Assembly and operation manual

CE

Bed-in-bed systems

.bock

- combiflex bibs
- belluno bibs
- unilift

Dear valued customer,

with your decision to purchase a nursing care bed from Hermann Bock GmbH, you are receiving a long-lasting care product with superior functionality at the highest safety level. Our electrically operated nursing care beds guarantee optimal lying comfort and allow professional care at the same time. This product was designed with a focus on the elderly, whose confidence must be reinforced and whose life needs protection. With this health care product, we meet these requirements.
We urge you to prevent potential malfunctions and the risk of accidents by complying strictly with the safety and operating instructions and by carrying out the necessary maintenance.

Klaus Bock

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1 Preface and general instructions

The various bed systems from Hermann Bock meet special requirements for the use in care and treatment facilities as well as for home care. Reliable functionality and a long product life make each bed particularly valuable. Our beds need little maintenance with proper operation and care. Each bed from Hermann Bock must pass quality testing in a final inspection before it is shipped anywhere. The beds are manufactured according to the current standards for medically used beds and tested accordingly.

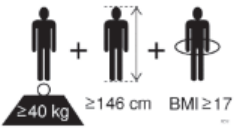
The beds comply with the EN 60601-2-52 standard. The electrical building components comply with safety standard EN 60601-1 for medical devices. Nursing care beds are medical devices and are to be assigned to Class 1.

These standards divide the beds in five different areas of use:

1. Intensive care in a hospital; intensive care bed
2. Short-term care in a hospital or other medical facility; patient bed in the hospital
3. Long-term care in medical environment; stationary nursing care bed
4. Care at home, pure so-called “HomeCare bed”
5. Home-care nursing service

1.1 Intended purpose

The bed-in-bed systems are intended for installation in an existing or new bed panelling. The instructions and specifications for installation (Chapter 4) must be observed.



The "bed-in-bed system" nursing care bed is suitable for persons in need of care (adults) with a body height of 146 cm or more. The person's weight must not exceed 185 kg and must be over 40 kg. The body mass index (BMI = weight of the person (kg) / body height of the person $(m)^2$) must be greater than or equal to 17.

The nursing care bed may be used in homes for the elderly or nursing homes and rehabilitation facilities. It is used to alleviate a disability and/or to facilitate the lives of people who are in need of care or to make the work of their caregivers easier. Furthermore, the nursing care bed was also designed as a convenient solution for the home care of frail and elderly people as well as for home care of people with disabilities. Accordingly, the nursing care beds are designed to be used for the application environments 3 to 5. Any other use is considered improper and is excluded from a possible liability claim.

The Trendelenburg function may be used exclusively under supervision of medical professionals. The beds, which are determined for application environment type 4, are equipped with a hand control which is unable to operate the Trendelenburg function.

The nursing care bed is not suitable for use in hospitals. It is also not designed to transport patients. The beds can only be moved within the patient's room - even during patient positioning - for cleaning or better access to the patient, for example.

Attention: The beds come with no special connection options for a potential equalisation. Electrical medical devices connected to the patient intravascular or intracardiac may not be used. The operator of the medical products has to ensure that the combination of the equipment meets the requirements of EN 60601-1.

This user manual contains safety instructions. All persons working with the beds must be acquainted with the contents of these instructions. Improper operation can result in personal injuries.

1.2 Definition of person groups

Operator
Operators (e.g. medical supply stores, specialist dealers, facilities and cost units) include all physical or juridical persons, who use the beds or have the beds used for medical purposes. The briefing on the use of the product shall generally be conducted by the operator.

User
Users are persons whose training, experience or briefing on the product allows them to operate the nursing care bed or carry out works on it. The user is able to recognize possible hazards and/or to avoid them and to assess the health condition of the patient.

Patient/resident
Person with one or more disabilities, one or more activity restrictions, one or more participation restrictions or a combination thereof.

Qualified personnel
Employees of the operator are referred to as qualified personnel. They are entitled to deliver the nursing care bed, assemble, dismantle and transport it, on the basis of their training or instructions. Besides knowing how to operate, mount and demount the nursing care bed, these persons must be instructed according to the guidelines concerning the cleaning and disinfection of the nursing care bed.

