at the negative electrode occurs. If improper charging is carried out, hydrogen along with oxygen also arises at the negative electrode. This hydrogen cannot be converted to water, but rather discharges including the oxygen present in the gas compartment via the safety valves after the permitted excess pressure level has been exceeded. If improper charging is avoided, no water loss will occur in sealed storage batteries and the storage batteries are completely maintenance-free. During storage and energy extraction there is no oxygen in the gas compartment and the storage battery has low pressure. Opening the valves must be avoided in all cases as if oxygen enters them, the negative electrode will be oxidised. This will result in irreparable damage and could lead to the complete power failure of the storage battery.

## 23.2 *Customer service booklet*

General

- 1. Inspection (12 months after commissioning)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

Information

- 2. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

Prepare

- 3. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

Operate

- 4. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

- 5. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

Help

- 6. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

Technology

- 7. Inspection (annual)  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Stamp: \_\_\_\_\_

## 23.3 EC declaration of conformity


	<p><b>EG-Konformitätserklärung</b> Declaration of Conformity</p> <p>Gemäß Anhang VII der Richtlinie 93/42/EWG für Medizinprodukte According annex VII of the council directive 93/42/EEC</p> <p>Wir, die Firma We, the company</p> <p>PARAVAN GmbH Paravan Straße 5-10 72539 Pfrontstätten - Alchäau, Deutschland (Germany)</p> <p>erklären als Hersteller hiermit in Alleinverantwortlichkeit, dass die Produkte der Klasse 1 hereby declare on our own responsibility, that the class 1 medical devices</p> <p><b>Elektroliegestuhl / electrically powered wheelchair</b> <b>PARAVAN Rollstuhl - PR 25</b></p> <p>(Modelle gemäß Produktbeschreibung in der Technischen Dokumentation - products according product description in our technical documentation)</p> <p>in Einklang mit der Technischen Dokumentation hergestellt werden und die grundlegenden Anforderungen der Richtlinie 93/42/EWG Anhang 1 (EG-Richtlinie für Medizinprodukte) erfüllen. Die Produkte sind mit dem CE-Zeichen gemäß oben genannter Richtlinie versehen.</p> <p>are manufactured in accordance with the technical documentation and comply with the Essential Requirements of Medical Devices Directive 93/42/EEC (annex 1). The products are labelled the CE-Mark according to the above Directive.</p>
<p><b>PARAVAN GmbH</b> Paravanstraße 5-10 72539 Pfrontstätten-Alchäau Deutschland</p> <p>Tel: +49 (0) 72 88 / 99 05-66 Fax: +49 (0) 72 88 / 99 05-79 Email: info@paravan.de</p> <p><b>MOBILITÄT FÜR DEIN LEBEN</b></p>	<p><b>PARAVAN GmbH</b> Paravan-Straße 5-10 72539 Pfrontstätten-Alchäau Tel.: 07288-9995 91 Fax: 9995 999</p> <p>Stempel, Unterschrift Stamp, signature</p> <p><i>S. Alchäau 20.02.2020</i></p> <p>OT, Datum Location, date</p> <p>Kreissparkasse Reutlingen IBAN: DE66 6405 0000 0100 0046 10 BIC: SOLA DE33 REU Commerzbank AG Reutlingen IBAN: DE27 4404 0033 0428 8270 00 BIC: COBA DE33 330</p> <p>Geschäftsführer: Roland Arnold Umsatzsteuer-ID: DE27525479 IK: 590841201</p> <p><a href="http://www.paravan.de">www.paravan.de</a></p>

Fig. 111: EC declaration of conformity

## 23.4 *Log of instructions provided upon delivery*

Due to the power wheelchair's flexible setting options, the following information should be observed:

### **In the event of tilting (optional):**

- It must be ensured that the seat is not tilted too far forwards or backwards, as otherwise you could slip out of the seat.
- The tilt function is set to your weight.
- Tilt the wheelchair first, then set the backrest.
- Always wear the seatbelt when using the tilt function.
- When using the tilt function, only half the speed of the selected movement level is possible.

