

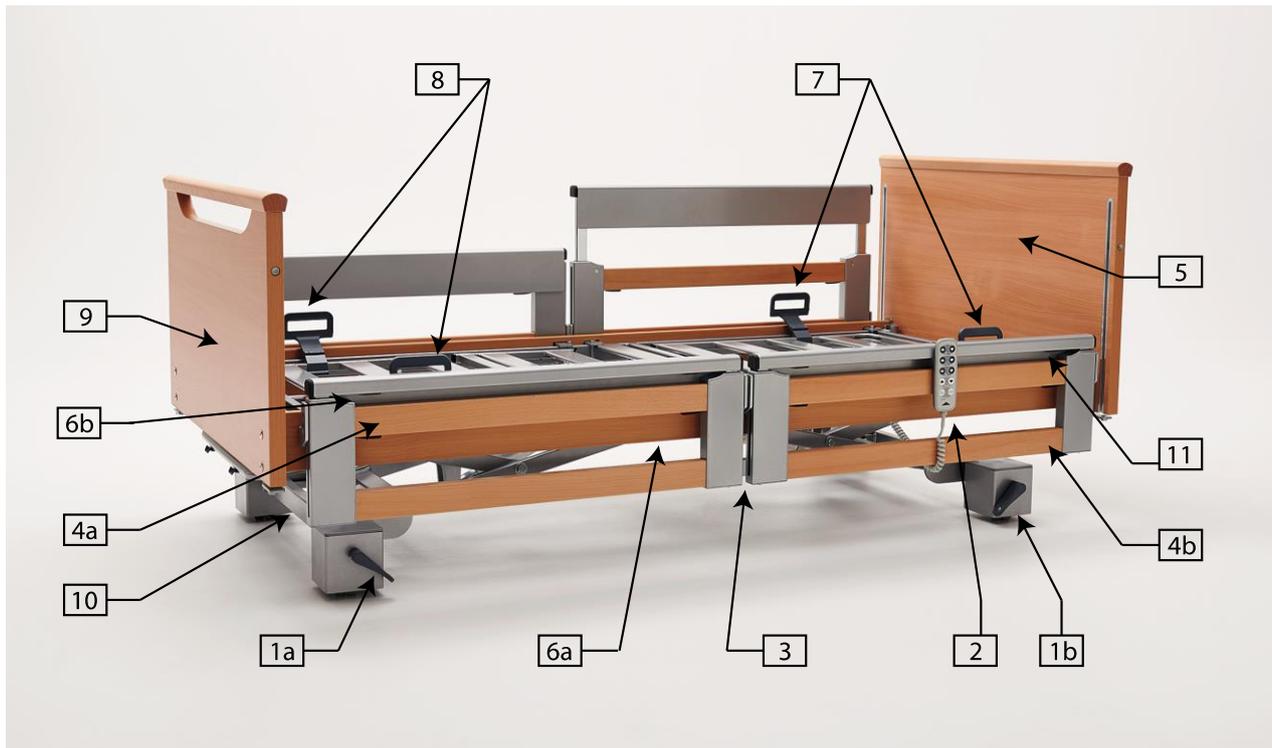
# Instruction Manual

## Care Bed

# Regia



## Regia Care Bed



(Illustration shows optional equipment with split safety sides)

- 1a Foot pedal for operating castor brakes, foot end
- 1b Foot pedal for operating castor brakes, head end
- 2 Handset, can be clipped on
- 3 Adaptor sleeve for mobilisation post on one or both sides  
(only if equipped with split safety sides)
- 4 Telescopic safety side (TSG)  
(only if equipped with split safety sides)
- 5 Headboard
- 6a Release lever, lower level
- 6b Release lever, upper level
- 7 Grab handle for backrest, on both sides
- 8 Grab handle for lower leg rest, on both sides
- 9 Footboard
- 10 Linen holder (only if equipped with split safety sides)
- 11 Locating sleeve for patient lifting pole (2 in total, concealed)



Advice

In this instruction manual, numbers which appear in square brackets [ ] and **bold type** refer to the care bed's operating devices as shown in this illustration.

# Contents

<b>1 FOREWORD</b> .....	<b>5</b>
<b>2 GENERAL INFORMATION</b> .....	<b>6</b>
2.1 Definition of the Groups of Persons Involved.....	7
2.2 Safety Information.....	8
2.2.1 Explanation of the Safety Symbols Used.....	8
2.2.2 Safety Information for the Operator .....	9
2.2.3 Safety Information for the User .....	10
2.3 Product Description .....	12
2.3.1 Designated Use .....	12
2.3.2 Designated Use .....	12
2.3.3 Contraindications .....	13
2.3.4 Special Features.....	14
2.3.5 Structural Design .....	14
2.3.6 Materials Used .....	15
<b>3 ASSEMBLY AND PUTTING INTO SERVICE</b> .....	<b>16</b>
3.1 Assembling the Bed .....	16
3.1.1 Assembling the Chassis.....	16
3.1.2 Assembling the Wooden Surround .....	20
3.2 Electrical Connection.....	22
3.3 Fitting the Telescopic Safety Sides (Optional) .....	24
3.4 Fitting the VSG Slidable Safety Sides (Optional) .....	25
3.5 Checklist: Inspection by the User.....	34
3.6 Location Requirements .....	35
3.7 Putting into Service .....	36
3.8 Disassembling the Bed .....	37
<b>4 OPERATION</b> .....	<b>38</b>
4.1 Moving and Braking the Bed .....	38
4.1.1 Castors.....	39
4.2 Electrical Adjustment Options .....	40
4.2.1 Special Safety Information on the Electrical Actuator System.....	40
Handset .....	42
Sleep position.....	42
4.2.2 Tilting Handset (Optional).....	44
4.2.3 Handset Locking Functions .....	45
4.3 Mechanical Adjustment Options .....	46
4.3.1 Lower Leg Rest .....	46
4.4 Attachments and Optional Features .....	47
4.4.1 Location Sleeves for Patient Lifting Pole .....	47
4.4.2 Grab Handle (Triangular Handle) .....	49
4.4.3 Under Bed Light.....	50
4.5 Bed extension .....	51
4.5.1 Manual CPR Release of Backrest.....	53
4.5.2 CPR Backrest Release Using Quick Release (Optional).....	55

4.6 Safety Sides.....	56
4.6.1 Special Safety Information for Safety Sides.....	56
4.6.2 TSG Telescopic Safety Side (Optional) .....	58
4.6.3 VSG Slidable Safety Side (Optional) .....	58
<b>5 CLEANING AND DISINFECTION .....</b>	<b>61</b>
5.1 General Information on Cleaning and Disinfection .....	61
5.2 Cleaning and Disinfection Plan.....	62
5.3 Instruction of Users and Trained Staff.....	63
5.4 Cleaning and Disinfection Agents.....	64
5.5 Handling Cleaning and Disinfection Agents.....	65
<b>6 MAINTENANCE .....</b>	<b>66</b>
6.1 By the User .....	67
6.2 By the Operator .....	68
6.3 Replacement Parts.....	71
6.4 Manufacturer's Address/ Service Address .....	71
6.5 Replacement of Electrical Components.....	72
6.5.1 Special safety information on replacing electrical components .....	72
6.5.2 Replacing the Handset .....	73
6.5.3 Plug Assignment of the Control Unit.....	73
<b>7 TROUBLESHOOTING.....</b>	<b>74</b>
<b>8 ACCESSORIES .....</b>	<b>75</b>
<b>9 TECHNICAL DATA .....</b>	<b>76</b>
9.1 Dimensions and Weights .....	76
9.2 Electrical Data .....	76
9.3 Ambient Conditions .....	79
9.4 Technical Information on Electromagnetic Compatibility (EMC) .....	79
9.5 Classification .....	82
9.6 Disposal Instructions .....	83
<b>10 DECLARATION OF CONFORMITY.....</b>	<b>84</b>

## 1 Foreword

Dear Customer,

Burmeier has built this bed to give you the best possible help with the challenges posed by nursing and caregiving. We passionately pursue the goal of developing high-quality and durable products. Our products should make patients and residents feel as safe and comfortable as possible during their stay in bed and maximise the safety and lighten the workload of nursing and care staff. For this reason, the electrical safety and all functions are tested prior to delivery. Each bed leaves our factory in perfect condition.

Correct operation and care are necessary to keep the bed in excellent condition during long-term use. Please therefore read and observe these instructions carefully. They will help you to put the bed into service for the first time and to use it on a daily basis. This instruction manual contains all the information you will need to make controlling and handling this bed as easy and safe as possible, both for you as the operator and for your users. It is a practical reference book and should be kept close to hand at all times.

Even after purchasing a bed, Burmeier is still on hand to help at any time. We provide customised solutions in all matters relating to inspection and maintenance, repair and process optimisation. You can contact our service centre by phone at +49 (0) 5232 9841 - 0.

We wish you and your users every success and satisfaction in caring for your patients and residents.

Burmeier GmbH & Co. KG

### Disclaimer

This product is not licenced for use on the North American market. This applies particularly to the United States of America. The distribution and use of the care bed in these markets, including through third parties, is prohibited by the manufacturer.

## 2 General Information



### Advice

The Regia care bed, hereafter referred to as the bed or the care bed, is manufactured in various models. This instruction manual has been issued for several bed models. It is possible that certain functions or features are described which are not incorporated in your particular bed.

### Instructions for the Operator:

- This care bed fulfils all the requirements of the 93/42/EEC Medical Devices Directive and the latest safety standard DIN EN 60601-2-52/A1 for Medical Beds. It is classified as a Class 1 active medical device in accordance with the Medical Devices Act (Medizinproduktegesetz, *German abbreviation: MPG*) § 13.
- Please observe your obligations as the operator in accordance with the Medical Devices Operator Ordinance (MPBetreibV), in order to ensure the permanently safe operation of this medical product with no risk of danger to patients, users or third parties.
- Any item of technical equipment, electrical or otherwise, can prove hazardous if used improperly.
- Read this instruction manual from start to finish to prevent any injury or damage resulting from incorrect operation.
- You are obliged to instruct users (see [Chapter 4](#)) in the proper use of this care bed in accordance with the Medical Devices Operator Ordinance (MPBetreibV) § 5.
- Ensure that users know where this instruction manual is kept, in accordance with the Medical Devices Operator Ordinance (MPBetreibV) § 9.

### Instructions for the User:

- Before using a bed, the user must check that the bed is fully functional and in perfect working order, and must observe the instructions in the manual in accordance with the Medical Devices Operator Ordinance (MPBetreibV) § 2. The same applies for accessories that are attached to the bed.
- Read this instruction manual from start to finish to prevent any injury or damage resulting from incorrect operation.
- This instruction manual contains safety information which must be followed. All users working on and with the Regia care bed model must be familiar with the contents of this instruction manual and follow the safety information given.

### Before using the care bed for the first time:

- Remove all transport securing devices and packaging film.
- Assemble the bed from the knocked down assembly units in accordance with the assembly instructions.
- Clean and disinfect the bed prior to using it for the first time.

## **2.1 DEFINITION OF THE GROUPS OF PERSONS INVOLVED**

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In this instruction manual, the following groups of persons are defined as:

### **Operator**

Operators (e.g. a hospital, or care home operator, etc.) is every natural and legal person with property rights to the Regia care bed. The operator is responsible for the safe operation of this medical device.

### **User**

Users (e.g. medical specialists, doctors, nursing staff, carers and attendants, ...) are persons who, based on their training, experience or briefing, are qualified to operate the bed on their own authority or to carry out work on it, or have been instructed how to handle this bed. Furthermore, they are able to recognise and avoid potential hazards and assess the clinical condition of the occupant.

### **Resident or Patient**

In this instruction manual, a resident or patient is defined as a person who is infirm, in need of care, ill or disabled, and occupies this bed.

It is strongly recommended that the operator or user instruct each resident or patient in the bed functions that are important for him/her.

## 2.2 SAFETY INFORMATION

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At the time of leaving the factory, this bed represents state-of-the-art technology and has been tested by an independent testing institute. The most important objective of the safety information is to prevent personal injuries. Property damage is also to be avoided.

Only use the hospital bed if you are absolutely certain that it is in perfect working order!

### 2.2.1 Explanation of the Safety Symbols Used

In this instruction manual, the following safety symbols are used:

#### Risk of injury to persons

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This symbol indicates hazards due to electrical voltage. There is danger to life.



This symbol indicates general hazards. There is danger to life and health.

#### Risk of damage to property

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This symbol indicates possible damage to property. It is possible that damage may occur to the actuator, materials or the environment.

#### Other advice

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This symbol indicates a useful general tip. If you follow it, you will find it easier to operate the bed. This tip is provided to give you a better understanding.

**The safety symbols used are not a substitute for the written safety information. Therefore read the safety information and follow the instructions precisely!**

**All persons who work on or with this bed must be familiar with the contents of this instruction manual and follow the all the relevant safety advice.**

## 2.2.2 Safety Information for the Operator

- Please observe your obligations as the operator in accordance with the Medical Devices Operator Ordinance (Medizinprodukte-Betreiberverordnung, German abbreviation: MPBetreibV), to ensure that this medical product is always operated safely and with no risk of danger to residents, users or third parties!
- Using this instruction manual, which must be provided with the bed, ensure that every user is instructed in the safe operation of this bed before using it for the first time.
- Draw every user's attention to the possible hazards that can arise if the bed is improperly used. This applies in particular to the use of electrical drives and safety sides.
- If the bed is in long-term use, test the functions and check for any visible damage (see [Chapter 6.2](#)) after a reasonable period of time (recommendation: once a year).
- Only allow this bed to be used by persons who have been instructed in the safe operation of the bed!
- Check to ensure that the safety instructions are adhered to!
- Make sure that substitute staff are also sufficiently well instructed in the safe operation of the bed.
- If any other equipment is attached to the bed, (e.g. compressors for positioning systems, etc.), ensure that this is securely fastened and is functioning properly. Pay particular attention to:
  - Safe routing of all loose connector cables, tubing, etc.
  - Ensure that no multiple socket outlets are located under the bed (risk of fire due to ingress of liquids).
  - [Chapter 2.3.1 Designated Use](#)
  - [This](#) bed is used for the diagnosis, treatment, alleviation and monitoring of illnesses or for compensating for injuries or disabilities. For detailed instructions for use, see Chapter 9.5.
- This bed is suitable for accommodating adult patients only (= persons whose height is at least 146 cm).
- The bed itself is not life sustaining or life supporting.
- This bed is not indicated for any particular medical use.
  - Designated Use of this instruction manual.  
If you have any queries or concerns, consult the manufacturer of the additional equipment.

### 2.2.3 Safety Information for the User

- Ensure that the operator instructs you in the safe operation of this bed.
- Check each time before using the bed to ensure that it is in perfect working order (see also [Chapter 3.5](#)).
- Ensure that no obstacles such as bedside cabinets, supply rails or chairs could impede adjustments to the bed.
- If any other equipment is attached to the bed, (e.g. compressors for positioning systems, etc.), ensure that this is securely fastened and is functioning properly. Pay particular attention to:
  - Safe routing of all loose connector cables, tubing, etc.
  - Ensure that no multiple socket outlets are located under the bed. These could cause electrical hazards due to damaged mains cables or the ingress of liquids.  
If you have any queries or concerns, consult the manufacturer of this equipment.
- If any damage or malfunction is suspected, take the bed out of service:
  - Unplug the bed from the mains supply immediately.
  - Indicate clearly that the bed is “Out of order”.
  - Report this immediately to the operator responsible.



- Route the mains cable, and also all other cables, in such a way that they cannot be pulled, driven over or damaged by moving parts when the bed is operated.
- There is a strangulation hazard for unsupervised babies and toddlers who may become caught in exposed connection cables, such as electrical supply lines and handset cables!
- There is a risk of suffocation for unsupervised babies and toddlers from swallowing small parts which have become detached from the bed.
- Before moving the bed, unplug the power supply unit and place the cable in the mains cable holder provided to ensure that the power supply unit will not fall off or trail on the floor.
- Do not place multiple socket bars under the bed. This could cause electrical hazards due to damaged mains cables or the ingress of liquids.
- Adjust the mattress base to its lowest position before leaving the resident unattended. In this way, you considerably reduce the risk of injury to the resident due to a fall when getting in or out of bed.
- Always ensure that the castor brakes are applied before leaving the resident unattended in the bed.

- When not in use, stow the handset in such a way that it cannot inadvertently fall off (hang it on the hook). Make sure that the cable cannot be damaged by moving parts of the bed.
- In these cases, adjustments must only be performed by, or in the presence of, a trained person!
- Before carrying out any adjustments, make sure that there are no people, limbs or objects in the way, in order to avoid hazards due to entrapment and/or damage to property. This applies particularly when mattress base sections are adjusted to a lower height.
- To safeguard the patient or resident, and children in particular, against unintentional electrical adjustments, place the handset out of their reach (e.g. at the foot end of the bed) or lock the adjustment functions of the handset, if:
  - The resident or patient is not able to operate the bed safely or to extricate himself/herself from hazardous situations.
  - The resident or patient could be at risk due to unintentional actuator adjustments.
  - The safety sides are raised (danger that the occupant's limbs could be trapped when adjusting the backrest and thigh rest).
  - Children are left unsupervised in a room with the bed.
- Always ensure that the castor brakes are applied before leaving the resident unattended in the bed.
- At regular intervals, carry out a visual inspection of the mains cable to check for mechanical damage (scuffing, exposed wires, kinks, pressure points, etc.). Perform such a check:
  - Whenever the cable has been subjected to any mechanical load, e.g. has been driven over by the bed itself or by an equipment trolley.
  - Whenever the cable has been bent, stretched or violently pulled, e.g. due to the bed rolling away while it is still plugged into the mains socket.
  - Before plugging it in again after the bed has been moved or relocated.
  - Regularly, but at least once a week, by the user when the bed is in constant use.
- Check the strain relief for the mains cable regularly to ensure that the screws are tight.

**Observe the safety information found in this instruction manual!**

## 2.3 PRODUCT DESCRIPTION

### 2.3.1 Designated Use

- This bed is used for the diagnosis, treatment, alleviation and monitoring of illnesses or for compensating for injuries or disabilities. For detailed instructions for use, see Chapter 9.5.
- This bed is suitable for accommodating adult patients only (= persons whose height is at least 146 cm).
- The bed itself is not life sustaining or life supporting.
- This bed is not indicated for any particular medical use.