1.3 Safety instructions

The intended use/operation of all moving parts is as important for the safety of the person in need of care as well as for the relatives and the caregivers/nursing staff to avoid potentially dangerous situations. This requires the correct installation and operation of the bed. The individual physique of the person in need of care as well as type and the extent of their disability must be taken into account by all means when operating the bed.

Avoid dangers, accidental motor adjustments and incorrect operation by using the disabling function. When the operator, e.g. the nursing staff/caregivers or the care providing relative leaves the room, the entire operating functions of the bed should be disabled via the hand control. This is achieved by operating the key of the hand control. First, lower the lying surface to the lowest position and activate the lock function with a twist of the key, located in the keylock on the backside. Remove the key and check the function of the hand control for safety reasons. Make sure that it is indeed locked.

These recommendations apply particularly:

- if the person in need of care cannot operate the hand control safely due to certain disabilities;
- if the person in need of care or the caregivers could be at risk due to those accidental adjustments;
- if the side rails are in a raised position and there could be danger of trapping and crushing,
- if children are unsupervised in the room with the bed.

Always make sure that the hand control (when not in use) is securely hooked in the support hook at the bed and cannot drop.

As a general rule, the bed should be operated by instructed nursing staff/caregivers, relatives or in attendance of instructed persons.

When adjusting the lying surface, it is particularly important to ensure that no limbs are placed within the adjustment range of the side rails. If the side rails are adjusted, pay attention to the correct lying position of the person in need of care.

Prior to making any electrical adjustment, it should, as a general rule, be made sure that no limbs are positioned in the adjustment range between the chassis and the head or foot part, especially that there are no persons or animals in the area between the floor and the raised lying surface. Danger of being crushed is particularly high in these areas. Always beware of objects that are located close to or even below the nursing care bed. This can lead to damages.

The permitted person's weight depends on the total weight of the equipment that has been mounted to the bed (mattresses and other electronic medical devices). For safe working load, please refer to the type plate on the lying surface frame of the bed.

1.4 Service life / warranty

This nursing care bed was developed, designed and manufactured for safe operation over a long period of time. With proper operation and maintenance, this nursing care bed has an expected service life of 2 to 10 years. The service life depends on operating conditions and frequency. In the furnishing sector, for example, a service life of 15 years is to be expected.

Attention: Unauthorised technical changes to the product voids all warranty claims.

This product is not approved for the North American market, particularly not for the United States of America (USA). Distribution and use of the nursing care bed in these markets, including through third parties, is prohibited by the manufacturer.

1.5 Requirements for the installation location

The company Hermann Bock GmbH is not liable for damages which might arise from the daily usage on the floor.

To avoid floor indentations, floor should correspond to the recommendations of the FEB - Fachverband der Hersteller elastischer Bodenbeläge e. V. (Association of Elastic Floor Coverings Manufacturers). To do this, the technical information FEB No. 3 can be referenced.

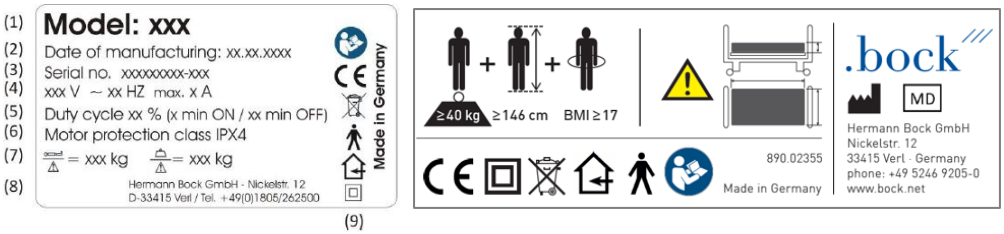
Hazard note from Bock

Simultaneous use of electrical appliances particularly in the vicinity of the operational bed may result in small electromagnetic interactions of these electric devices, e.g. static noise in the radio. In such rare events, increase the distance of the devices. Do not use the same socket or temporarily switch off the interference source and/or the disturbing or disturbed device.
If the bed should be operated with electrical medical equipment (contrary to its intended use), the functions of the bed must first be disabled via the integrated locking function in the hand control for the duration of the application.

1.6 Type plate

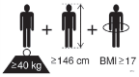
Each nursing care bed is marked with an individual and a general type plate.