### **Seat / backrest in the special orthopaedic seat (optional):**

- The backrest must only be adjusted as far as is necessary, as the motor is not powerful enough to lift the weight of the driver. Use the tilt function first.
- When adjusting the backrest and the tilting angle, be aware of attachments (rucksack, etc.).

### **Raising system:**

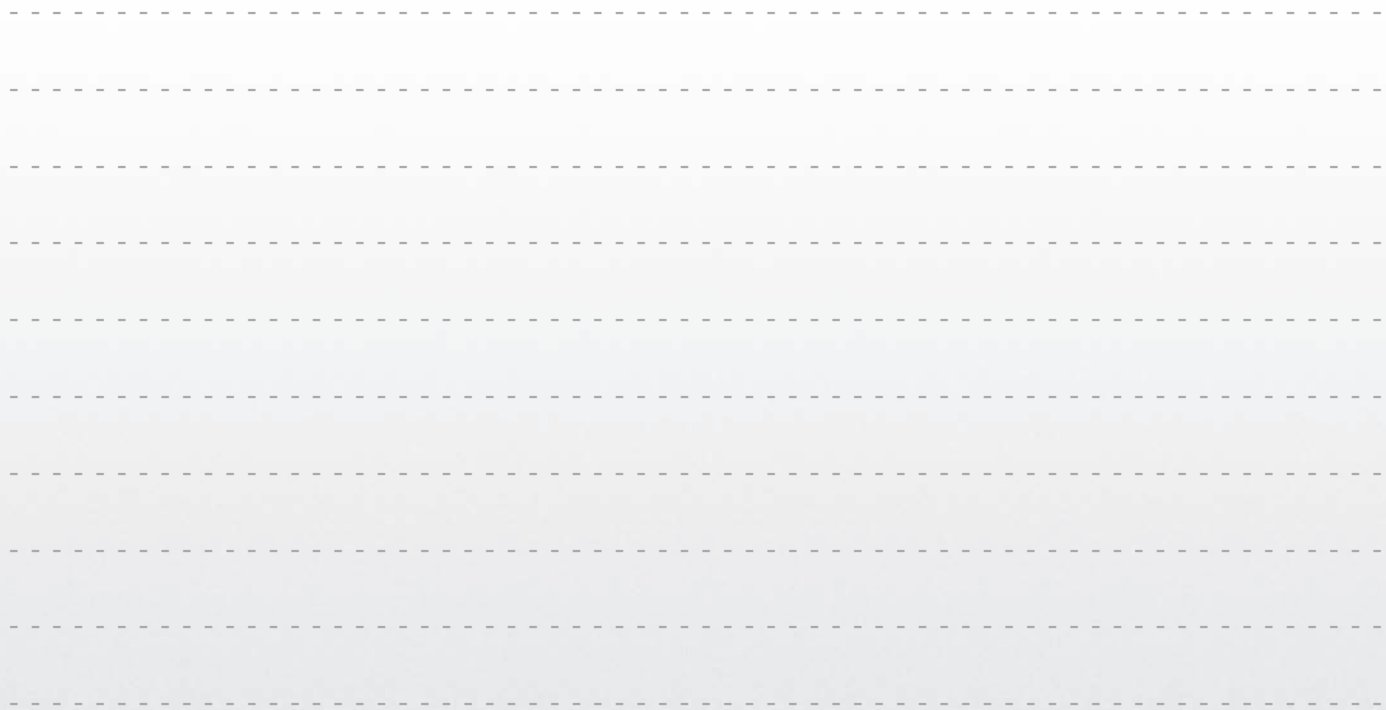
- When raising and lowering the seat, be aware of head and leg space, the footrests must not be in contact with the floor.
- When raising the seat, the power wheelchair will only travel at half speed after approx 100 mm.
- Lowering up to 15 cm

**Footrests (optional):**

- When adjusting the height and inclination of the footrest, take care to ensure that the height adjustment does not touch the seat pad.
- The setting of the footrest must be higher than the obstacle. The footrest should also not jam on the obstacle since the power wheelchair could topple over.

**Control / joystick**

- Moving the joystick on the control panel forwards, backwards and to either side controls the power wheelchair.







PARAVAN WHEELCHAIR SERIES

*Operating instructions*  
**PR 25**

ORIGINAL INSTRUCTION MANUAL

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