### 2.3.2 Designated Use

- This bed was developed as a comfortable solution for infirm persons in need of care in homes for the elderly, nursing homes and comparable medical facilities, and for caring in the home.
- The use of this bed in hospitals is only permitted in rooms designed for medical treatment of the application group 0 (in accordance with VDE 0100 part 710, previously VDE 0107). This bed was not designed for any other usage!
- This bed may be used for the purposes of care under the supervision of a doctor and to facilitate the diagnosis, treatment or observation of the resident. It is therefore equipped with an option of locking the handset.
- This bed has no special connectors for potential equalisation. Please take this into account before connecting any additional (medical) electrical equipment. If necessary, further advice on additional protective measures can be found:
  - In the instruction manuals for these additional electrical devices (e.g. compressed air positioning systems, infusion pumps, enteral feeding devices ...)
  - In the DIN EN 60601-1-1 standard (Safety of Medical Electrical Equipment)
  - In the VDE 0100 standard part 710 (High Voltage Installations in Hospitals).
- Please refer to the safety information provided in [Chapter 4.3.1](#) and [4.4.2](#), particularly where occupants are in poor clinical condition.
- Safe working load (explanation of symbol on bed)



225 kg

This bed may be operated without restrictions with a permanent maximum load of 225 kg (patient or resident and accessories).



185 – 215 kg

The permitted weight of the occupant depends on the total weight of accessories attached at any time (e.g. respirators, infusions,...)

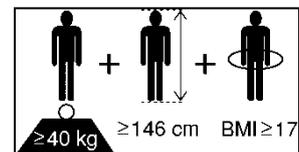
Example:

Weight of Accessories (incl. Mattress)	 Maximum permitted resident weight
10 kg	215 kg
40 kg	185 kg

- This bed may be operated only by persons who have received instruction in its safe operation.
- This bed is suitable for repeated use. When re-using the bed, pay attention to the necessary requirements:
  - Cleaning and Disinfection (see [Chapter 5](#))
  - Maintenance / Repeat Inspections (see [Chapter 6](#)).

### 2.3.3 Contraindications

- This bed is only suitable for occupants who do not fall below the following minimum body size/weight:
  - Height: 146 cm,
  - Weight: 40 kg
  - Body Mass Index<sup>1</sup> "BMI": 17.<sup>1</sup>



Sticker on bed chassis

- Owing to the smaller limbs of occupants with lower body measurements/weight, there is an increased risk of entrapment between the open spaces of the safety sides when safety side systems are used.

**The Regia bed may only be used under the operating conditions described in this instruction manual. Its use for any other type of application is deemed to be contrary to the intended purpose!**

<sup>1</sup> Calculation of BMI =  $\frac{\text{Gewicht Patient [kg]}}{\text{Körpergröße Patient [m]}^2}$ ; example: a)  $\frac{41 \text{ kg}}{1,5\text{m} \times 1,5\text{m}} = 18,2 \rightarrow \text{OK!}$ ; b)  $\frac{35 \text{ kg}}{1,5\text{m} \times 1,5\text{m}} = 15,6 \rightarrow \text{Not OK}$

### 2.3.4 Special Features

- Safety sides on both sides
- Electrical height adjustment range: approx. 26 - 80 cm
- Electrical thigh rest adjustment from 0° to approx. 40°
- Electrical backrest adjustment from 0° to approx. 70°
- Electrical adjustment to an approx. 15° reverse-Trendelenburg position (only possible when connected to mains power supply)
- Moves on four castors, either locked in pairs or centrally locked
- Mattress base in four sections: approx. 200 x 90 cm, (option: approx. 220 x 90 cm); external dimensions approx. 210 x 100 cm (option: approx. 230 x 100 cm)
- Headboard cannot be removed
- Mechanical CPR release of backrest

### 2.3.5 Structural Design

The bed is delivered unassembled so that it can be transported to every room. It consists of a chassis, a headboard, a footboard, a mattress base frame and the safety sides. The bed is equipped with four castors, each of which is fitted with a locking brake (see overview on [page 2](#)).

#### **Mattress base**

The mattress base frame is divided into a backrest, a fixed middle section, a thigh rest and a lower leg rest. All rests are adjustable. The mattress base height can be adjusted horizontally. A handset controls all electrical adjustments.

#### **Safety sides**

The bed is equipped with safety sides to protect the resident or patient from accidentally falling out of bed. The safety sides can be raised, one after the other, from the lowered position to protect the occupant, and then lowered again.

### Electrical adjustment system

The bed's electrical adjustment system is first-error-secure, flame-resistant (V0) and consists of:

- An 'external' power supply unit. The power supply unit consists of: A voltage transformer and a low-voltage connection cable. The voltage transformer generates a protective low voltage that is safe for both the patient and user. The power supply unit provides all actuators (motors) with protective low voltage using a connection cable and a cable harness. The socket available on the chassis is protected against the ingress of water.
- The central bus control unit, containing plug-in connections for all drive motors and the handset that work with protective low voltage.
- Electric motors for the backrest and thigh rest.
- Two electric motors for the height adjustment of the mattress base.
- A handset with a stable hook.
- A control box. The user must lock handset adjustments using this control box if the occupant's clinical condition makes this necessary.

#### 2.3.6 Materials Used

The bed is made predominantly of steel sections coated with a polyester powder finish or a zinc or chromium metal finish. The headboards and safety sides are made of wood or wood products whose surfaces have been finished.

All surfaces are recognised as being safe for contact with skin.

## 3 Assembly and Putting into Service

The bed is delivered unassembled and must be assembled at the place of use.

The bed is supplied in the following packaging units:

- Box 1: Chassis fitted with lift motors, backrest motor, thigh rest motor, control unit, handset, power supply unit
- Box 2: Mattress base with headboard/footboard holding sleeve, fastening screws
- Box 3: Headboard/footboard with sleeve nuts
- Box 4: Side panel, fastening screws, washers

### 3.1 ASSEMBLING THE BED

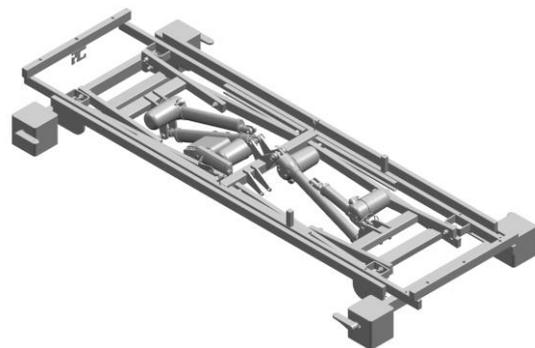
The bed must be assembled by two people.

#### Tools required:

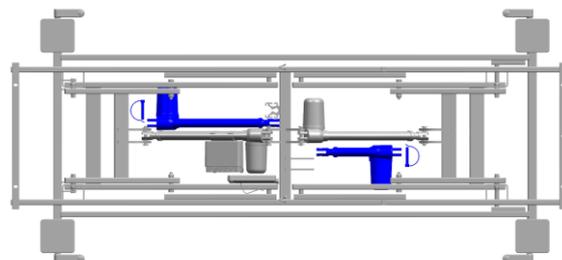
- Allen key, 8 mm

#### 3.1.1 Assembling the Chassis

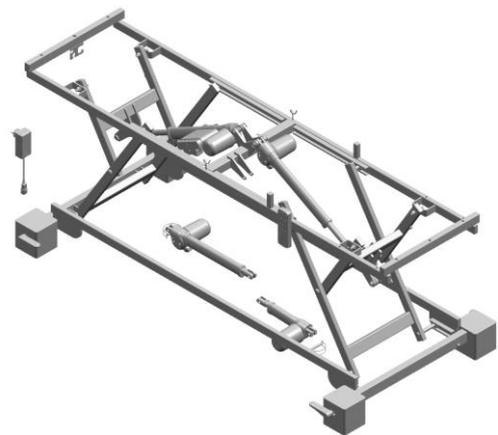
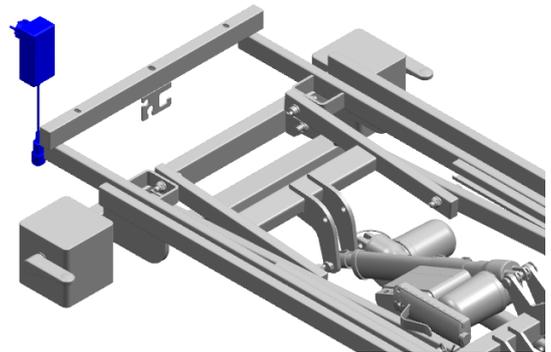
- Remove the chassis from the cardboard box and set it down.
- Remove all packaging foil from the cables.



- Remove the thigh rest motor and the backrest motor from their transport position as follows:
- Remove the locking pin on the housing.
- Cut through the cable tie on the actuator tube.
- **Note:** Pay attention to the cable routing.



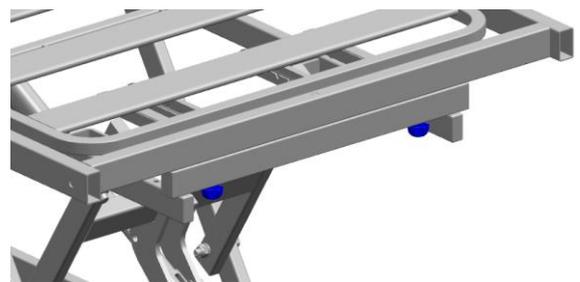
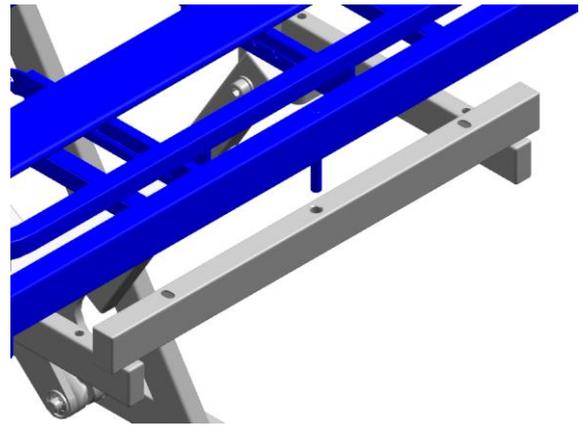
- Connect the power supply unit.
- Move the chassis to the highest position.
- **Note:** The lift stops in the intermediate position. Please press the lift button again.



- Put the mattress base in place.
- **Note:** Pay attention to the signs indicating the head and foot end.



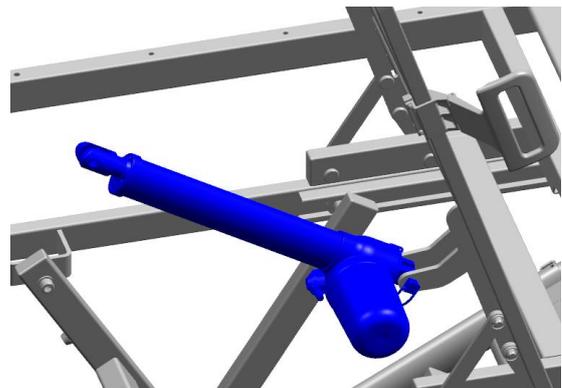
- Insert the location pins into the holes on both sides.
- Connect the mattress base and the chassis with the handwheel bolts (2 x 2 bolts).



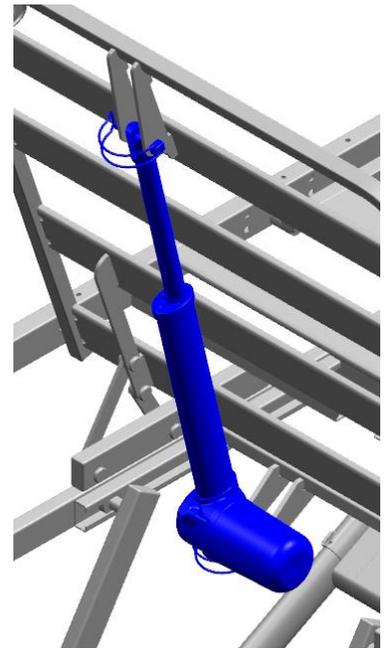
- Raise the backrest by hand.
- Insert the backrest motor into the take-up and secure it in place with the locking pin on the housing side.
- **Note:** Observe the following installation position. The housing assembly must be located over the lift motor.



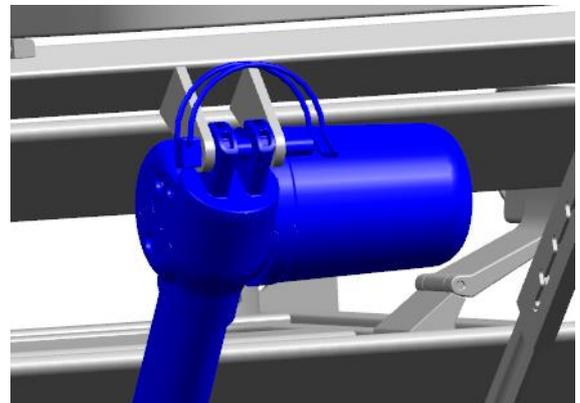
- Guide the lifting bar for the backrest motor into the take-up.



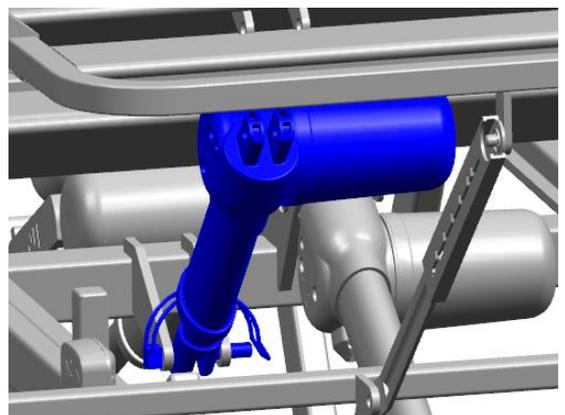
- Secure the lifting bar with the locking pin.



- Raise the thigh rest.
- Place the thigh rest motor in the take-up.
- Secure the thigh rest motor in place on the housing side using the locking pin.
- **Note:** Observe the following installation position. The housing assembly must be located over the lift motor.

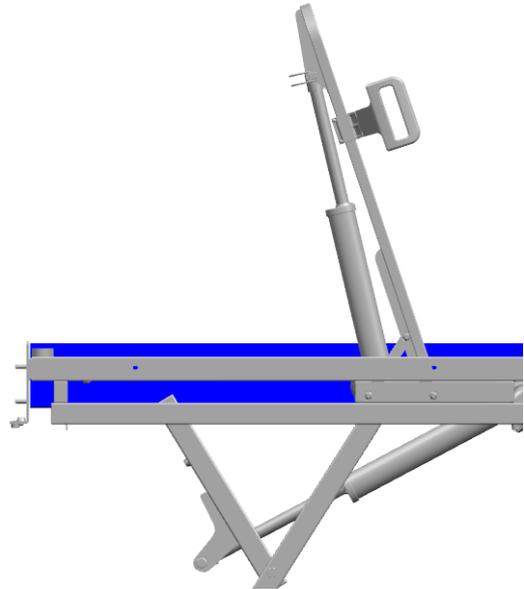


- Guide the lifting bar for the thigh rest motor into the take-up.
- Secure the lifting bar with the locking pin.

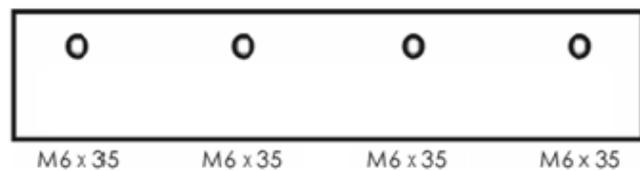


### 3.1.2 Assembling the Wooden Surround

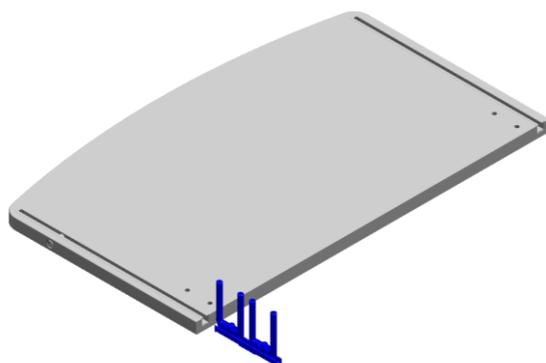
- Raise the thigh rest.
- Raise the backrest.
- Raise the side panel.



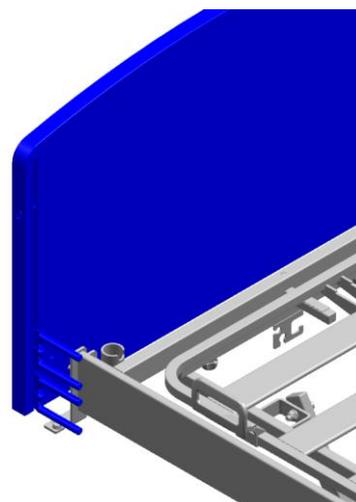
- Fasten the side panel to the mattress base with the through-bolts and the washers.
- **Note:** The side panel is asymmetrical. The short side must face upwards.



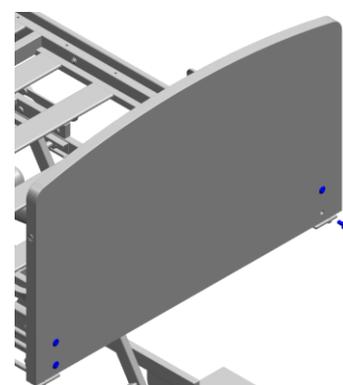
- Take the headboard/footboard out of the cardboard box.
- Depending upon the safety side configuration, insert the safety side guide as necessary (only in conjunction with the VSG slidable safety side).



- Place the headboard/footboard onto the threaded pins.



- Secure the headboard/footboard in place with the sleeve nuts.



## 3.2 ELECTRICAL CONNECTION

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When connecting components, always ensure that the plugs are inserted fully into the control unit. This is the only way to ensure proper sealing and faultless operation.

Ensure that the plug cover is always on the control unit.

Stow the motor cable and handset cable under the mattress base frame in such a way that there are no loops and they will not be damaged by moving parts of the bed. Use the cable routing provided on the chassis for this purpose.

Please take extra care when laying the power supply unit connection cable. This cable must not be damaged by moving bed parts or trapped under the castors when moving the bed!



Ensure that cables are not damaged, loops do not form and cables are not trapped in moving parts.

Special attention is required when routing the mains cable. Ensure that it is not damaged and that it does not form any loops! The mains cable must not be crushed by castors when the bed is wheeled around!

---

### Features of the Power Supply Unit

The power supply unit is simply plugged into an electrical socket. The cable outlet must hang downwards.



The socket which you wish to use to insert the power supply unit must not be located underneath the bed.



Otherwise, the power supply unit for the mattress base frame can be pulled out of the electrical socket during horizontal adjustments.

It is possible that irreparable damage can occur to the power supply unit and a short-circuit in the electrical socket.

---

All plugs are connected to the control unit. To prevent the plugs from being inadvertently disconnected, they are secured with a plug cover.