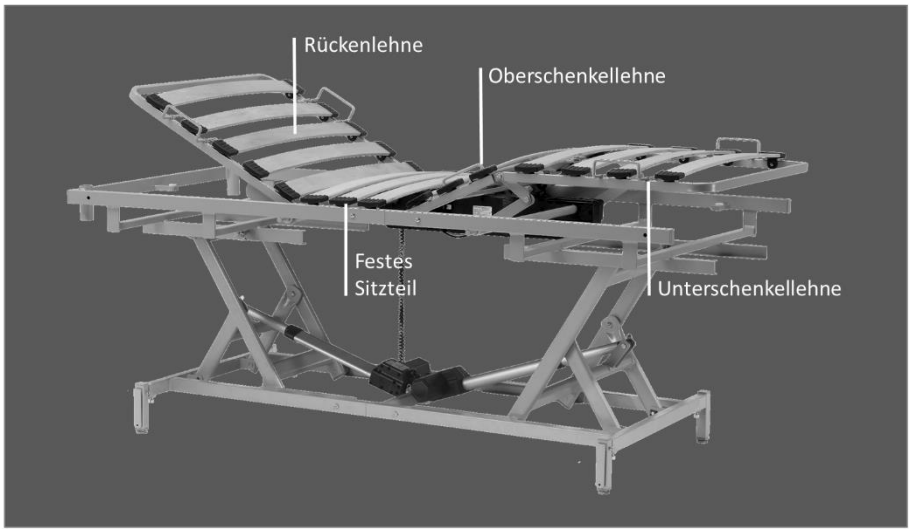
Individual and general type plate



(1) Model designation
(2) Manufacture date: Day, month and year
(3) Serial number: Order number - running number
(4) Mains voltage, mains frequency and power input
(5) Duty cycle
(6) Drive protection class
(7) Maximum patient weight / safe working load
(8) Manufacturer
(9) Symbols (located on the right side)

Explanation of the symbols:

CE	Conformity mark according to the medical device regulation
	Symbol for observance of the user manual
	Within the European Union, this product must be disposed via the separated municipal waste. Product may not be disposed of as household waste.
	Medical application part type B
	Use only in dry rooms
	Protection class II (double insulation, insulated for protection)
IPX4	Protection of electrical equipment against splashing water
	Symbol for maximum patient weight
	Symbol for safe working load
MD	Symbol for the identification of a medical device
	Patient population
	Follow the instructions appropriate for mattress size and thickness
	Address of the manufacturer



2 General description of the functions

Construction design and function

Corrosion protection

The Hermann Bock GmbH nursing care beds are developed and constructed in such a way that they can function long and safely. For this reason, all materials that may corrode are protected accordingly. All metal parts are equipped with a surface protection. The steel parts are either galvanised or stove-enamelled with a PES powder coating and the aluminium profiles are anodised.

The lying surface with 4 function areas

The lying surface consists as standard of a slatted comfort frame (can alternatively be fitted with aluminium slats or special suspension systems) and is divided into four functional areas: Backrest, solid seat, upper and lower leg rest.

The comprehensive lying surface frame is welded from a steel tube. The steel tubes are stove-enamelled with a PES-powder coating. The electric variable height adjustment of the lying surface is carried out with protective low-voltage DC motors (29 to 35V), and controlled with the smooth keys of the hand control. The backrest can be adjusted electrically. The leg part consists of a foot support that is divided into two parts. With a touch of a button on the hand control, each individual position can be adjusted continuously. In the event of a power failure, the back and leg sections can be lowered using a 9-volt battery.

The chassis

The height adjustment of the beds is carried out via a base frame with single or double drive. The surface of the tubular steel structure is stove-enamelled with a PES-powder coating.

The side rail

The bed-in-bed systems can be equipped with a clip-on steel side guard on both sides.

Hazard note from Bock

If the bed-in-bed system is to be additionally equipped with a side rail, the mattress bracket on the lying surface must be removed.

Hazard note from Bock

When the lying surface is lowered, there is an increased risk of crushing in the area of the four integrated castors or in the area of the chassis panelling.

Before an electrical adjustment, it is always necessary to check whether individual limbs (hands/fingers) are located between the upper edge of the wooden cladding of the scissors and the lying surface in the leg section, as this is the area where the risk of crushing or shearing is greatest.

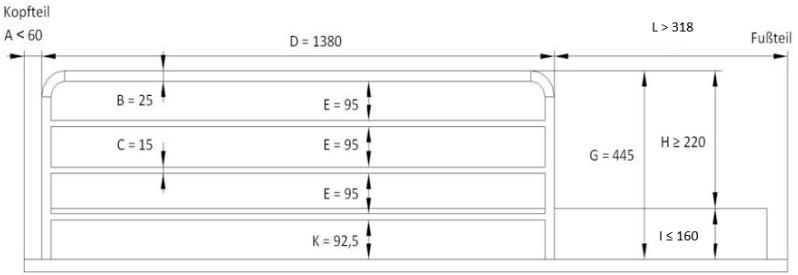
Hazard note from Bock

Use only original Bock side rails, which are available as accessories for every nursing care beds.
Use only technically flawless and non-damaged side rails with the permissible gap dimensions.
Make sure that the side rails are engaged securely.

Before installation of the side rail and each new use, inspect all mechanical parts on the bed frame, and all parts of the side rails, and all parts which secure the side rails, for any possible damages.

The operation of the side rail should be done with great care. Fingers can be quickly pinched between the longitudinal pieces.

Fig. 1: Steel side protection for bed-in-bed systems



All dimensions in mm.
(*) Depending on the length of the lying surface.

Item numbers	
Designation	**Item No.**
Steel side protection for bed-in-bed systems	206.00526
Steel side protection bed-in-bed system for a bed width = 100cm	206.00527

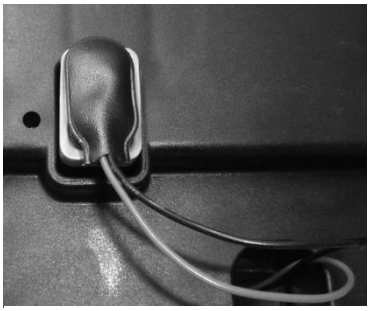
A: Distance between the head part and the side rail
B: Height 1 of side rail
C: Height 2 of side rail
D: Width of the side rail
E: Distance between the elements within the side rail
G: Distance between the lying surface and the upper edge of the side rail
H: Height of the top edge of the side rail above the mattress without compression
I: Thickness of the mattress for the intended use
K: Smallest dimension between side rail and lying surface (or the panel, if any)
L: Distance between the foot part and the side rail

3 Electric parts

3.1 The drive unit

The drive unit consists of a double drive with two separate drive units for the electrically movable adjustment of the backrest and leg rest. The level adjustment of the lifting frame is adjusted via one or two individual drives (depending on the model). The level adjustment drive is connected to the control box via a helical cable. In the plug-in power supply, the input voltage is converted into a protective low voltage of maximum 35 VDC direct current. The motors and the hand control function with this non-hazardous low voltage. The cables are double-insulated and the mains plug has a primary fuse.

The internal emergency lowering is carried out via a 9 V block battery. Furthermore, power adjustment allows for constant speed of the functions. Therefore, the safety functions comply with protection class II and the moisture barrier protection type IPX4.



9 V block battery for emergency lowering

The maximum duty cycle is specified on the (type plate) of the bed. For example, 10% duty cycle (2 min. ON / 18 min. OFF) means that any electronic adjustment can be performed for a max. of 2 minutes within a timeframe of 20 minutes (protection against overheating).

If the maximum setting time of two minutes is exceeded e.g. by someone continuously playing with the hand control which could lead to an overheating of the servomotors, the thermal fuse immediately shuts off the power supply to the bed. After a cooling down time of approx. one hour, the power will be automatically supplied again.

Hazard note from Bock

The 9-volt batteries in the controller should be checked once a year for their functionality and replaced if necessary. In addition, regular visual inspections must be carried out.

3.2 Caution: Electric drive

The electrically operated nursing care bed enables the person in need of care to support the recovery process psychologically and physically and at the same time relieve pain through its various functions. Electrically operated beds that are medical products need special care in regards to constant safety checks. This includes safety-conscious handling of the bed, daily inspection of electrical equipment and proper maintenance and cleaning.

To prevent damages to the cables, wiring should be conducted outside of the area in which damages could be caused. Furthermore, avoid touching the sharp parts. To prevent injury through an electric shock, avoid the possibilities of too high contact voltages. These circumstances may especially be the case if the power cable is damaged, if inadmissible and excessive leakage currents exist, or if liquid was spilled into the motor housing, e.g. during improper cleaning. This damage can cause malfunction of the controller, which could result in unwanted movements of single bed elements, posing a risk of injury for the operator and the person in need of care.