- Carefully lift the plug cover off using a screwdriver (see illustration below). To do so, insert the screwdriver into the groove of each cap, one after the other.
- Plug the height motor for the head section into socket 3.
- Plug the height motor for the foot section into socket 4.
- Replace the plug cover onto the control unit.

### Plug assignment for the control unit

- 1 = Handset
- 2 = Foot section lift motor (white)
- 3 = Head section lift motor (blue)
- 4 = Thigh rest (yellow)
- 5 = Backrest motor (black)
- 6 = Battery compartment



### 3.3 FITTING THE TELESCOPIC SAFETY SIDES (OPTIONAL)

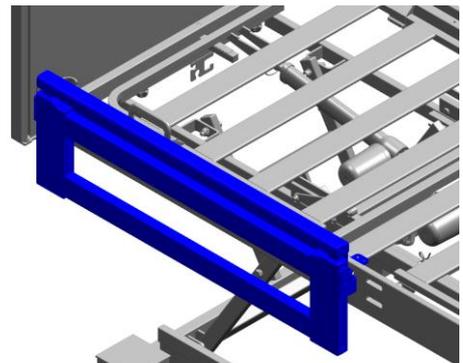
#### Fitting the side panel

1. Attach the side panel.

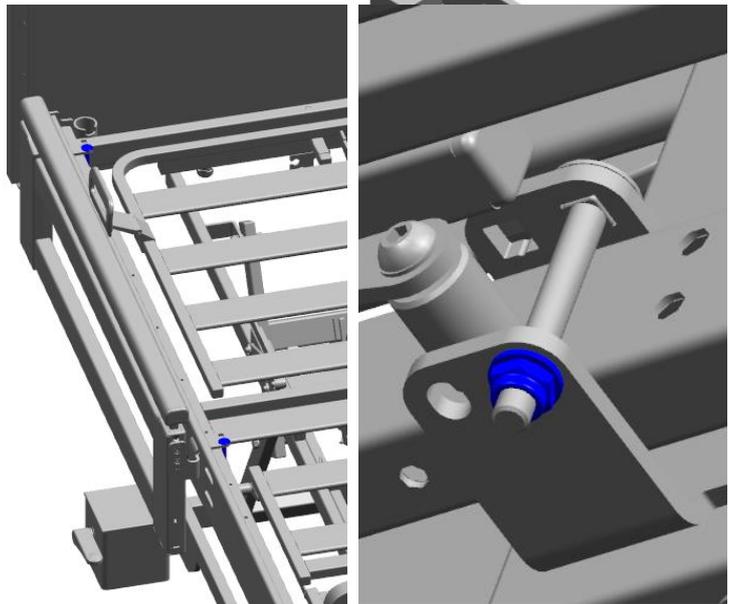


#### Inserting the safety side

1. Take the safety side out of the cardboard box in its retracted state.
2. Insert the safety side holders through the slotted holes in the side panel.



3. Insert the carriage bolts from above into the free through bores in the holder.
4. Bolt these from below to the washers and nuts.



5. Test the function of the telescopic safety side.

### 3.4 FITTING THE VSG SLIDABLE SAFETY SIDES (OPTIONAL)



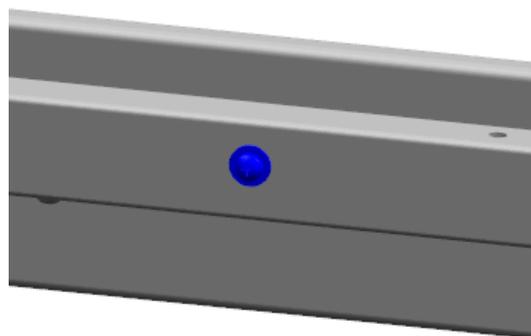
#### Advice

To speed up and simplify the installation process, we recommend the following preparation steps:

- Use a cordless power screwdriver.
- Drive the bed to its highest position.
- Raise the mattress base to allow better access to the various elements.

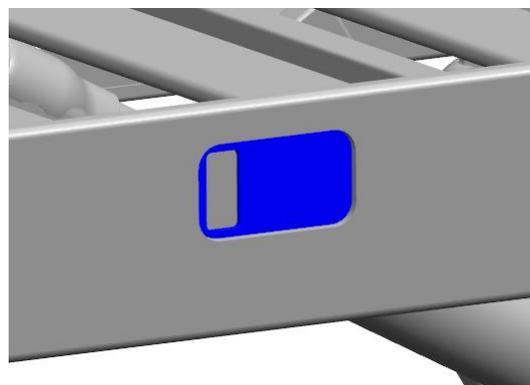
#### Replacing the side panel

1. Unfasten the four screws on the inner face of the longitudinal profile of the frame. Hold on to the side panel to prevent it from falling.



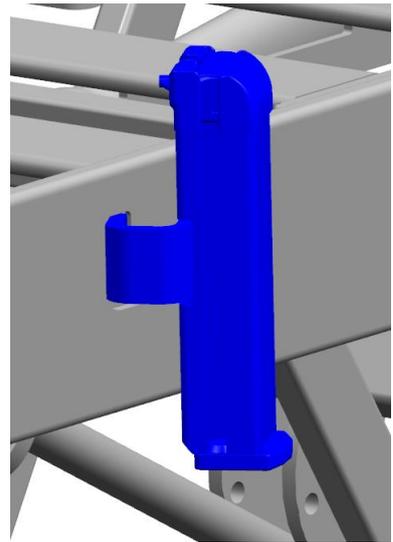
2. Remove the screws and then remove the side panel.

3. Place the new side panel in position on the bed. The hole in the panel should be closer to the top edge of the panel than the bottom edge.
4. Insert the four screws and tighten them.
5. Now press the panel into the hole. The opening should be towards the foot end.



## Mounting the rails for the mobilisation post

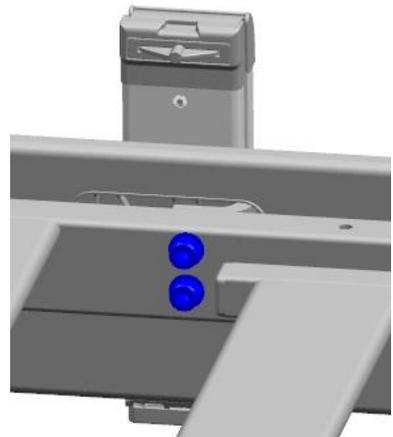
1. Place the parking section with the retaining bracket into the opening.



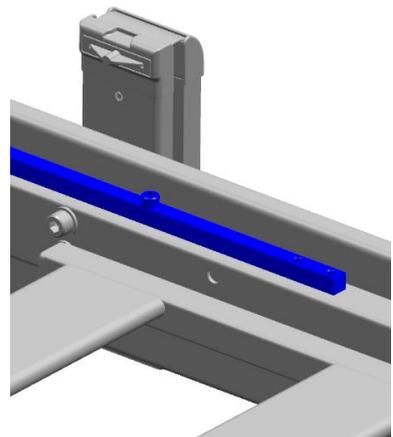
### Advice

The parking section is pre-assembled for installation on the right-hand side. If you wish to install the parking section on the left-hand side, it will have to be converted first. Instructions for the conversion can be found on page 33.

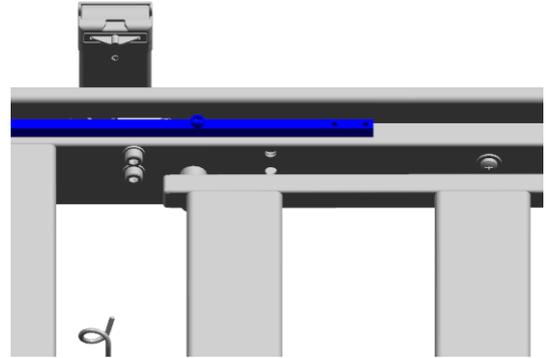
2. Fix the parking section in cylindrical screws (M8x35) and the corresponding washers. The screws should only be hand tightened at this stage.



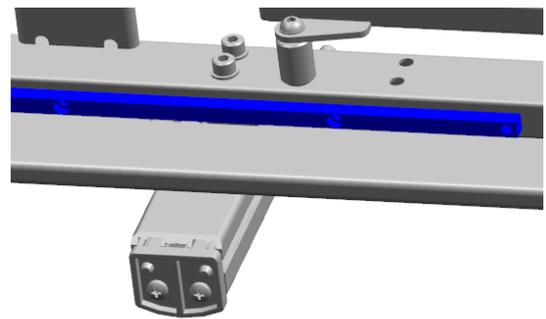
3. Now fix the limit stop screw (M6x8) on the top rail and tighten the screw. Ensure that the threaded blind holes face downwards.



**4.** Lay the rail on the longitudinal profile of the frame. Make sure that the limit stop screw lies towards the middle of the bed and that the threaded holes cover the holes in the longitudinal profile.

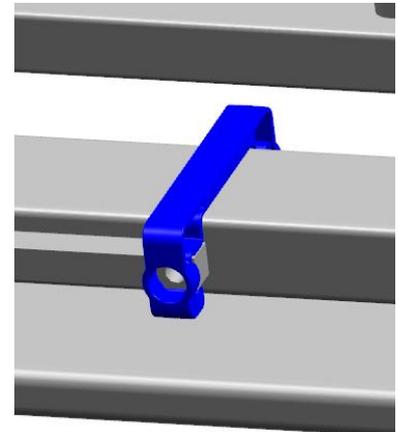


**5.** The bottom rail must be positioned in such a way that the recesses for the screw heads face downwards. The orientation is not important.



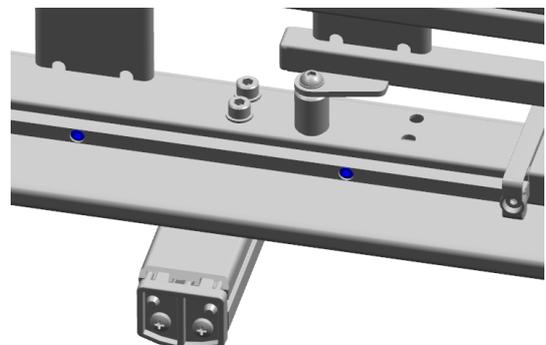
**6.** Now slide the two fixing brackets onto the rail, on the left and right, so that they are fixed to the longitudinal profile.

Make sure that the drilled holes are located on the underside.



**7.** At the right and left ends of the rail, insert a screw (M6x75) through the fixing brackets from below. Tighten these screws by hand.

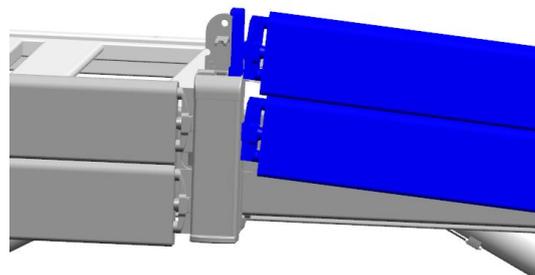
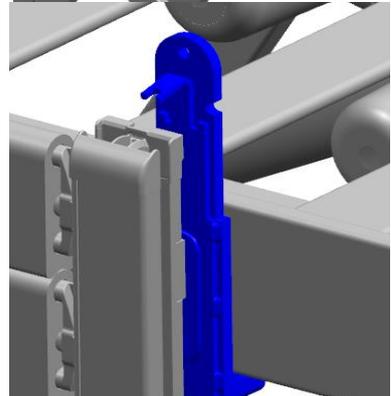
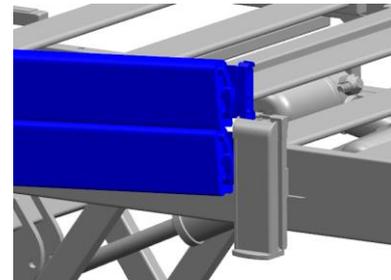
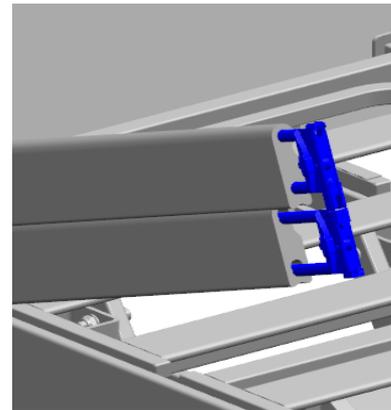
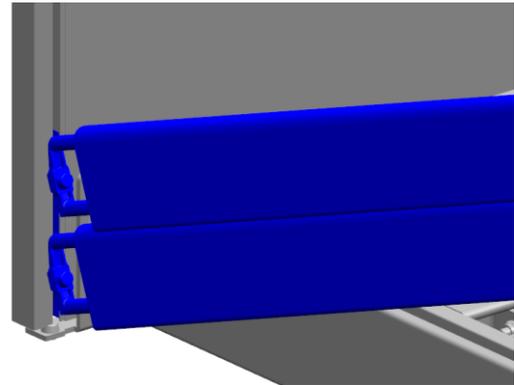
**8.** Now insert four screws (M5x55) into the rail, also from below. The screws should also only be hand tightened at this stage.



**9.** Once all the screws are in place, they can be tightened properly. Ensure that the heads of the four lower screws are completely countersunk into their recesses.

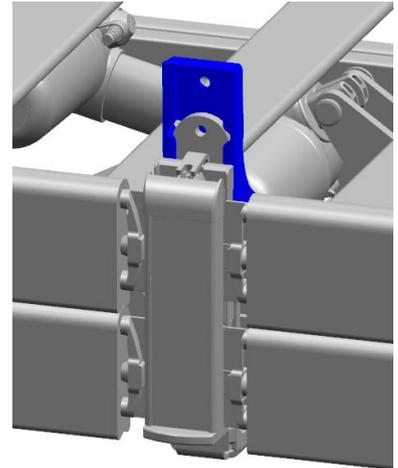
## Fitting the safety side bars

1. Install the safety sides at the foot end. To do so, slide the safety side bars into the brackets at the foot end.
2. At the other end of the bars, insert the safety side guides into each safety side bar. Make sure that the recesses face outwards! The opening of the rubber buffers then automatically faces inwards.
3. Activate the release mechanism on the parking element and insert the safety side into the corresponding slot.
4. Fit the bottom section of the carriage onto the rail from below. Press the release mechanism and slide the carriage section behind the parking element. The second slot must be left free.
5. Now fit the safety sides at the head-end. To do so, slide the safety side bars onto the brackets at the head end. Slide the other end into the free slot in the parking element.

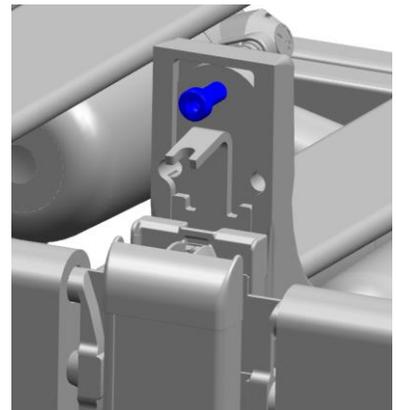


### Mounting the mobilisation post

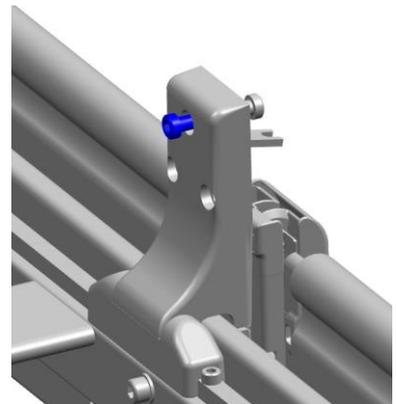
1. Draw the bottom carriage section to one side so that it is easily accessible. Then fit the top carriage section onto it from above. Caution: do not let go of the bottom carriage section or it will fall.



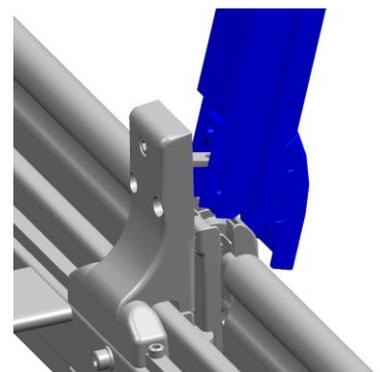
2. Take an M8 screw and put it in position at the top. Pull the link plate up to the drilled hole behind it and insert the screw into the hole.



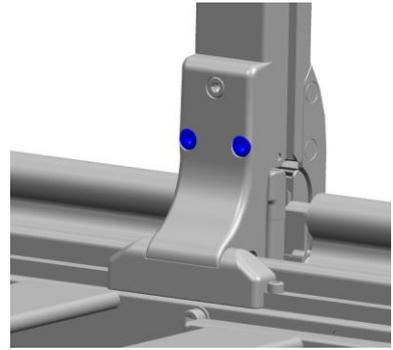
3. Then insert the correct screw (M8x25) from the other side and push it through the hole and the link plate, so that the first screw falls out.



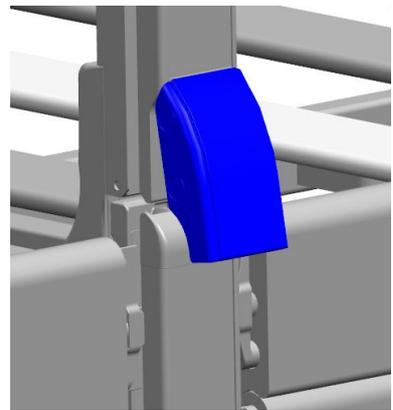
4. Now position the mobilisation post on the carriage from below, so that the link plate fits into the groove of the mobilisation post. Tighten the screw securely.



5. Insert the other two screws (M8x25) and tighten these as well.

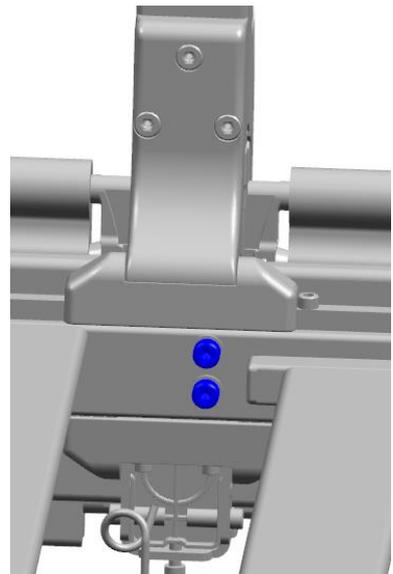


6. Check to make sure that the carriage functions properly and that it can slide along the rail.



7. Then slide the mobilisation post onto the parking element and secure it by pressing the locking lever down.

8. Now securely tighten the previously hand-tightened screws (M8x35) on the inner side.

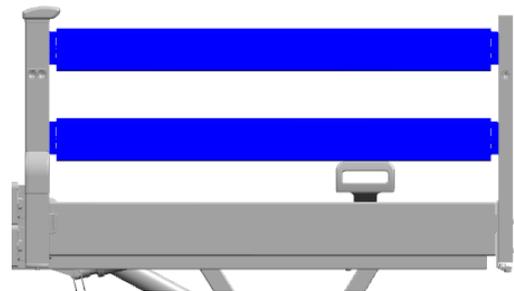


9. Place the knob on the mobilisation post. The overhang must face towards the foot end.
10. Screw the pre-assembled stud screw in until it is flush.

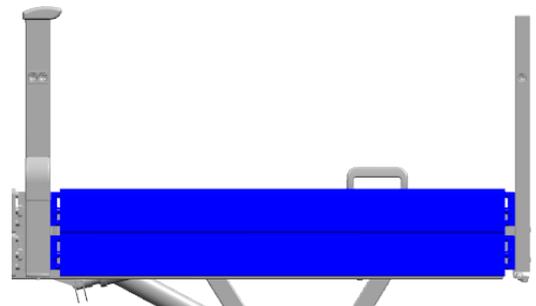


### Functional test

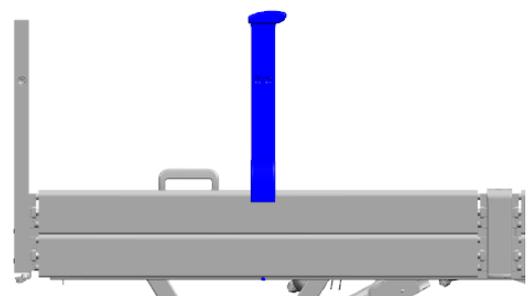
1. Raise the head end safety sides and the foot end safety sides and check to ensure that the safety side bars click safely into place.



2. Lower the safety sides again.



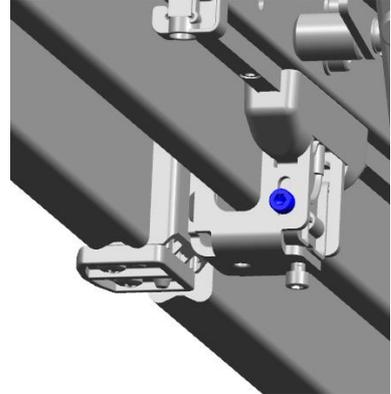
3. Slide the mobilisation post to various different positions and secure it using the release button.



## Adjustment

If the locking lever is too stiff to operate easily or if its locking force is inadequate, you will need to adjust it. Proceed as follows:

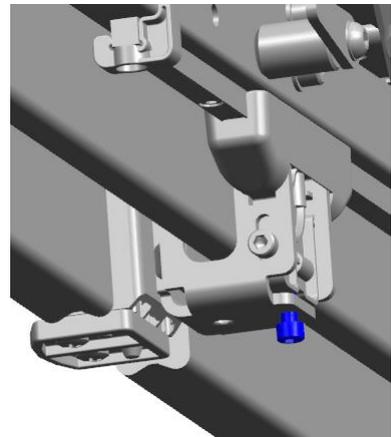
1. Slide the mobilisation post over the parking element and secure it in place with the locking lever.
2. On the underside of the carriage, loosen the two M6 screws on the outer left and right-hand sides.



3. Then use the adjusting screw (M6) in the middle to set the desired locking force.

Turning the screw inwards increases the locking force. Turning the screw out decreases the locking force.

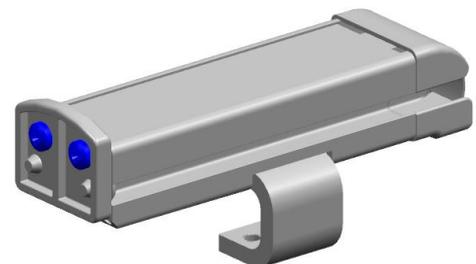
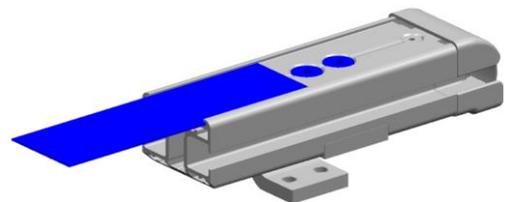
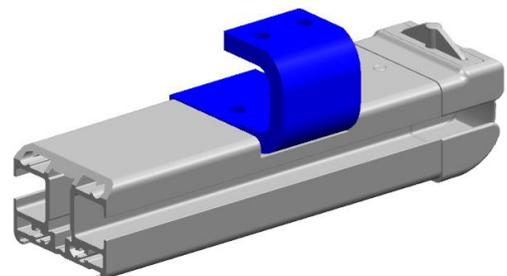
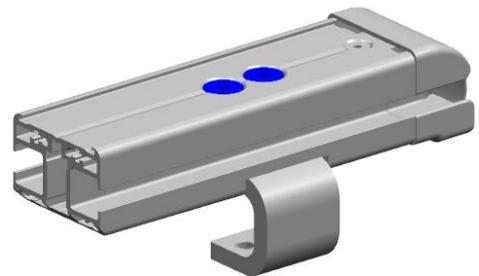
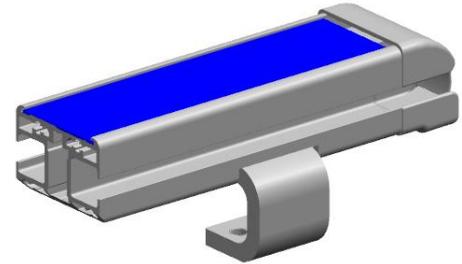
4. Operate the locking lever to check the locking force.
5. After adjusting the force, re-tighten the fixing screws at the sides.



### Converting the parking element

The side panel and the parking element are pre-assembled for installation on the right-hand side. If you wish to install the safety sides on the left-hand side, you will have to turn the side panel around and convert the parking element accordingly. Proceed as follows:

1. Loosen the two screws on the underside of the parking element. They are fixed to the plastic plate.
2. Pull the decorative strip out of the parking element.
3. Then loosen the two countersunk screws that were concealed behind the decorative strip.
4. Now you can turn the bracket in the parking element over.
5. Screw the two countersunk screws back into the parking element.
6. Slide the decorative strip back into place.
7. Re-insert the plastic plate from below and tighten both of the screws.



### 3.5 CHECKLIST: INSPECTION BY THE USER

Inspection		Ok	Not Ok	Description of Defect
<b>Visual Inspection of the Electrical Components</b>				
Handset	Damage, foil			
Handset cable	Damage, routing of cable			
Power supply unit	Damage, routing of cable			
<b>Visual Inspection of the Mechanical Components</b>				
Patient lifting pole, location sleeves	Damage			
Chassis	Damage, deformation			
Mattress base	Damage			
Wooden surround	Damage, splinters			
Safety side	Damage, splinters			
<b>Performance Check of the Electrical Components</b>				
Handset, locking functions	Functional test			
<b>Performance Check of the Mechanical Components</b>				
Castors	Braking, running			
CPR release of the backrest	Test according to manual			
Safety side	Locking in place, release			
Lower leg rest	Engage			
Accessories (e.g. patient lifting pole, grab handle)	Fastening, damage			
<b>Inspector's signature:</b>	<b>Overall Inspection Result:</b>			<b>Date:</b>



If damage or a malfunction is suspected, the bed must be withdrawn from service immediately and disconnected from the mains supply until the defective parts have been repaired or replaced!

**Report this immediately to the operator!**

### 3.6 LOCATION REQUIREMENTS

- There must be sufficient room available to accommodate the bed's entire range of adjustments. Furniture, window sills, etc. must not impede adjustments.
- Before using the bed on parquet flooring, check whether the castors could leave marks on the parquet varnish. The bed can be used on tiles, carpet, linoleum or laminate flooring without causing any damage.
- To prevent dents to floor coverings, the substrate should comply with the recommendations of FEB (Fachverband der Hersteller elastischer Bodenbeläge e.V., = Association of Manufacturers of Resilient Floor Coverings) (Technical Information No. 3 - Maintaining the value of resilient floor coverings) (<http://www.feb-ev.com>).
- A properly installed mains socket must be available (preferably) close to the bed.
- If any other additional equipment is attached to the bed, (e.g. compressors for positioning systems, etc.), ensure that this is securely fastened and is functioning properly. Pay special attention here to the safe routing of all loose connector cables, tubing, etc. If you have any queries or concerns, consult the manufacturer of the additional equipment or Burmeier.
- Ensure that children are not left unsupervised in a room with the bed. In this way, potential hazards are prevented through inadvertent activation of electrical or mechanical adjustment function during playing.



**Minimise, as far as possible, the risk of fire due to external influences. Instruct users on these points:**

- Use only flame-retardant mattresses and bedding if possible.
- Avoid smoking in bed, since the mattress and bedding used may not be resistant to smokers' accessories.
- Only use additional equipment (e.g. electric blankets) and other electrical devices (e.g. lamps, radios) that are in perfect working order!
  - Ensure that this equipment is used only for the purpose intended.
  - Ensure that this equipment is not inadvertently placed on or under the bedding (danger of overheating)!
- Avoid using extension cables or multiple socket bars under the bed (risk of fire due to penetrating fluids).

### 3.7 PUTTING INTO SERVICE

---

No electrical measurements are necessary prior to putting this bed into service for the first time, since the bed was tested by the manufacturer for electrical safety and functionality and left our factory in perfect condition.

#### **Before putting the bed into service for the first time:**

- Remove all transport securing devices and packaging film.
- Clean and disinfect the bed.
- After the bed has been assembled, carry out a check in accordance with the checklist in Chapter 3.5.

#### **Each time, before putting the bed into service, the user must check that:**

- The bed has been cleaned and disinfected.
- The castors are braked.
- The power supply is compatible with the bed (100-240 volt AC, 50/60 Hz).
- The power supply unit is connected and routed in such a way that it cannot be damaged.
- The power supply unit, drive cables and handset cable cannot be damaged by moving parts of the bed.
- No obstacles such as night tables, floor cable ducts or chairs will inhibit adjustments.
- All adjustment facilities work properly and have been checked (see [Chapter 6.1](#)).

The bed must not be put into operation unless these checks have been carried out!

### 3.8 DISASSEMBLING THE BED

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- Move the backrest, thigh rest and lower leg rest to a horizontal position.
- Move the mattress base to the highest position.
- Disconnect the power supply unit plug from the socket.
- Remove the safety sides. Do not let them drop!
- Remove the side panel.
- Remove the headboard and footboard.
- Remove the fixing bolts for the backrest motor and place the backrest motor on the floor.
- Remove the fixing bolts for the thigh rest motor and place the thigh rest motor on the floor.
- Undo the connection screws on the mattress base at the head and foot end.
- Take the mattress base off.
- Plug the power supply unit plug into the electrical socket.
- Move the chassis to the lowest position.
- Disconnect the power supply unit plug from the socket.
- Insert the backrest motor and thigh rest motor in their transport position and secure these with bolts.
- All loosened screws should be retightened for transport and the plug cover should be put back in position (prevent it from getting lost).

## 4 Operation

### 4.1 MOVING AND BRAKING THE BED

The bed is equipped with four lockable castors. The bed is delivered with individual axle braking (at head and foot ends) **(10)** as standard. The bed can be supplied with central locking at the foot end at the customer's request. The bed can also be moved within the room when the bed is occupied.



- The bed is not suitable for being moved often and over long distances outside the room along corridors, across thresholds or over very uneven floors.
- Adjust the bed to the lowest mattress base position when moving the bed over long distances outside the room.
- Each time before moving the bed, ensure that:
  - The mains cable will not be stretched, driven over or damaged in any other way.
  - When moving the bed, the mains cable is always stowed in the designated mains cable holder and does not trail on the floor (see Chapter 3.2).
  - All cables, tubes or pipes belonging to any accessory devices that are attached to the bed are safely secured and cannot be damaged.

Otherwise these could become damaged due to the mains cable being torn off, driven over or crushed. This damage could result in electrical hazards and malfunctions.

- Ensure that the brake is always sufficiently applied on the bed when a resident is left unattended.  
Depending on the location (e.g. by a wall or in a niche), it may be sufficient to brake only two of the castors. If the bed is standing on a sloping floor (e.g. on a ramp), then the brake must be applied on all four castors.  
A safe and secure bed position must always be guaranteed!



A bed occupied with a patient or resident should only be moved inside the room. In general, avoid moving the bed long distances along corridors and over thresholds.

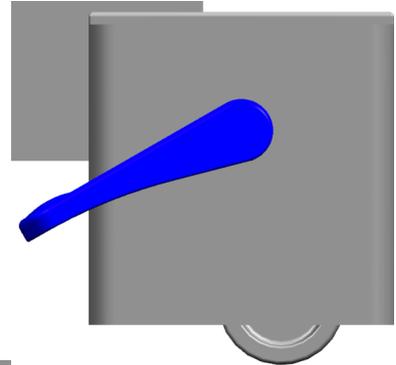
### 4.1.1 Castors

The bed has four steerable castors that can be locked in pairs or centrally locked with brake levers, depending on the model of bed.

#### Braking:

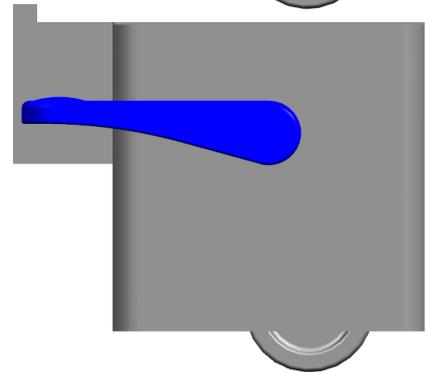
Press the foot pedal down with your foot.

**Note:** The bed must be raised to activate the brake.



#### Moving:

Raise the foot lever with the back of the foot. Steer the bed safely by pushing the bed from the foot end only.



- In order to avoid toe injuries, wear closed shoes (and not sandals) when operating the bed.
- Make sure that at both axes have their brakes applied.
- Only move the bed around if the mattress base is adjusted to its lowest position.
- Before moving the bed around, always ensure that the power supply unit is placed safely on the bed to prevent it from falling off.
- Before moving the bed around, always ensure that all the castor brakes have been released. This prevents excessive wear of the castor treads and scuffing marks on the floor.

## 4.2 ELECTRICAL ADJUSTMENT OPTIONS

### 4.2.1 Special Safety Information on the Electrical Actuator System



- This bed must not be used in combination with high-frequency surgical equipment or in explosive environments!
- When making any adjustments, ensure that no limbs from the patient, user or other persons, especially playing children, are under the rests or the bed frame. Otherwise, this could lead to trapped or injured limbs.
- In electrical beds, always lock the electrical adjustment of the backrest and thigh rest on the handset to protect the resident from unintentional power-operated adjustment when the safety sides are raised (risk of limbs being crushed or trapped when adjusting the backrest or thigh rest).
- The bed is delivered with a locking key for the handset supplied in an envelope together with this instruction manual. The locking key is not intended for use by the resident. The locking key should remain with the user for safekeeping.
- Adjust the mattress base height whenever necessary, but at least once a day, to its upper or lowest height. This automatically equalises the two independent adjustment drives and results in a level horizontal mattress base.
- When using accessories on electrically adjustable beds, the following applies: Make sure that the arrangement of accessories does not produce any crush or shearing zones for the resident when the backrest and thigh rest are adjusted. If this cannot be guaranteed, the user must lock the options for backrest and thigh rest adjustment on the handset.
- Ensure that the mains cable and the cable of the handset cannot be crushed or otherwise damaged.



- Before moving the bed, always make sure that you have unplugged the power supply unit from the mains socket. The power supply unit must not fall off or touch the floor. Failure to observe this may result in permanent damage to the power supply unit.
- Each time before moving the bed, ensure that the mains cable will not be stretched, driven over or damaged in any other way. When moving the bed, the mains cable must be stowed in the designated mains cable holder.
- To prevent damage, ensure that there are no obstacles such as furniture or sloping ceilings that could impede adjustments to the bed.

- Patient lifts or other equipment can be wheels under the bed. Ensure that when the mattress base is at its lowest height the actuator components of the bed are not damaged – if in doubt raise the mattress base height by about 10 cm before using a patient lift.
- Ensure that the 24-volt power supply cable and handset cable cannot be driven over or otherwise crushed when the bed is moved.

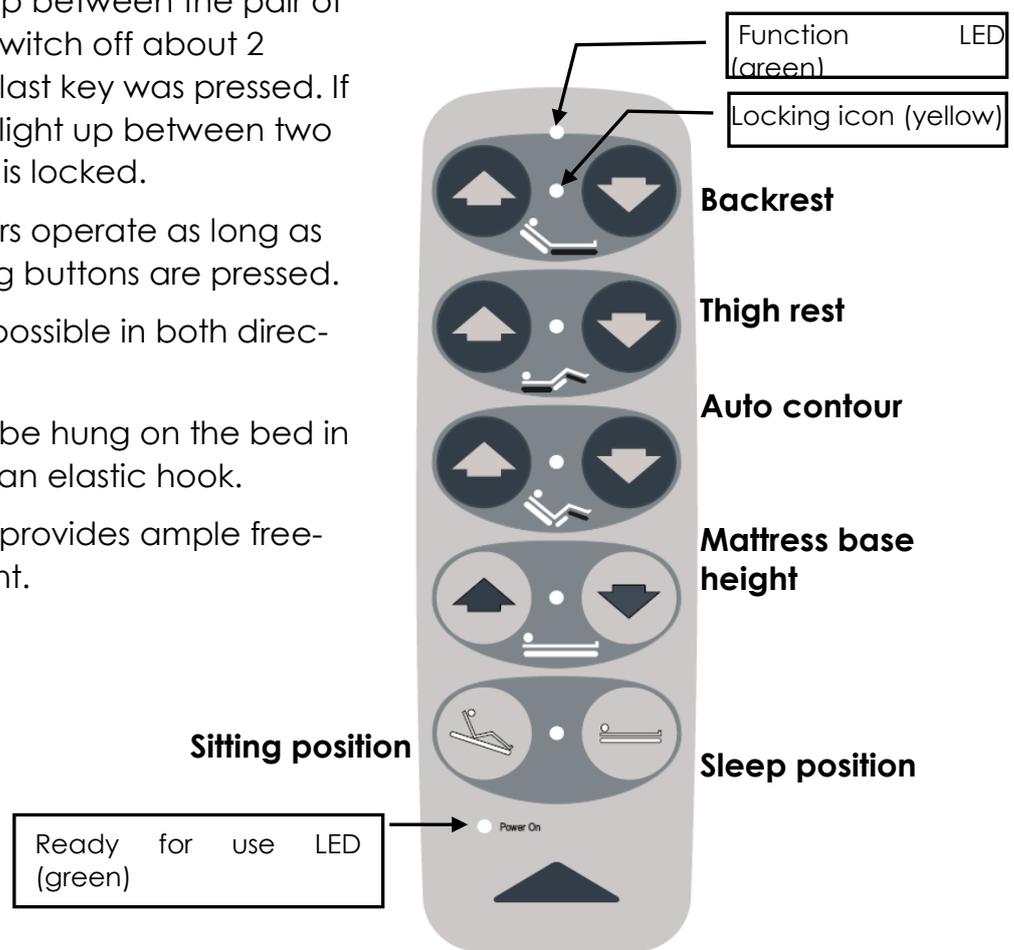
**Advice**

- In the case of malfunctions, an electronic overload switch deactivates the actuators in order to protect the control unit and motor. Once the malfunction has been remedied, adjustments are once again possible via the handset.
- Electrical adjustments are only possible when the bed is connected properly to the mains power supply.
- If the load is too high, an electronic overload switch is activated and the control unit is automatically switched off. When the overload is removed, the actuator system can be reactivated by pressing the appropriate button on the handset.
- Continuous operation must not exceed two minutes! After this time, a minimum rest period of at least 18 minutes must be observed. (Alternatively: one minute continuous operation followed by a nine minute rest period, etc.)
- For safety reasons, if the electric actuator is operated for a much longer period, e.g. due to the patient "playing" continually with the handset, the thermal protection device will deactivate the actuator permanently.
- The adjustment range for all functions is electrically/mechanically limited to the permitted ranges.
- As with every electrical device, even if all the specified EMC limiting values are observed during operation, interference disruptions from and between other closely situated electrical devices cannot be completely ruled out (e.g. "crackling" in a radio). In such cases, increase the distance between the devices. Switch off the disruptive/disrupted devices temporarily.