Hazard note from Bock

All drive components must not be opened!
Troubleshooting or exchanging single electrical components may only be performed only by special qualified personnel.

Hazard note from Bock

The motors meet the water protection standard IPX4. Do not squeeze/crush the cables. Adjustment of moving parts may only be used for the intended use. Hermann Bock GmbH assumes no liability for unauthorized technical changes.
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Hazard note from Bock

Do not try to fix failures on the electrical equipment itself. It could be fatal! Either call the customer service of Hermann Bock GmbH or an authorised/licensed electrician who conducts the troubleshooting in compliance with all relevant VDE regulations and safety regulations.

3.3 Drives

Hermann Bock GmbH equips nursing care beds with drive systems from Limoss (drive system with external switching power supply).

The double drive for step-less adjustment of lying surfaces and the linear drive as single drive for height adjustment of the lifting frames each consist of four main components.

– Housing
– Motor
– Gear
- Spindle with nut

The housing principle of the double drive and the single drive guarantees the permanent function of all drive components. The special design principle is based on two force-absorbing housing shells. Due to a detailed interior structure, the construction of the housing interior creates an essential prerequisite for the precise integration of the drive technology. The housing of the double drive is characterised by particularly simple assembly/disassembly and convenient installation space for the emergency lowering battery and control electronics above the powerful lateral slider.

3.4 The external switch mode power supply SMPS

The Limoss drive has a primary fuse in the plug-in power supply and an emergency lowering device. The plug-in part of the external switch mode power supply (SMPS) is an electronic transformer, which warms up only to a minimum degree under load and it is equipped with electronic performance monitoring. The result is a constant voltage up to the maximum load (no loss of speed) and a high level of protection against overloading. The external transformer ensures safety right from the socket because it converts the voltage directly into the safety low-voltage which is used to actuate the bed. It is connected via plug coupling to the mains supply line feeder cable and can be replaced separately if defective.

The plug-in part of the external switch mode power supply complies with the European directives for electrical household appliances. In standby mode, it also has a low energy consumption of maximum 0.5 Watt and can be used internationally with variable input voltages from 100 V to 240 V. Electromagnetic alternating fields are not measureable on the SMPS adapter and in operation still lower than mains isolation.

The external switch mode power supply

3.5 The system moves without adequate permission

If the system moves without permission, for example, too early into the incline, the position is considered as lost. This can occur, for example, by replacing the drives. An initialization must be carried out to correct the error. The initialization is carried out with a key combination using the third pair of keys from above (auto contour). The two keys are pressed and held until the initialization is complete. After about five seconds, all the drives will shut down at half the speed. Because of the half speed it is possible to prevent collisions in time.

3.6 Resetting the position after triggering the MSE

After the release of the mechanical quick release, the position of the drive no longer corresponds to the stored position. For this reason, the drive concerned must be reset to zero. To do this, press the "down" key of the corresponding drive until the drive has reached the lower control limit switch. The drive was successfully reset and can now be moved as usual.

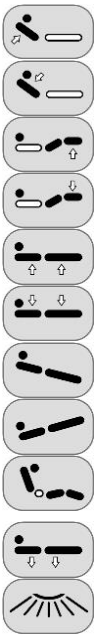
3.7 The hand control

The hand control is equipped with a built-in locking device, which allows the caregivers to lock the hand switch via a key completely or partially for its operation.

The lockable hand control, first-fault protected

The base functions can be controlled safely through a slight pressure on the eight extra large keys, which are located on the ergonomically designed hand control. The individual keys are marked with corresponding symbols. The servomotors run until as long as a corresponding key is pressed and held. A coiled cable allows the necessary freedom of movement while operating.

With the rear-mounted suspension unit, the hand control can be attached to the side rail - particularly when cleaning and during the maintenance of the bed. Thus, a possible disruptive position of the hand control can be avoided by simply attaching it to any preferred spot on the bed.