## Handset

The electrical bed functions can be activated by the resident or the user on the handset. For safety reasons the handset is equipped with a locking function. Depending on the clinical condition of the resident, the user can lock handset adjustments when deemed necessary by the supervising doctor (→Chapter 4.2.3).

- The bed can only be adjusted when the LED on the handset is orange (ready for operation). This lights up while the bed is connected to the power supply.
- Approved pairs of keys are shown by an LED which lights up between the pair of keys. These LEDs switch off about 2 minutes after the last key was pressed. If the LED does not light up between two keys, this key pair is locked.
- The electric motors operate as long as the corresponding buttons are pressed.
- Adjustments are possible in both directions.
- The handset can be hung on the bed in any position with an elastic hook.
- The coiled cable provides ample freedom of movement.
- The handset can be cleaned.



- The following basic rule applies to the keys:



Only one button can be pressed at a time. If, for example, straight after pressing a button, a second button is pressed, the second button command will not be carried out.

### 4.2.1.1 Adjustment Functions of the Standard Handset



#### Adjusting the backrest

The backrest can be raised to approx. 70°.

- Please also refer to the Chapter 4.5.1 which follows on "CPR release of backrest"!



#### Adjusting the thigh rest

The thigh rest can be raised to approx. 40°.



#### Adjusting the auto contour function

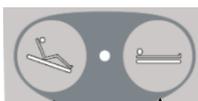
The backrest and thigh rest can be raised at the same time.



#### Adjusting the mattress base height

The mattress base height can be adjusted to approx. 80 cm.

- An intermediate stop is made at a height of about 40 cm whenever the mattress base is raised or lowered. By pressing the button again, the mattress base continues to move upwards or downwards.
- If the mattress base is tilted, it moves automatically into a horizontal position when it reaches the highest or lowest setting.



#### Sitting position/sleep position

Sitting position: the mattress base can be tilted by up to approx. 16° by keeping the button ① pressed.

Sequence of movements for maximum lying comfort ("anti-slip system"):

- "Auto contour raising" for about 20 seconds
- Stop "Auto contour raising" and start "Reverse-Trendelenburg position"

Sleep position: If the button ② is kept pressed, the mattress base is adjusted to the lowest position in the following order:

- Horizontal position (to intermediate stop position)
- Completely lowered backrest and thigh rest (first the backrest followed, 10 seconds later, by the thigh rest).
- By pressing the button again, the mattress base continues its upward or downward movement.

①      ②

## 4.2.2 Tilting Handset (Optional)

Tilting the mattress base can help to bring the resident into a suitable position to allow the user to provide care.



- Only users are authorised to use this handset. Lock the handset's functions if they are not being used!
- Setting the bed to a Trendelenburg position may pose a hazard for the resident.

**Danger**

### 4.2.2.1 Adjustment Functions



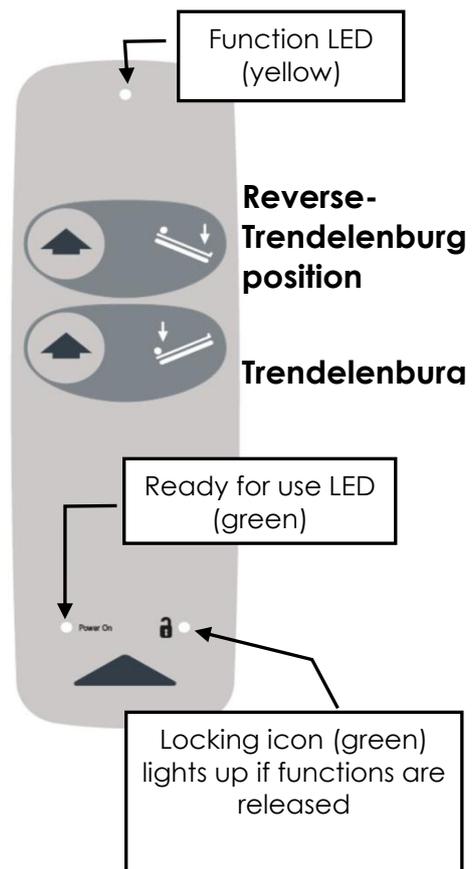
Pressing this button will move the mattress base into the reverse-Trendelenburg position.

If the bed is in a reverse-Trendelenburg position, this function will automatically cause the mattress base to move into a horizontal position when it is moved into its lowest or highest position.



Pressing this button will move the mattress base into the Trendelenburg position.

If the bed is in a Trendelenburg position, this function will automatically cause the mattress base to move into a horizontal position when it is moved into its lowest or highest position.



**Advice**

Only one button can be pressed at a time, otherwise all adjustments stop (emergency off safety function).

### 4.2.3 Handset Locking Functions



Danger

**Only users are authorised to use the locking function!**

If the clinical state of the resident is so critical that any adjustment via the handset places him/her at risk, then the user must lock this adjustment function immediately. The bed remains in the position it was in at the time it was switched off.

#### 4.2.3.1 Handset Locking Functions

The locking key supplied offers the following choice between 4 levels to be made on the rear of the handset:

Icon	Function/Key
	All adjustment options are locked
	All functions are activated
	Programming mode: <ul style="list-style-type: none"> <li>• Turn the locking key on the rear of the handset to programming mode.</li> <li>• Select the buttons to be locked on the front of the handset.</li> <li>• Set the locking key to resident mode. The setting is saved.</li> </ul>
	Resident mode: Only functions which have not been locked while programming in programming mode can be used.



Advice

Do not forcibly turn the locking key beyond the limit stop of the lock! The lock or the handset can be damaged.

#### 4.2.3.2 Tilting Handset Locking Functions

On the tilting handset, there is a choice of 2 levels that can be set with the locking key:

Icon	Function/Key
	All adjustment options are locked
	All functions are activated

## 4.3 MECHANICAL ADJUSTMENT OPTIONS



- In order to avoid damage, ensure that no obstacles such as furniture or sloped ceilings could impede adjustments to the bed.
- When making any adjustment procedures, always ensure that there are no limbs belonging to residents, users, other persons and playing children, in particular, that could be trapped underneath the backrest, thigh rest or lower leg rest, or the bed frame.

### 4.3.1 Lower Leg Rest

There are two lockable (Rastomat) adjustment options located on the lower leg rest which can be used to adjust the angle of the lower leg rest. This way an orthopaedic position (stepped bed with legs bent and raised), a sloping position of the lower leg rest or an outstretched and raised position of the legs can be achieved.

#### Raising by hand

The thigh rest must be raised in order to raise the lower leg rest.

- Grasp the two rounded corners of the frame – not the mattress guide handles – and raise the lower leg rest smoothly until the desired angle is reached.
- The lower leg rest must automatically lock into place on both sides.

#### Lowering by hand

- Grasp the rounded corners of the frame and smoothly raise the lower leg rest slightly.
- Lower the lower leg rest slowly.



Always grip the lower leg rest by the rounded corners of the frame. Otherwise, there is a danger that fingers will get crushed.

**There is risk of injury if the lower leg rest falls uncontrollably.**

### Lowering using the handset

If the thigh rest is lowered using the handset, the lower leg rest is automatically lowered as well.

### Raising using the handset

If the raised thigh rest is lowered using the handset, the lower leg rest locks into place in several intermediate positions. When the thigh rest is raised, the lower leg rest remains in position.

## 4.4 ATTACHMENTS AND OPTIONAL FEATURES

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### 4.4.1 Location Sleeves for Patient Lifting Pole

The two corners of the mattress base frame at the head end of the bed are each fitted with a round sleeve **(A)** with a recess **(C)** at the top. These sleeves are the location sleeves for the patient lifting pole. The patient lifting pole should be fitted in that side of the bed on which the patient or occupant will be getting into and out of the bed. This will provide assistance for the occupant when getting in and out of bed.



**The maximum loading capacity at the front end of the patient lifting pole is 75 kg.**

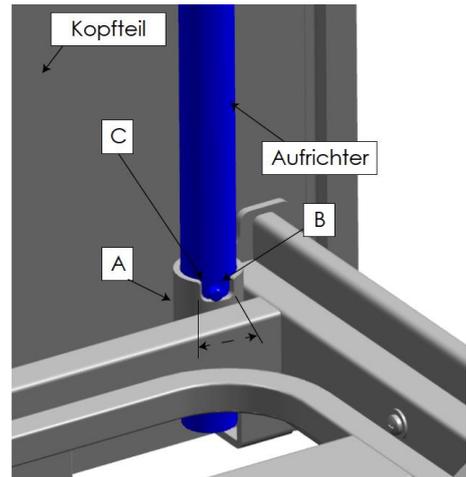
- The carrying capacity is rated to allow a heavy patient lying in the bed to sit up by themselves using their own strength.
- Do not use the patient lifting pole as a lifting mechanism for the patient.
- Do not allow a heavy patient to “hang” from the patient lifting pole with his/her entire weight (e.g. when getting out of bed).

### To insert the pole

- Insert the patient lifting pole in the sleeve. The metal pin (**B**) on the pole must be located in the sleeve recess. This will limit the slewing range (arrow) of the patient lifting pole.

### To remove the pole

- Pull the patient lifting pole up and out of the sleeve.



### Slewing range of patient lifting pole

- The slewing range of the patient lifting pole is limited to the area over the bed (**A**).
- Do not swing the patient lifting pole out beyond the boundaries of the bed (**B**).
- There is a danger that the bed will tip up when weight is applied to the pole.
- Therefore the metal pin of the patient lifting pole must always sit in the sleeve recess!

### 4.4.2 Grab Handle (Triangular Handle)

A triangular grab handle can be attached to the patient lifting pole. The resident can use this grab handle to sit up and readjust his/her position. Check the grab handle and belt regularly for damage (see Chapter 6). Replace damaged grab handles or belts immediately.

#### Service life

A date is printed on the grab handle. In normal use, the grab handle has a service life of at least five years. After this period, a visual inspection must be carried out regularly to determine whether the handle may continue to be used.



#### Adjustment of the grab handle

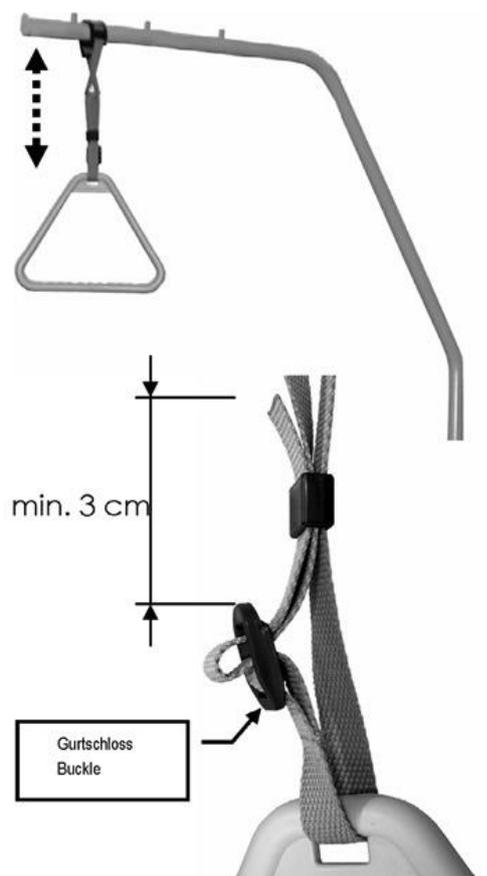
Due to its adjustable belt, the grab handle height can be adjusted to between about 55 cm and 70 cm (measured from the upper edge of the mattress).

- Slide the fixed loop of the grab handle over the first bolt on the patient lifting pole.
- Check the secure hold of the grab handle by tugging hard on it.
- **Note:** The maximum loading capacity at the front end of the patient lifting pole is 75 kg.

The height of the triangular grab handle can be adjusted using the strap.

Make sure that the strap is correctly threaded through the buckle.

Make sure that the end of the strap projects at least 3 cm from the buckle.



### 4.4.3 Under Bed Light

The energy-saving, long-lasting LED under bed light provides safe orientation during the night and can reduce the risk of falls. The light is sufficiently restrained, however, to not disturb the resident of the adjacent bed.



#### Switching the under bed light on/off

When the bed is connected to the mains power supply, the light can be switched on or off on the standard handset (using the backrest adjustment buttons):

Proceed as follows:

- Press both adjacent buttons at the same time
  - The light is switched on
- Press again
  - The light is switched off



Advice

Please note: If the backrest is locked, the under bed light is also locked at the same time.

## 4.5 BED EXTENSION

The bed can be fitted with an extension at the foot end that extends the length of the mattress base by 20 cm. The resulting gap is filled with a support base and a mattress piece. The safety side bars must be replaced by longer ones (for accessories, see also [Chapter 8](#)).

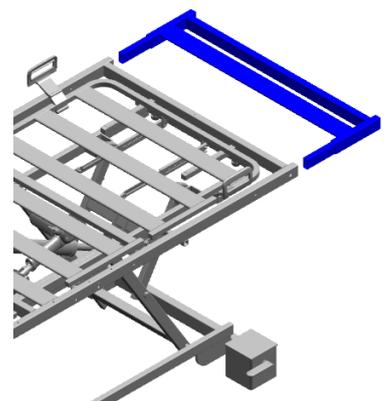
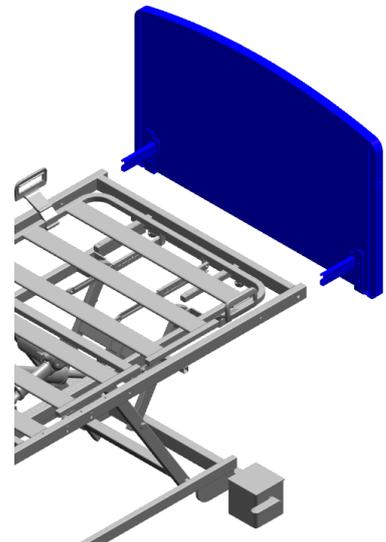


- If the slidable safety sides (VSG) are used, the travel range of the mobilisation post must be offset by 10 cm.
- If telescopic safety sides (TSG) are used, only the 27 cm bed extension may be used.
- If the slidable safety sides (VSG) are used, only the 20 cm bed extension may be used.

**Failure to take this into account may incur the risk of entrapment of the patient, since the required distance between the safety side and the footboard will not be maintained in this case.**

### Extending the mattress base (200 > 220 cm)

- The bed must not be occupied when extending it!
- Ensure that the brakes are applied on the bed.
- Remove the safety sides.
- Dismantle the side panels.
- Remove the footboard.
- Insert the bed extension.



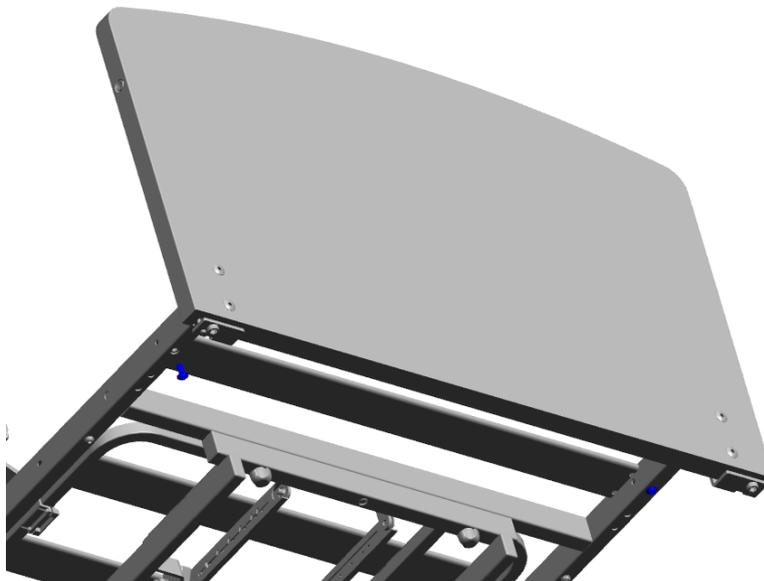
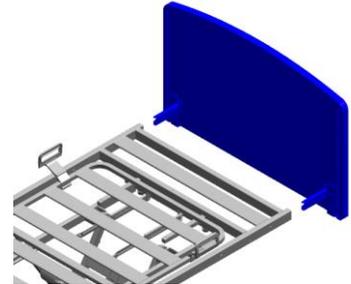
- Screw the bed extension in place.
- Fill the resulting gap with the support base and the mattress piece.



- Insert the footboard and screw it in place.

Assemble the longer side panel.

- Assemble the safety sides.



### Shortening the mattress base (220 > 200 cm)

- The bed must not be occupied when shortening it!
- Ensure that the brakes are applied on the bed.
- Remove the support base and the mattress piece.
- Take off the safety sides.
- Dismantle the side panel.
- Dismantle the footboard.
- Dismantle the bed extension and take this out.
- Attach the footboard.
- Install the short side panel.
- Attach the safety sides.

#### 4.5.1 Manual CPR Release of Backrest

In the event of power supply outages or electrical actuator system failures, the raised backrest ① can be lowered by hand in an emergency.



Advice

Please note: Manual CPR release of the backrest must be carried out by **two people!**



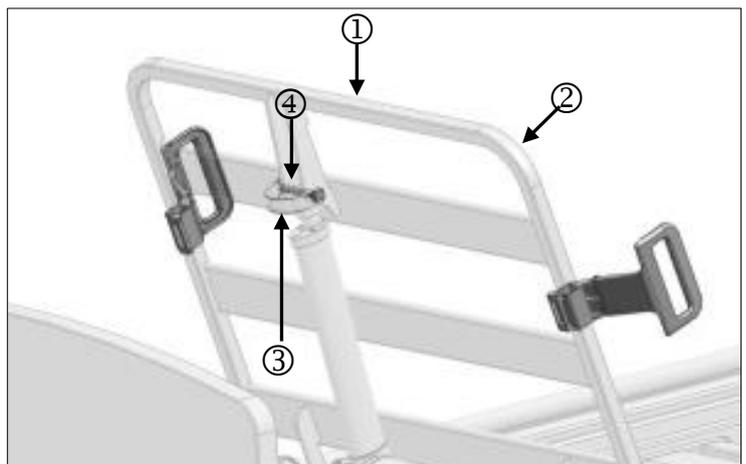
Danger

**Disregard for this safety information and instructions for use may cause the backrest to fall uncontrollably, which could lead to serious injuries for both user and resident!**

- CPR release must only be carried out in the case of extreme emergencies and by users who have a complete command of the procedure described below.
- We strongly advise you to practice CPR release of the backrest under normal conditions. That way, in the case of emergency you will be able to react quickly and accurately.

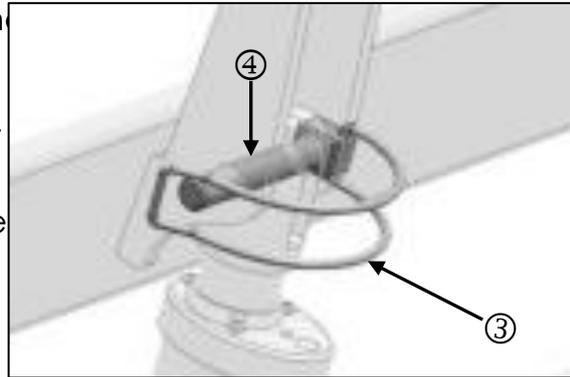
Before lowering the backrest ①, any load exerted on the backrest must be removed.

- To do this, the first person raises the backrest ① slightly by holding onto the backrest frame ② and must hold it in this position.
- The second person now removes the bolts ④. Open up the curved clip and draw the bolt ③



and clip ③ out of the backrest motor lifting pipe.

- The motor is now disconnected from the backrest
- Put the motor down on the bed frame.
- After the second person has left the danger zone, the first person lowers the backrest carefully (with the help of the second person).



**Hold the backrest firmly when lowering it, as it could otherwise fall uncontrollably!**

- Now the motor on the lifting pipe is no longer connected to the motor connector mount.
- The lifting pipe remains in the position it was in when CPR release was carried out.

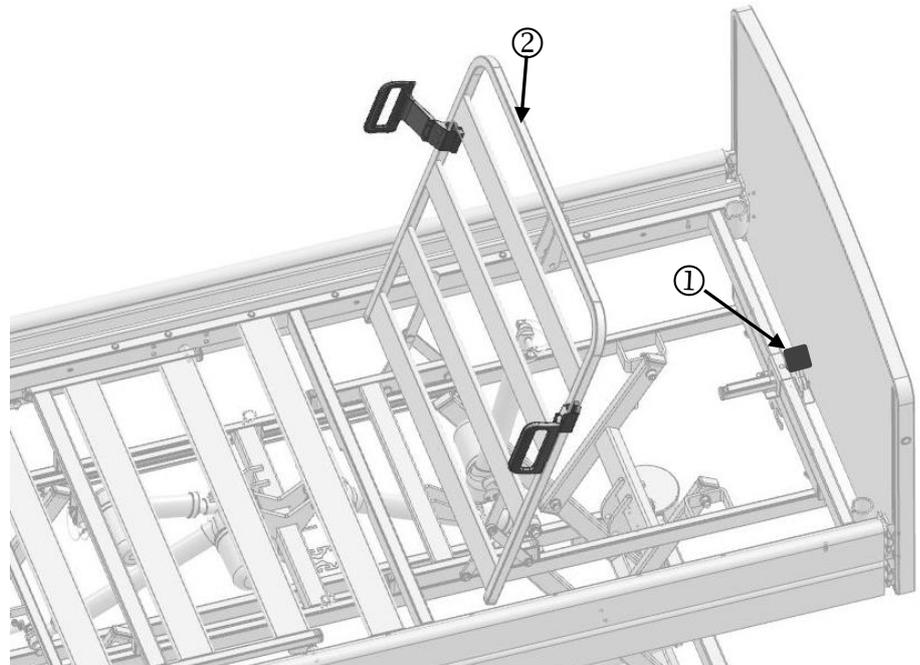
### **Restoring the bed to its original state following CPR release of the backrest**

- Raise the backrest by hand.
- Swing the lifting pipe up again, use the bolt to secure it in place in the motor connector mount and fold the curved clip back over.

### 4.5.2 CPR Backrest Release Using Quick Release (Optional)

In the event of a power cut or actuator system failure, the raised backrest can also be comfortably lowered by just one person, without the need to dismantle the actuator, using a quick release mechanism.

A red lever is provided on the bed frame at the head end ①.





**Danger**

- Entrapment hazard! When lowering the backrest, ensure that the resident's limbs are not underneath the backrest. Otherwise, the weight of the backrest could cause limbs to be trapped or crushed.
- The backrest can drop very quickly in the case of heavy residents once the operating lever has been activated!
- Always grip the backrest by the frame ② with one hand so as to "control" the adjustment.

**Proceed as follows:**

1. Grab the frame of the backrest ② with one hand.
2. With the other hand, pull the red operating lever ① upwards and guide the backrest down to the desired position.
  - Keep the lever pressed until the backrest is fully lowered.



**Advice**

- The backrest can be kept in its position by letting go of the red lever.
- If there is no load resting on the backrest, it must be pressed down lightly by hand if necessary when releasing it in an emergency.
- Once the actuator system is supplied with electricity again, the backrest can then be adjusted with the handset.

## 4.6 SAFETY SIDES

### 4.6.1 Special Safety Information for Safety Sides

Safety sides protect the patient or resident from accidentally falling out of bed. They are not intended as a device to prevent the occupant from intentionally leaving the bed.

If not used properly, there is a considerable danger of strangulation for the occupant! Please, therefore, bear in mind the following instructions.



- Only use technically perfect, undamaged safety sides which engage securely!
- Before using the safety sides, assess and take into consideration the clinical condition and particular physical build of the occupant:
  - For example, if the occupant is extremely confused or very restless, avoid using safety sides as far as possible and make use of alternative safety measures such as restraint sheets, etc.
  - For especially small, slim occupants, additional protective measures for reducing the space between the bars on the safety sides may be necessary. In these cases, use safety side foam leather padding (accessory), posey belts, etc. This is the only way to effectively guarantee occupant safety and reduce the risk of the occupant becoming trapped or slipping through.
- Only use suitable mattresses that comply with the German DIN 13014 standard and are not too soft, with a density of at least 40 kg/m<sup>3</sup> and a height of between 10 cm and 18 cm (see also [Chapter 8](#)).
- If elevated resident positioning systems, such as anti-decubitus mattresses, are used (for prevention or therapy), an effective safety side height of at least 22 mm above the non-occupied mattress must be guaranteed. If this dimension is not adhered to, you must take additional/alternative measures on your own responsibility and according to your assessment of the risks in view of the clinical condition of the occupant, such as:
  - Providing additional safety systems for the patient
  - Arranging for the patient to be monitored regularly
  - Issuing internal instructions for users

- When the safety sides are raised, the electrical adjustment of the backrest and thigh rest must always be locked:
  - Attach the handset out of reach of the occupant (e.g. at the foot end of the bed).
  - or:**
  - Lock the handset adjustment options.

Otherwise there is a danger of limbs being crushed or trapped by the safety sides if the occupant inadvertently activates the handset. The effectiveness of the safety sides can also be reduced if mattress base sections are raised to a high level. Place the handset out of reach (e.g. at the foot end of the bed) or lock the handset adjustment options.

#### 4.6.2 TSG Telescopic Safety Side (Optional)

##### Condition

The TSG telescopic safety side must have been installed in accordance with the installation instructions.

##### Raise the safety side

- Grasp the middle section of the top bar and raise the safety side until it audibly clicks into place. The maximum protective height is reached after it has engaged for the second time.

##### Lower the safety side

- Lift the safety side slightly.
- Press the release buttons on both sides and guide the safety side downwards.
- Press the second pair of unlocking levers and lower the safety side even further.
- Repeat this procedure until the required height is reached.

#### 4.6.3 VSG Slidable Safety Side (Optional)

##### Condition

The VSG slidable safety side must have been installed in accordance with the installation instructions.

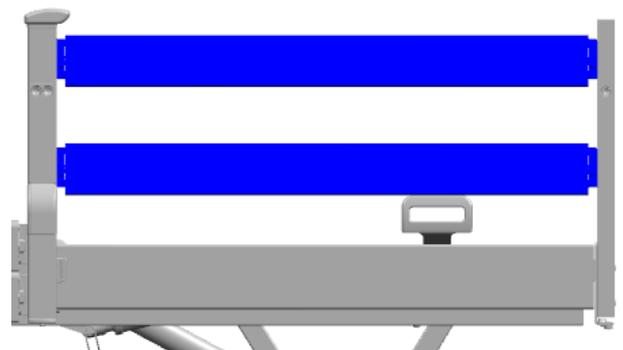
The slidable post must be securely clicked into its parking position.

##### Raise the safety side

Raise the safety sides, one after the other, allowing them to slide through their guide rails until the pushbutton clicks into place at the highest position.

It should not be possible now to move the bars up or down.

- Check that the safety side is securely locked in place by exerting pressure on it.



### Lower the safety side

- Lift the safety side slightly (A).
- Press the release button and lower the safety side (B). Do not let it drop!
- Repeat this procedure for the other sides.

### Move the mobilisation post

#### Condition

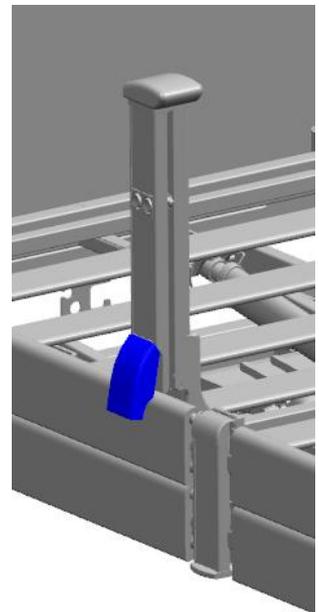
The safety side bars must be lowered at both the head and foot ends of the bed.



Advice

If you move the mobilisation post when the safety side bars at the foot end are still raised, then these bars could be pulled out of their guide rails and drop suddenly.

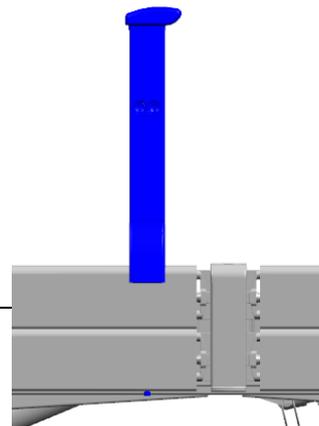
Release the locking lever on the mobilisation post.



Slide the mobilisation post to the desired position.

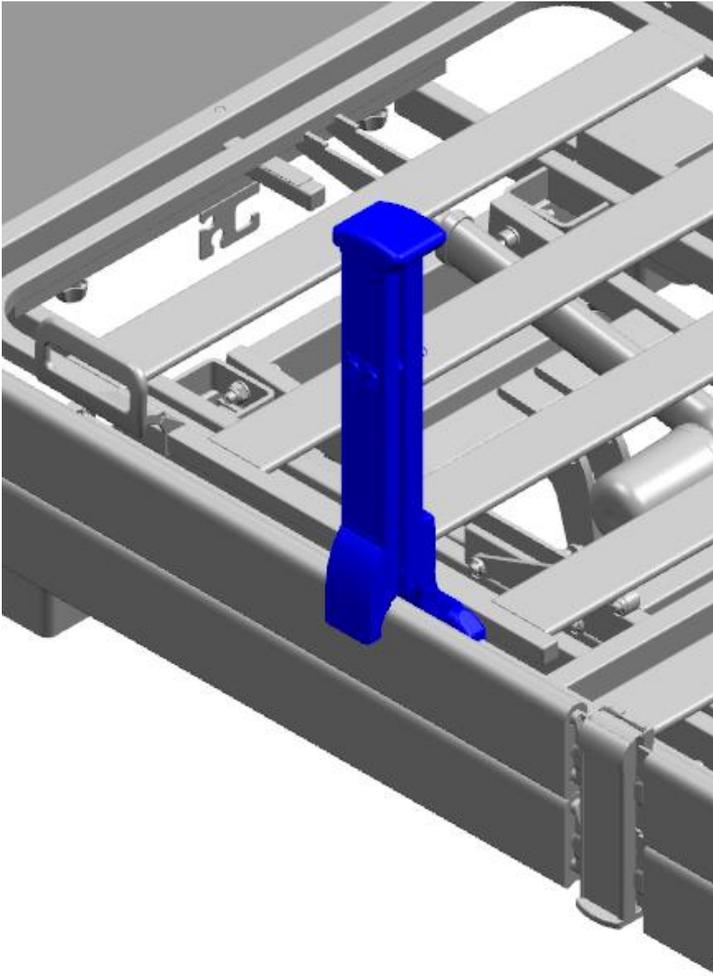
Hold the post as close to the bottom as possible when moving it.

Fix the mobilisation post in place with the locking lever.



Advice

The middle post can be moved along between the middle and the head end of the bed. The adjustment range is limited by end stops in the guide track.

**Risk of injury due to entrapment!**

If the middle post has been moved, care must be taken to prevent the patient from being caught or trapped in any shearing zones when raising the backrest.

Place the handset out of the resident's reach (e.g. at the foot end of the bed) or lock the handset adjustment options.

**Bed extension**

If the bed is fitted with a bed extension, the limit stop located in the centre of the bed must be offset 10 cm towards the foot end.

## 5 Cleaning and Disinfection



This bed is NOT suitable for machine washing or for cleaning in a decontamination unit. The bed is only suitable for manual cleaning and disinfection. To extend the bed's service life and preserve its operability, always follow the instructions provided in this chapter.

### 5.1 GENERAL INFORMATION ON CLEANING AND DISINFECTION

Cleaning is the most important measure and requirement for a successful chemical disinfection.

When the bed is occupied by the same resident or patient, routine cleaning of the bed is generally sufficient in terms of hygiene. Disinfection of the chassis is only necessary when it has been visibly contaminated with infectious or potentially infectious materials (blood, stool, pus) or, if in the presence of an infectious disease, under doctor's orders.

**Before a new resident or patient occupies the bed, it must first be cleaned and disinfected by wiping!**



#### **Before cleaning or disinfecting:**

- Unplug the power supply unit and store it so that it does not come into contact with water or cleaning solutions.
- There must be no external damage visible to any of the electrical components. Failure to comply with this may result in ingress of water or detergents into the electronic unit and cause malfunctions or damage.
- Before operating the bed again, ensure that there is no residual moisture on the electrical contacts by drying or blow-drying the mains plug.
- The electrical components must not be cleaned with a water jet, a high pressure cleaner or other similar device! Clean only with a moist cloth!
- If you suspect that water or any other form of moisture has penetrated the electrical components, unplug the power supply unit plug immediately or do not plug it back into the socket. If already disconnected from the mains supply, make sure it is not plugged in again. Report this immediately to the operator responsible.

**Failure to follow this safety advice could result in considerable damage to the equipment and lead to subsequent malfunctions!**

## 5.2 CLEANING AND DISINFECTION PLAN

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- Remove bed linen and send it to the laundry service.
- Clean all surfaces, including the slatted bed frame and mattress base made of synthetic or metal slats, with a mild and environmentally friendly cleaning agent. This also applies for the handset.
  - If the bed has been visibly contaminated with infectious or potentially infectious materials, the bed should be subsequently disinfected by wiping with one of the disinfectants approved by the DGHM (Deutsche Gesellschaft für Hygiene und Mikrobiologie, German Society for Hygiene and Microbiology) which is suitable for the corresponding surfaces. The same applies for all beds with occupants who have notifiable diseases according to § 6 of the Infektionsschutzgesetz (IfSG, Protection against Infection Act), bacterial infections, or infections with multiple-resistant pathogens (e.g. MRSA, VRE), as well as all beds in intensive care stations and infectious disease clinics. For all disinfections, the concentrations given in the DGHM list must be observed.
  - Disinfection of the castors is only necessary when they have been visibly contaminated with infectious or potentially infectious materials.

## 5.3 INSTRUCTION OF USERS AND TRAINED STAFF

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In order to ensure that cleaning and disinfection are properly conducted, we recommend that users and trained staff are appropriately instructed.

When providing instruction, observe the following points:

- A clean bed must be transported in such a way that it will not become dirty or contaminated.
- Staff should be informed of the special measures required for cleaning and disinfection and should carry out the procedure in a reliable manner (the operator should specify the operational procedures or the individual procedural steps). Care must be taken that only disinfection agents approved by the DGHM (German Society for Hygiene and Microbiology) are used, and that these are used only in the DGHM approved concentrations. The disinfection agent must be suitable for use with the surfaces to be disinfected.
- For this activity, the expert should be provided with disposable aprons and gloves which are impermeable to fluids.
- For the cleaning treatment, only fresh, clean cloths may be used which are subsequently sent to the laundry service.
- When cleaning/disinfecting work has been completed, the staff must disinfect their hands before carrying out other tasks. The staff should be equipped with a suitable pump dispenser containing a disinfection medium for hands.
- The immediate cleaning of the bed on site has the advantage that no “dirty” beds or bed components come into contact with clean beds. In this way, the transfer of potentially infectious germs, which may be found on used chassis, is prevented. A transfer of germs in terms of a nosocomial infection can be safely avoided by consistently and thoroughly following these recommendations.
- When the bed is not immediately reused, it should be stored (covered) in such a way that it is protected from dust, inadvertent dirt and contamination.