Back part upwards

Back part downwards

Lower leg part upwards

Lower leg part downwards

Lying surface upwards

Lying surface downwards

Low foot support (Anti Trendelenburg) *

Head-lowering position (Trendelenburg) *

Comfort sitting position *
(upwards only **)

Enable low function *

Lighting on/off

Examples for different hand controls

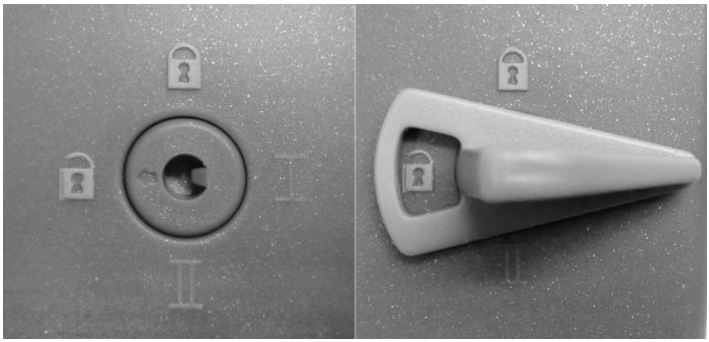
* availability depends on the model
** Comfort sitting position only moves up. All adjusted positions must be lowered separately.

Hazard note from Bock

Do not exceed the maximum duty cycle of 2 minutes. Observe a subsequent break of at least 18 minutes by all means.

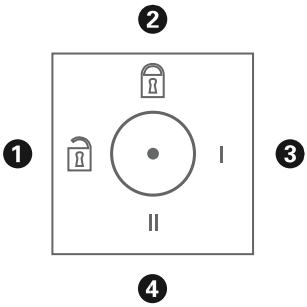
Hand control - lock functions

The hand control comes with an integrated disabling function that can be activated and deactivated with the corresponding key. To disable the entire electrical function, insert the key in the keylock on the backside and turn the lock function on or off with a corresponding twist of the key.



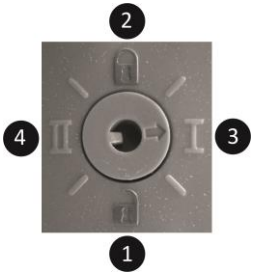
Key for locking device

Locking device 1



2	All hand control functions disabled
1, 3, 4	All functions executable

Locking device 2



1	Only Trendelenburg function disabled
2	All hand control functions disabled
3 + 4	All functions executable (including Trendelenburg function, if available)

4 Assembly and operation

4.1 Technical data

Technical data		combiflex bibs	belluno bibs	unilift
Lying surface dimension: cm		90 x 200	90/100 x 190/200	90 x 200
Outer dimension: cm		89 x 197	89/99 x 187/197	-
Minimum inside dimension of the bed panelling: cm		94 x 203	94/104 x 193/203	-
safe working load: kg		220	200	200
max. Weight of person: kg		185	165	165
Height adjustment: cm		33 - 77	31 - 75*	-
Length of backrest: cm		78 MA**	66 / 78 MA**	-
- back part		70°	70°	70°
- Lower leg part		20°	20°	20°
- Trendelenburg position (optional)		15°	n. possible	n. possible
- Attachable steel side rail		•	•	•
Lifter bottom space clearance: cm		11	> 11*	-
Sound level: dB(A)		< 65	< 65	< 65
Total: kg		75	76	52
Lying surface: kg		38	38	14
Chassis: kg		37	38	38
Special dimensions	Length: cm	180 – 220	180 – 220	180 – 220
Special dimensions	Width: cm	80 - 140	80 - 140	80 - 140
Input voltage: V		100-240	100-240	100-240
Frequency: Hz		50/60	50/60	50/60
max. Power consumption: A		2.0 – 1.2	2.0 – 1.2	2.0 – 1.2
* variable depending on stand **with mattress adjustment				

All parts and data are subject to a constant further development and therefore may differ from the mentioned data.
Please note that the beds are also available in special sizes and the technical data varies accordingly.

4.2 Special features when setting up bed-in-bed systems

For the installation of bed frames in a bed panelling, certain requirements must be met. In order to minimise the risk of crushing when the bed frame is immersed in the bed panelling, the width of the bed frame must have an inside dimension of at least 94 cm (outside dimension of the lying surface 89 cm) or 104 cm (outside dimension of the lying surface 99 cm). The length of the bed panelling must have an inside dimension of at least 193 cm (outside dimension of the lying surface 187 cm) or 203 cm (outside dimension of the lying surface 197 cm). Only then can it be guaranteed that the necessary minimum distance of 2.5 cm between the bed frame and the bed panelling can be maintained all the way round (see Figure 1).
In order to avoid possible dangers of crushing, the bed frame may only be lowered to such an extent that the distance between the upper edge of the bed panelling and the lower edge of the bed frame is at least 2.5 cm (see Figure 2) in case the distance to the bed panelling is smaller. Hermann Bock GmbH provides various feet for the bed frames so that the selection of suitable feet can support a compliance with the minimum distance.