## 5.4 CLEANING AND DISINFECTION AGENTS

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Pay attention to the following recommendations to ensure that the bed functions and usability are preserved as long as possible:



- Do not use scouring agents, stainless steel cleaning agents, abrasive cleaning agents or scouring pads. These substances can damage the surfaces.
- Cleaning and decontaminating agents must have a pH value of 5 to 8 at the specified concentrations.
- The chloride content of the solutions prepared for use must not exceed 100 mg/l.
- We recommend (damp) wipe cleaning. When selecting cleaning agents, ensure that the ones chosen are mild (gentle to skin and surfaces) and environmentally friendly. A standard household cleaner can generally be used.
- Ensure that after cleaning/ disinfection no liquid residues remain on the metallic parts of the bed (avoid drops on the edges). Otherwise corrosion cannot be excluded in these areas in the long term.
- Despite the excellent mechanical resistance, any scratches, knocks etc. which permeate the entire coating should be resealed using a suitable repair substance to prevent moisture from penetrating. For further information, consult Burmeier company or a specialist of your choice.



- As a rule, aldehyde-based disinfection media have the advantage that they have a wide range of impact, a relatively low protein effect and are environmentally friendly. The main disadvantage of these agents is their potential to cause allergies and irritation.
- Glucoprotamine-based formulations do not have this disadvantage and are equally effective, although most are somewhat more expensive.
- Disinfection media based on compounds which could potentially release chlorine may be corrosive for metals, synthetics, rubbers and other materials over longer contact periods or when concentrations are too high. Furthermore, these media have a higher so-called protein effect, are mucous membrane irritants and demonstrate poor environmental compatibility.

- For disinfection by wiping, most cleaning and disinfection agents usually used in hospitals or care facilities, such as cold and hot water, detergents, alkaline solutions and alcohols, can be used.
- These agents must not contain any substances that could alter the surface structure or the adhesive properties of the plastic materials. The choice of cleaning agents and disinfectants available on the market may change from time to time. Burmeier therefore routinely tests the most commonly used materials for compatibility. The most up-to-date list of cleaning agents and disinfectants can be obtained on request from:

Our German service centre:

**Burmeier GmbH & Co. KG**

(A Stieglmeyer Group company)

Pivitsheider Straße 270

32791 Lage/Lippe

Tel.: + 49 (0) 52 32 / 98 41- 0

Fax: + 49 (0) 52 32 / 98 41- 41

Email: [auftrags-zentrum@burmeier.de](mailto:auftrags-zentrum@burmeier.de)

Internet: [www.Burmeier.com](http://www.Burmeier.com)

- Customers outside Germany can contact our distribution companies in their particular country if they have any questions. Contact details can be found on our website.

## **5.5 HANDLING CLEANING AND DISINFECTION AGENTS**

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- Pay attention to the exact dosage! We recommend the use of automated dosing instruments.
- Always prepare solutions with cold water in order to avoid the formation of vapours which are mucous membrane irritants.
- Wear gloves, in order to avoid direct skin contact.
- Do not keep prepared surface disinfection solutions in open containers with floating cleaning cloths. Be sure to cover all containers!
- Use sealable bottles with pump dispensers for moistening the cleaning cloths.
- Ventilate the room after the disinfection has been completed.
- Disinfect by wiping; do not disinfect by spraying! When spraying, a large portion of the disinfection medium is released as spray and could be inhaled.
- Furthermore, the wiping effect plays a significant role.
- Do not use alcohols for the disinfection of large surfaces.

## 6 Maintenance

### Legal Principles

Operators of beds in Germany are obliged in accordance with

- German Medical Devices Operator Ordinance § 4 (Maintenance)
- DGUV A3 (Testing of Mobile Electrical Equipment in Commercial Use) of the German Social Accident Insurance

to preserve the safe operating condition of medical devices throughout their entire service life. This also includes regularly carrying out expert maintenance as well as safety checks.

In other countries outside Germany or the EU, the relevant national regulations must be complied with.

### Information for the Operator



Advice

This bed has been designed and built to work safely over a long period of time. When operated and used properly, the expected service life of this bed is up to 10 years. The bed's service life depends on the conditions within and frequency at which it is used.



Warning

As a result of repeated transport, assembling and dismantling, improper operation and long-term use, it is possible that damage, defects and signs of wear may occur. These deficiencies can cause hazards if they are not recognised and corrected immediately.

For this reason there are legal principles for conducting regular inspections in order to guarantee the safe condition of this medical product.

According to § 4 of the Medical Devices Operator Ordinance (Medizinprodukte-Betreiberverordnung) it is the responsibility of the operator to maintain this product. For this reason, the regular inspections and functional checks described hereafter must be performed by both the operator as well as the users.

- This bed must not be modified without authorisation by the manufacturer.
- Instruct users about the following inspections that are required to be performed! (See Chapter 6.1).

## 6.1 BY THE USER

Besides the regular comprehensive inspections by qualified technical staff, the normal user (care staff, caregiving relatives etc.) must also carry out a minimum of visual inspections and functional checks at short, regular intervals and before use by a new occupant.



- If damage or a malfunction is suspected, the bed must be withdrawn from service immediately and disconnected from the mains supply until the defective parts have been repaired or replaced!
- Contact the operator who is responsible for you if the defective parts need to be replaced or repaired.

### Recommendation:

Inspect all electrical and mechanical components once a month. In addition to the above, check the power supply unit and cable and the handset cable every time they have been subjected to mechanical stress and each time after the bed has been moved to a new location.

### Checklist: Inspection by the User

Inspection		Ok	Not Ok	Description of defect
What to Check...	Check for...			
<b>Visual Inspection of the Electrical Components</b>				
Handset, handset cable	Damage, routing of cable			
Power supply unit	Damage, routing of cable			
Handset	Damage, foil			
<b>Visual Inspection of the Mechanical Components</b>				
Patient lifting pole, location sleeves	Damage, deformation			
Chassis	Damage, deformation			
Wooden surround	Damage, splinters			
Mattress base frame	Damage, deformation			
Safety side bars	Damage, splinters			
<b>Performance Check of the Electrical Components</b>				
Handset	Function test, locking function			
<b>Performance Check of the Mechanical Components</b>				
Castors	Braking, running			
CPR release of the backrest	Test according to manual			
Screws	Fixed position			
Safety side	Safe locking, unlocking			
Lower leg rest	Engage			
Motor bolt	Fixed position			
Accessories (e.g. patient lifting pole, handle)	Fastening, damage			
<b>Inspector's signature:</b>	<b>Overall Inspection Result:</b>			<b>Date:</b>

## 6.2 BY THE OPERATOR

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**The operator of this care bed is obliged according to MPBetreibV (Medical Devices Operator Ordinance) Section 4 to conduct regular inspections in each new building, after each maintenance and during operation to ensure the safe condition of this bed.**

These inspections must be repeated as part of the regular maintenance work performed depending on the bed's conditions of use as specified in § 4 of the German Medical Devices Operator Ordinance (MPBetreibV) and of the inspections in accordance with DGUV A3 required under the German Employers Liability Insurance Association regulations for mobile electrical equipment in industrial use.

- Observe this order for inspection according to DIN EN 62353:
  - I. Visual inspection
  - II. Electrical measurement
  - III. Performance inspection
- In accordance with § 4 MPBetreibV, the performance test and the evaluation and documentation of the test results must only be performed by an expert with the relevant knowledge and experience required to perform the same properly.
- Electrical measurement according to DIN EN 62353 may also be conducted by electrically instructed persons (in the sense of DGUV A3) with additional medical and device-specific know-how if appropriate measuring instruments are present.
- The test results must only be evaluated and documented by a qualified electrician with additional medical and device-specific know-how.

### Test procedure:

- Leakage current test, direct or differential current, in accordance with DIN EN 62353
- Conduct a leakage current test according to the information of the instrument manufacturer. Threshold: Leakage current  $I_{Abl}$  smaller than 0.1 mA.

### Inspection cycle:

As a guide, we recommend performing this inspection once a year and to extend this interval to no more than two years at your own risk, depending on the bed's conditions of use and if it is possible to verifiably adhere to the 2 % error rate (see DGUV A3:§ 5, table1B).



If damage or a malfunction is suspected, the bed must be withdrawn from service immediately and disconnected from the mains supply until the defective parts have been repaired or replaced!

Please use the inspection report templates included below for your inspections.

**Inspection Report following an Inspection of Electromedical Equipment According to DIN EN 62353 (VDE 0751-1): 2015-10 - Page 1 of 2**

<b>Customer / med. facility / practice:</b>						
<b>Address:</b>						
<b>Carried out:</b> <input type="checkbox"/> Repeat inspection <input type="checkbox"/> Inspection prior to initial operation (reference value)						
<input type="checkbox"/> <b>Inspection following repair/servicing</b>						
<b>Equipment type:</b> <input type="checkbox"/> Hospital bed <input checked="" type="checkbox"/> Care bed		<b>Protection class:</b> <input type="checkbox"/> I <input checked="" type="checkbox"/> II				
<b>Bed type:</b> Regia		<b>Inventory number:</b>				
<b>Location:</b>						
<b>Transformer unit number:</b>		<b>Serial number:</b>				
<b>Manufacturer:</b> STIEGELMEYER GmbH & Co. KG		<b>User-specific parts:</b> None				
<b>Testing equipment used (type/inventory no.):</b>		1.				
<b>Medical Devices Act classification:</b> Class I		2.				
<b>I. Visual Inspection</b>				<b>Ok</b>	<b>Not Ok</b>	<b>Description of Defect</b>
<b>What to Check...</b>	<b>Check for...</b>					
<b>Visual Inspection of the Electrical Components</b>						
Stickers and type plates	Present, legible					
Control unit housing	Correct position, damage					
Motor housing and lifting tubes	Correct position, damage					
Handset	Damage, foil					
Motor cable, handset cable, mains cable, connecting cable	Damage, routing of cable					
Plug and plug cover on control unit	Available, correct position					
<b>Visual Inspection of the Mechanical Components</b>						
Stickers and type plates	Present, legible					
Patient lifting pole, adaptor sleeves; grab handles	Damage, deformation					
Chassis	Damage, deformation					
Bowden cable, CPR lowering, backrest	Routing, kinks					
Castors	Damage					
Mattress base	Damage, deformation					
Wooden surround	Damage, splinters					
Welded seams	Split welded seams					
Safety sides: Bars	Damage, splinter, dimensions acc. to Sheet 3					
Connecting elements (screws, bolts, nuts, safety caps)	Fixed position, completeness					
Wearing parts, such as joints	Damage					
<b>II. Electrical measurement</b>						
<b>Leakage current of device, direct/difference</b>						
1. Plug the mains cable / plug-in power supply unit into the test socket of the measuring instrument.						
2. Connect the probe to a bare metal screw on the mattress base frame.						
3. For the duration of the measurements, activate the motors using the handset.						
4. Start measurement procedure on the measuring instrument.						
	Limit value	Measured value				
Result: Bed prot. class II (type B)	0.1 mA	mA				

## Inspection Report following an Inspection of Electromedical Equipment According to DIN EN 62353 (VDE 0751-1): 2015-10 - Page 2 of 2

III. Performance inspection What to Check...	Check for...	Ok	Not Ok	Description of Defect
<b>Performance Check of the Electrical Components</b>				
End of travel cut-out for motors	Automatic cut-out			
Handset, control units, external transformer	Test according to instruction manual: Locking functions; key functions; no "rattling" when shaken			
Motors	No abnormal noise development (rattling, uneven running, etc.)			
Installation of cable harness and proper seat of plugs and strain relief	Secure attachment, firm seat acc. to operating instructions			
<b>Performance Check of the Mechanical Components</b>				
Joints and pivots;	Smooth operation			
Castors	Brakes, securely engaged brake			
Safety sides	Safe engagement, unlocking acc. to operating instructions			
Lower leg rest	Engage			
Accessories (e.g. patient lifting pole, grab handle)	Secure attachment, without damage, suitability for bed			
<b>Overall Inspection Result:</b>				
<b>Inspection passed; test approval sticker applied:</b> <input type="checkbox"/> Safety or functional defects were not detected <input type="checkbox"/> No direct risk, the defects detected can be rectified quickly				
<b>Inspection was not passed; <u>no</u> test approval sticker applied:</b> <input type="checkbox"/> Appliance must be taken out of circulation until the defects have been rectified! <input type="checkbox"/> Device does not meet requirements – modification / replace components / decommissioning is recommended!				
<b>Next inspection date:</b>				
<b>Documents that form part of this inspection report:</b> <input type="checkbox"/> Enclosure: _____				
<b>Inspected on:</b>	<b>Inspector:</b>	<b>Signature:</b>		
<b>Evaluated on:</b>	<b>Operator/Expert:</b>	<b>Signature:</b>		

### 6.3 REPLACEMENT PARTS

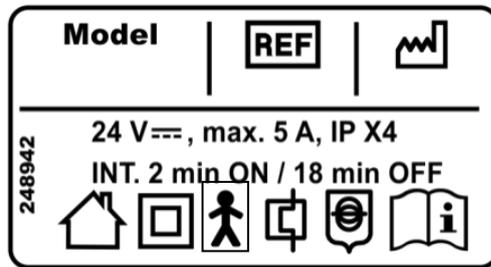


In order to maintain operational reliability and the right to make claims under warranty,

- only original Burmeier replacement parts may be used!
- no technical modifications must be made to the bed.

The relevant replacement parts are available from Burmeier upon specifying the item number, order number and serial number.

The necessary details are found on the type plate on the cross tubing of the mattress base frame.



<b>Model</b>	Name of bed
<b>REF</b>	Item number
	Date of manufacture (week/year)

### 6.4 MANUFACTURER'S ADDRESS/ SERVICE ADDRESS

In order to maintain operational reliability and the right to claim under warranty, only original Burmeier replacement parts may be used!

To order replacement parts, or make customer service requests or other queries, please contact:

**Burmeier GmbH & Co. KG**

(A Stiegemeyer Group company)

Pivitsheider Straße 270

32791 Lage/Lippe

Tel.: + 49 (0) 52 32 / 98 41- 0

Fax: + 49 (0) 52 32 / 98 41- 41

Email: [auftrags-zentrum@burmeier.de](mailto:auftrags-zentrum@burmeier.de)

Internet: [www.Burmeier.com](http://www.Burmeier.com)

## 6.5 REPLACEMENT OF ELECTRICAL COMPONENTS

### 6.5.1 Special safety information on replacing electrical components



#### Danger of Death Due to Electric Shock!

- Before commencing any work on electrical equipment, always unplug the mains cable from the electrical socket!
- Any work and/or repairs to the electrical equipment may only be carried out by the service engineers, the actuator manufacturer or qualified and authorised electricians in compliance with all the relevant VDE and safety regulations!
- On no account should the user attempt to rectify malfunctions in the electrical system!



- The bed must be in the home position (with the mattress base horizontal) in order to remove the motors. Otherwise, there is a danger of crushing due to parts of the mattress base falling.
- The components of the electrical system are maintenance-free and must not be opened. If a malfunction occurs, the relevant component must be replaced in its entirety!



- When replacing individual components, make sure that the plugs have undamaged O-rings and are inserted into the control unit as far as they will go.
- The yellow sealing ring on the plug must be fully immersed in the plug coupling.
- Attention! Do not use force. If it is not possible to insert the plugs, turn these around 180° and insert them again.
- This is the only way to ensure a proper seal and faultless operation.



**Before commencing any work - replacing the mains supply cable and replacement of the handset - unplug the mains cable from the electrical socket!**

### 6.5.2 Replacing the Handset

- Carefully release the lock on the protective cover over the plug with a screwdriver, and then slide it away from the control unit to remove it.
- Disconnect the handset plug from the control unit.
- Replace the old handset with a new one. Make sure that the O-ring on the plug is not damaged. It seals the plug within the control unit.
- When routing the handset cable, ensure that it cannot be damaged by any moving parts of the bed.
- Put the plug cover back in place. This prevents all the plugs from being pulled out of the control unit.
- After this, check the power adjustment functions to ensure that they work!

### 6.5.3 Plug Assignment of the Control Unit

All plugs are connected to the control unit. To prevent the plugs from being inadvertently disconnected, they are secured with a cover. To replace the plug, this device can be carefully lifted off using a screwdriver.

- 1 = Handset
- 2 = Foot section lift motor (white)
- 3 = Head section lift motor (blue)
- 4 = Thigh rest (yellow)
- 5 = Backrest motor (black)
- 6 = Battery compartment

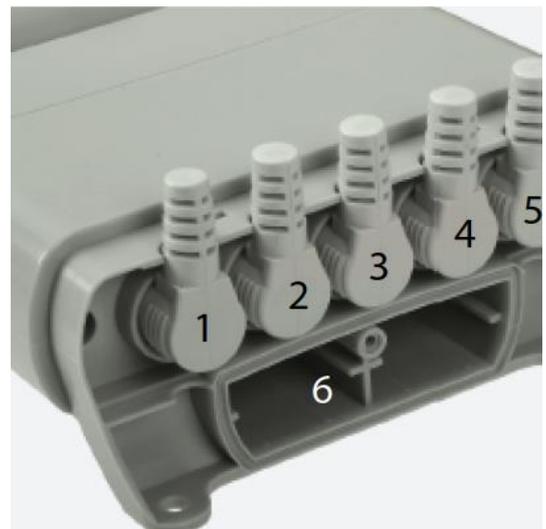


Illustration: Plug assignment of the control unit

## 7 Troubleshooting

The following table is a guide to rectifying faults:

Problem	Possible Causes	Solution
Handset/ Actuator system - No function	<ul style="list-style-type: none"> <li>• Mains cable not plugged in</li> <li>• No power supply to socket</li> <li>• Handset plug not correctly inserted</li> <li>• Handset or actuator system is defective</li> <li>• Functions are locked on the locking box</li> </ul>	<ul style="list-style-type: none"> <li>• Plug in the power supply unit</li> <li>• Check socket and fuse box</li> <li>• Check connector plugs</li> <li>• Inform your operator about any necessary repairs</li> <li>• Enabling functions</li> </ul>
Actuators only operate for a short time when buttons are pressed	<ul style="list-style-type: none"> <li>• Too much weight on the bed</li> <li>• Bed is locked by an obstacle</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce load</li> <li>• Remove obstacle</li> </ul>
Operation is not possible despite proper power supply	<ul style="list-style-type: none"> <li>• Control unit has shut off temporarily due to overheating</li> <li>• Control unit defective</li> </ul>	<ul style="list-style-type: none"> <li>• Observe max. duty cycle: After 2/18 min; allow control unit to cool down for approx. 30 minutes</li> <li>• Replace the control unit with a new one; inform your operator about any necessary repairs</li> </ul>
Handset green function LED does not light up when buttons are pressed or is permanently lit up.	<ul style="list-style-type: none"> <li>• Control system error</li> <li>• End-of-travel position reached</li> <li>• Locking function activated</li> <li>• Actuator load has been exceeded</li> </ul>	<ul style="list-style-type: none"> <li>• Inform your operator about any necessary repairs</li> <li>• Move motor to end-of-travel position</li> <li>• Unlock locking box</li> <li>• Reduce load</li> </ul>
Permanent or long warning sound without handset actuation	<ul style="list-style-type: none"> <li>• Control unit faulty</li> </ul>	<ul style="list-style-type: none"> <li>• Inform your operator about any necessary repairs</li> </ul>
Individual actuators operate in one direction only	<ul style="list-style-type: none"> <li>• Defective handset, actuator unit or control unit</li> </ul>	<ul style="list-style-type: none"> <li>• Inform your operator about any necessary repairs</li> </ul>
Electric backrest adjustments not possible	<ul style="list-style-type: none"> <li>• Power cut</li> <li>• Actuator faulty</li> <li>• Patient weight too high (safe working load)</li> </ul>	<ul style="list-style-type: none"> <li>• CPR lowering of backrest - always refer to information on page 56!</li> </ul>
The wrong function is activated when handset buttons are pressed	<ul style="list-style-type: none"> <li>• Internal motor plugs incorrectly connected (mixed up)</li> </ul>	<ul style="list-style-type: none"> <li>• Inform your operator about any necessary repairs</li> </ul>

## 8 Accessories



The bed must only be operated with original BURMEIER accessories.

BURMEIER does not accept any responsibility for accidents, defects and hazards that arise from the use of other accessories, removable parts and materials that are not described in this instruction manual.

Accessory lists can be obtained from us by quoting the bed type.



### **Pay attention to the following information when using safety sides, infusion stands, etc. on electrically adjustable beds:**

Make sure that the arrangement of accessories does not produce any crush or shearing zones for the patient when the backrest and leg rest are adjusted. If this cannot be guaranteed, the user must reliably prevent the patient from adjusting the backrest and leg rest.

Place the handset out of reach (e.g. at the foot end of the bed) or lock the handset adjustment options.

### **Mattress requirements**

Basic dimensions:

Length x width

200 x 90 cm (option: 200 x 100 cm)

Thickness/height

10 - 18 cm

Foam density

min. 40 kg/m<sup>3</sup>

Compression hardness

min. 4.5 kPa

Applicable standards:

DIN 13014

DIN 597 Part 1 and 2

## 9 Technical Data

### 9.1 DIMENSIONS AND WEIGHTS

#### Assembled bed with safety sides

Mattress base (LxW) approx.	200 x 90 cm (standard) 200 x 100 cm (option) (option: 220 x 90 cm) Bed extension
Total weight	135 kg
Safe working load	225 kg
External dimensions (LxW) approx.	209.4 x 100.3 cm (for 90 cm mattress base width)
	209.4 x 110.3 cm (for 100 cm mattress base width)

#### Disassembled bed

Head and footboards (wooden surround)	14 kg each
Chassis, including motors	65.5 kg
Mattress base without motors	38 kg
Telescopic safety side (TSG)	6 kg/each
Slidable safety side (VSG)	12 kg/side
Patient lifting pole	5 kg
Side panel	4.2 kg

### 9.2 ELECTRICAL DATA

#### Control unit

Type	ECS (relay control)
Operating voltage	29 V DC through ext. power supply unit
Output current	max. DC 8.5 A
Duty cycle	Intermittent duty, 2 min ON / 18 min OFF
Type of enclosure	IP X4, splash-proof
Classification	Protection class III, not for use in explosive atmospheres

### Power supply unit

Type	PD 15
Input voltage	100-240 V
Max. current input	AC 1.5 A
Output voltage	29 V DC
Output current	5.5 A (max. 8.5 A)
Duty cycle	Intermittent duty, 2 min ON / 18 min OFF
Type of enclosure	IP X4, splash-proof
Classification	Protection class II, not for use in explosive atmospheres

### Handset

Type	DEWERT IPROXX II
Type of enclosure	IP X6

### Electric motor for mattress base height

Type	DEWERT Megamat 2
Force/lift	6,000 N / 250 mm
Input voltage	24 V DC
Type of enclosure	Intermittent duty: 2 min ON / 18 min OFF
Duty cycle	IP X4

### Electric motor for backrest

Type	DEWERT Megamat 2
Force/lift	4,000 N / 200 mm
Input voltage	24 V DC
Type of enclosure	Intermittent duty: 2 min ON / 18 min OFF
Duty cycle	IP X4

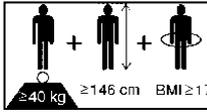
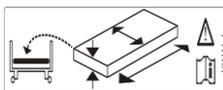
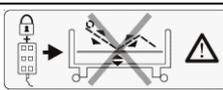
### Electric motor for thigh rest

Type	DEWERT Megamat 2
Force/lift	4,000 N / 70 mm
Input voltage	24 V DC
Type of enclosure	Intermittent duty: 2 min ON / 18 min OFF
Duty cycle	IP X4

### Noise level

Noise level during adjustments	max. 48 dB(A)
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## Explanation of the graphical symbols used

Symbols	Meaning
	Device with Type BF applied part in accordance with EN 60601-1 (special protection against electric shock)
	Transformer with thermal fuse
	Safety transformer to VDE 0551
	Protection Class II device, shock-proof
	Attention! Pay attention to the instruction manual
	Only for use in enclosed spaces - do not use outdoors
<b>IP x4</b>	Protection of electrical equipment from splash water from all sides
<b>IP x6</b>	Protection of electrical equipment from strong water jets
	Mark of conformity in accordance with the Medical Devices Directive 93/42, EEC Appendix VII
	<b>Safe working load</b> (= max. permitted weight of occupant, mattress and all accessories attached)
	<b>Max. weight of patient</b> (= max. permitted weight of occupant; this is dependent on the total weight of all the accessories attached to the bed and is always less than the safe working load)
	<i>Minimum patient sizes/weight:</i> Height: 146 cm, Weight: 40 kg; Body Mass Index "BMI": 17
	Only use mattress dimensions that are approved by the manufacturer.
	Lock the handset if the occupant could be at risk due to inadvertent motorised adjustments.

### 9.3 AMBIENT CONDITIONS

The following ambient conditions must be maintained:

#### For storage/transport

	Minimum	Maximum
Storage temperature:	-20 °C	+50°C
Relative humidity:	50 %	70 %
Air pressure:	800 hPa	1060 hPa at a height of < 2000m

#### In operation

	Minimum	Maximum
Ambient temperature:	+10 °C	+40 °C
Relative humidity:	30 % to	75 % (not condensed)
Air pressure:	700 hPa	1060 hPa

### 9.4 TECHNICAL INFORMATION ON ELECTROMAGNETIC COMPATIBILITY (EMC)

To ensure EMC, use only cables and accessories approved by the manufacturer.



- The use of accessories, sensors or cables other than those approved, with the exception of sensors and cables sold by the equipment manufacturer as replacement parts for internal components, can result in an increase in the transmission level or a reduction in the immunity level of the equipment.
- The equipment may not be used directly next to or on top of other equipment.
- If it is necessary to use the equipment in this way, you must check to ensure that it functions properly in the required configuration.

#### Guidelines and Manufacturer's Declaration – Electromagnetic Emissions –

The BED is intended for use in the electromagnetic environment described below. The operator or user of the BED should ensure that it is used in such an environment.

Interference emission measurements	Compliance	Electromagnetic environment - guidelines
HF emissions to CISPR 11	Group 1	The BED uses HF energy for its internal functions only.
HF emissions to CISPR 11	Class B	The BED is intended for use in all types of establishment including residential and the like that are directly connected to a public supply network that also serves buildings that are used for residential purposes.
Harmonics according to IEC 61000-3-2	Class D	
Voltage fluctuations/ flicker acc. to IEC 61000-3-3	Complies	
HF emissions according to CISPR 14-1	Complies	The BED is not intended for connection to other technical equipment.

<b>Guidelines and Manufacturer's Declaration – Resistance to Electromagnetic Interference –</b>			
The BED is intended for use in the electromagnetic environment described below. The operator or user of the BED should ensure that it is used in such an environment.			
<b>Interference resistance testing</b>	<b>IEC 60601 - test limit</b>	<b>Compliance level</b>	<b>Electromagnetic environment - guidelines</b>
Electrostatic discharge (ESD) according to IEC 61000-4-2	+/-6 kV contact discharge +/-8 kV air discharge	+/- 20 kV contact discharge +/-20 kV air discharge	Floors should be made of wood and concrete or be tiled with ceramic tiles. If the floor is covered with synthetic flooring material, the relative air humidity must be at least 30%. Can be used when higher ESD levels are present.
Short, transient electrical disturbances / bursts according to IEC 61000-4-4	+/-2 kV for mains cables +/- 1 kV for input and output cables	+/-2 kV for mains cables Not applicable	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment.
Surges according to IEC 61000-4-5	+/-1 kV transversal voltage +/-2 kV longitudinal voltage	+/-1 kV transversal voltage +/-2 kV longitudinal voltage	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment.
Voltage dips, short interruptions and fluctuations in the supply voltage according to IEC 61000-4-11	<5 % $U_T$ (>95 % dip in $U_T$ ) for half a period 40 % $U_T$ (60 % dip in $U_T$ ) for 5 periods 70 % $U_T$ (30 % dip in $U_T$ ) for 25 periods <5 % $U_T$ (>95 % dip in $U_T$ ) for 5 s	<5 % $U_T$ (>95 % dip in $U_T$ ) for half a period 40 % $U_T$ (60 % dip in $U_T$ ) for 5 periods 70 % $U_T$ (30 % dip in $U_T$ ) for 25 periods <5 % $U_T$ (>95 % dip in $U_T$ ) for 5 s	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment.  If the person using the BED requires that the bed functions must continue despite any interruptions in the energy supply, it is recommended that the BED be connected to an uninterruptible electricity supply or a battery.
Supply frequency magnetic fields (50/60Hz) according to IEC 61000-4-8	3 A/m	3 A/m	Network frequency magnetic fields should be equivalent to those to be found in a typical business or hospital environment.
Note:	$U_T$ is the AC network voltage before the test level is applied.		

<b>Guidelines and Manufacturer's Declaration – Resistance to Electromagnetic Interference –</b>			
The BED is intended for use in the electromagnetic environment described below. The operator or user of the BED should ensure that it is used in such an environment.			
<b>Interference re- sistance testing</b>	<b>IEC 60601 - test limit</b>	<b>Compliance level</b>	<b>Electromagnetic environment - guidelines</b>
<p>Radiated HF interference according to IEC 61000-4-6</p> <p>Radiated HF interference according to IEC 61000-4-3</p>	<p>3 V<sub>eff</sub> for 150 kHz to 80 MHz</p> <p>3 V/m for 80 MHz to 2500 MHz</p>	<p>3 V<sub>eff</sub> for 150 kHz to 80 MHz</p> <p>3 V/m for 80 MHz to 2500 MHz</p>	<p>Portable and mobile radio devices should not be used in closer proximity to the BED, including the cables, than the recommended protection distance calculated using the equation for the appropriate transmission frequency.</p> <p>Recommended protection distance:  <math>d = 1.17 (P)^{1/2}</math></p> <p><math>d = 1.17 (P)^{1/2}</math>      for 80 MHz to 800 MHz</p> <p><math>d = 2.33 (P)^{1/2}</math>      for 800 MHz to 2.5 GHz</p> <p>with <b>P</b> as the maximum rated power of the transmitter in watts (W) according to the manufacturer of the transmitter and <b>d</b> as the recommended protection distance in metres (m).<sup>b</sup></p> <p>According to an in-situ test, the field strength of stationary radio transmitters should be lower, for all frequencies, than the compliance level<sup>d</sup>.</p> <p>Interference is possible when in the vicinity of equipment bearing the following sign.</p> 
Note 1:	The higher frequency range applies for 80 MHz and 800 MHz.		
Note 2:	These guidelines may not be applicable in all circumstances. The propagation of electromagnetic interference is affected by buildings, objects and people due to absorption and reflection.		
c	The field strength of stationary transmitters, such as base stations for cordless telephones and for public mobile radio devices, amateur radio stations, and AM and FM radio and television transmitters cannot be predicted exactly by theoretical means. In order to determine the electromagnetic environment with regard to the transmitter, a study of the location should be considered. If the field strength measured at the location where the BED is to be used exceeds the upper compliance limit, the BED should be observed to check that it functions properly. Should any unusual performance characteristics be observed, additional measures could be necessary, such as turning the BED or moving it to a different location.		
d	Across the frequency range of 150 kHz to 80 MHz, the field strength should be less than 3 V/m.		

**Guidelines and Manufacturer's Declaration – Resistance to Electromagnetic Interference – Recommended protection distances between portable or mobile HF communication devices and the BED**

The BED is intended for use in an electromagnetic environment in which radiated HF interference is controlled. The operator or user of the BED can help to avoid electromagnetic interference by keeping a minimum distance between the BED and any portable or mobile communications devices (transmitters) – irrespective of the output characteristics of the communications device, as described below.

Power rating of the transmitter [W]	Protection distance (d) dependent on the transmission frequency [m]		
	150 kHz to 80 MHz $d = 1.2 (P)^{1/2}$	80 MHz to 800 MHz $d = 1.2 (P)^{1/2}$	800 MHz to 2.5 GHz $d = 2.3 (P)^{1/2}$
0.01	0.2	0.2	0.3
0.1	0.4	0.4	0.8
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
	For transmitters whose maximum power rating is not listed in the above table, the distance can be determined using the equation given in the relevant column, where P is the maximum power rating of the transmitter in watts (W) as stated by the manufacturer of the transmitter.		
Note 1:	The higher frequency range applies for 80 MHz and 800 MHz.		
Note 2:	These guidelines may not be applicable in all circumstances. The propagation of electromagnetic interference is affected by buildings, objects and people due to absorption and reflection.		

## 9.5 CLASSIFICATION

- This bed fulfils all the requirements of the 93/42/EEC Medical Devices Directive.
- This bed is classified as a Class I medical device (in accordance with the medical devices act § 13).
- For use in the following application groups according to DIN EN 60601-2-52:

3:	Long-term care in a medical facility in which medical supervision is required and monitoring is provided if required. A medical electrical device used in medical procedures can be provided to help maintain or improve the condition of the occupant. (e.g. retirement and nursing homes, rehabilitation facilities and geriatric institutions)
4:	Care in the home. A medical electrical device is used to alleviate or compensate for injuries, disabilities or illnesses.

- Active medical device; equipment with type BF application component.
- UMDNS code:

Bed (electrically adjustable)	10-347
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## 9.6 DISPOSAL INSTRUCTIONS

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- The operator must ensure that all components of the bed that are to be disposed of are not infectious or contaminated.
- If the bed is to be scrapped, the synthetic and metallic parts are to be separated and disposed of properly.
- If you have any queries, you can contact your local municipal waste company or our service department. The address is given in [Section 6.4](#) on [page 71](#).

### Disposal of electrical parts

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- This bed – since it is electrically adjustable – is classified as (type b2b) industrial electrical equipment in accordance with the WEEE Directive 2012/19/EC (implemented in Germany in the law governing electrical equipment).
- The electrical components used are free from prohibited hazardous substances in compliance with the RoHS-II Directive 2011/65/EU.
- Exchanged electrical components (drives, control units, handsets, etc.) must be treated as electric scrap (in accordance with the WEEE Directive) and properly disposed of accordingly.
- The operator of this bed is legally obliged to send the electrical components directly to the manufacturer and not to dispose of them at municipal waste collection points. BURMEIER and its service and sales partners will take these components back.
- The return of these components is covered by our General Terms and Conditions.

### Disposal of rechargeable batteries

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**Pb**

- Batteries which are no longer usable and have been removed must be disposed of properly as set out in directive 2006/66/EC (in Germany, the law governing battery regulations) and do not belong in household waste.
- If you have any queries, you can contact your local municipal waste company or our service department. The address is given in [Chapter 6.4](#).

In other countries outside Germany or the EU, the relevant national regulations must be complied with.

## 10 Declaration of Conformity

### EC – Declaration of Conformity

We,

**Burmeier GmbH & Co. KG**  
**Pivitsheider Straße 270**  
**D – 32791 Lage/Lippe**

hereby declare under sole responsibility as the manufacturer that the product named below:

#### Regia Care Bed

in the version submitted complies with the regulations of the EC Directive 93/42/EEC for Medical Devices, last amended by Directive 2007/47/EC dated 5 September 2007.

It is categorised as a class 1 active medical device.

The relevant technical documentation is kept by the manufacturer's safety representative.

To evaluate the conformity to the directives, all applicable parts of the following standards were referred to:

#### Harmonised Standards:

EN 14971:2013-04	Risk Analysis for Medical Devices
EN 60601-1:2006	Safety for Electromedical Equipment
EN 60601-1-2:2007	Electromagnetic Compatibility
EN 60601-1-6:2010	Medical Electrical Equipment: Usability
EN 60601-1-11: 2010-10	Medical Electrical Equipment – Requirements for medical electrical equipment and medical electrical systems for medical care in the home healthcare environment
DIN EN 60601-2-52/A1	Particular requirements for the safety and essential performance of medical beds

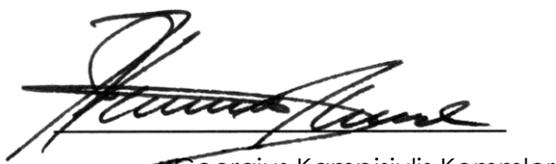
#### National Standards/ Specifications:

Additional safety requirements for care beds of the supreme German state authority dated 22 May 2001.

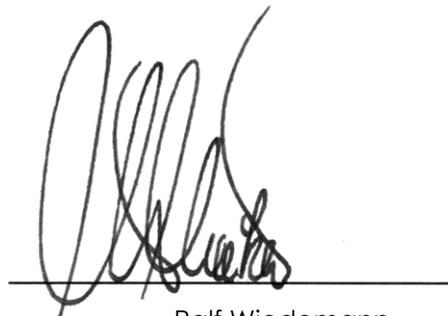
#### International Standards:

IEC 60601-2-52:2009	Particular requirements for the safety and essential performance of medical beds
IEC 62366:2007-10	Medical electrical equipment: Suitability for intended use

Herford, 23/04/2014



Georgius Kampisiulis Kemmler  
 (Management)



Ralf Wiedemann  
 (Management)

Notes:

Notes:

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Published by:

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Pivitsheider Straße 270 • D - 32791 Lage/Lippe  
Tel.: +49 (0) 52 32/98 41 - 0 • Fax: +49 (0) 52 32/98 41- 41

Email: [auftrags-zentrum@burmeier.de](mailto:auftrags-zentrum@burmeier.de)

Internet: [www.burmeier.de](http://www.burmeier.de)



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