Hazard note from Bock

The bed frame may only be completely immersed in the bed panelling if a minimum distance of 2.5 cm is maintained **between** the bed frame and the bed panelling. If the bed frame is immersed in the bed panelling without adhering to the required minimum distance, there is an increased risk of crushing!
Pay attention at all times to the special risk of crushing between the lying surface and the bed panelling with the bed-in-bed systems.

Hazard note from Bock

Please note that the installation of the lying surface into the bed panelling may only be carried out in accordance with the specifications and instructions described. In the case of other installations / conversions, changes or adaptations of the lying surface, the CE conformity of Hermann Bock GmbH will expire, and the responsibility pass to the customer (own manufacturer) or the service provider (system manufacturer).

Hazard note from Bock

In order to maintain the safe working load, no wooden side panels/frames may be attached to the lying surface!

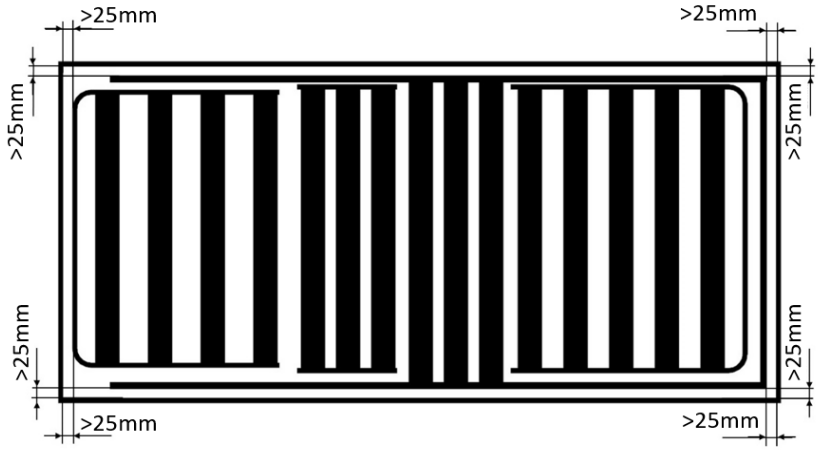
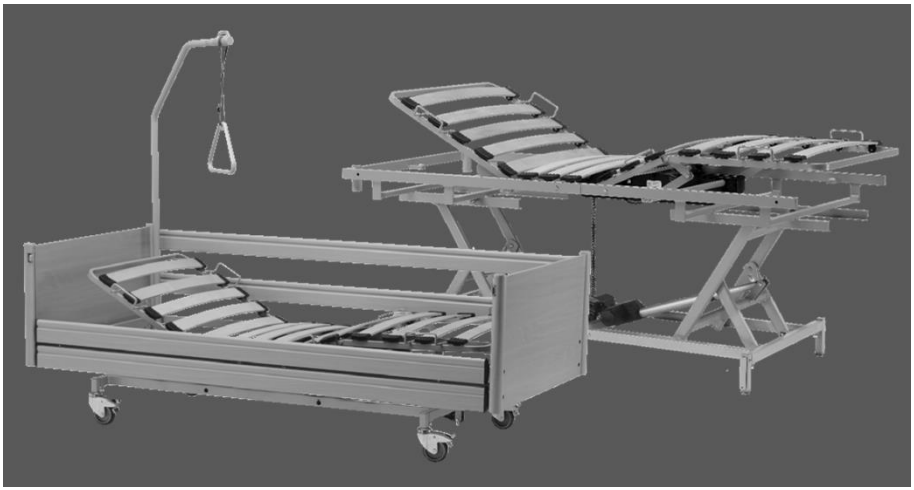


Figure 1: A minimum distance of 25 mm (= 2.5 cm) must be maintained between the bed frame and the bed panelling.

Figure 2: If the minimum distance between the bed frame and the bed panelling cannot be maintained, the lying surface may not be immersed in the bed panelling and may only be lowered to such an extent that there is a distance of at least 25 mm (= 2.5 cm) between the upper edge of the bed panelling and the lower edge of the bed frame.



4.3 combiflex bibs

The combiflex bibs has been specially designed to meet the requirements of the care at home, and in rehabilitation and care facilities. The above mentioned models provide a high degree of lying comfort for frail people, persons in the need of care and people with disabilities, and support the optimal care through an easy operation at the same time.

- combiflex bibs is not suitable for hospital use.
- The combiflex bibs is not suitable for patient transport. The beds may only be moved for cleaning purposes inside the patient's room or to allow access to the patient.
- The combiflex bibs is suitable for persons in need of care (adults) with a height of 146 cm or more. The person's weight must not exceed 185 kg and must be over 40 kg. The body mass index (BMI) must be greater than or equal to 17.
- Under certain circumstances combiflex bibs can be used (if necessary) for medical purposes with other electric medical equipment (e.g. suction devices, ultrasonic humidifier, food systems, anti-bedsore systems, oxygen concentrators and similar devices). In this event, disable all bed functions for the duration of the application via the integrated disabling function.

Attention: The bed has no special connection options for a potential equalisation. Electrical medical devices connected to the patient intravascular or intracardiac may not be used. The operator of the medical products has to ensure that the combination of the equipment meets the requirements of EN 60601-1.

Special features

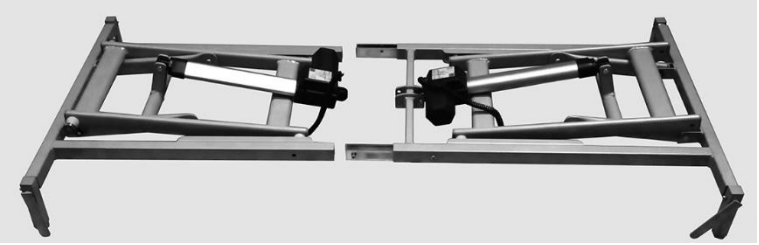
The combiflex bibs offers proven and modern technology with an automatic full function for a 4-fold adjustment of the lying surface for home use. If required, each possible automatic lying surface adjustment can be individually adjusted up to the sitting position.

Thanks to its extremely low installation height, the combiflex bibs can be combined with almost any existing bed frame, thus offering a high degree of individuality at any deployment location.

The combiflex bibs is available with an extended hand control function to support Trendelenburg positioning.

combiflex bibs becomes operational

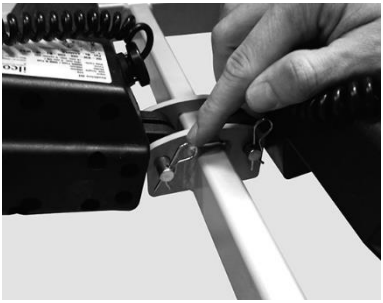
Before you begin with the assembly, all packaging residues must be completely removed. Place the two parts of the chassis on a free flat surface.



Insert the two halves of the chassis into each other, but do not push them together completely.

Hook in the lifting motor and insert the bolt.

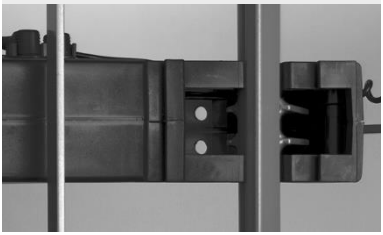
And secure with a safety pin.



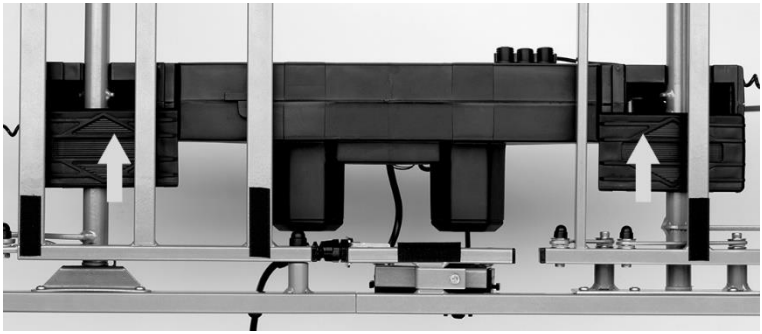
Push the halves of the chassis together completely and screw them together tightly.

Push the two halves of the lying surface together and tighten with the screws provided.

Attach the box motor to the lifting parts of the lying surface.

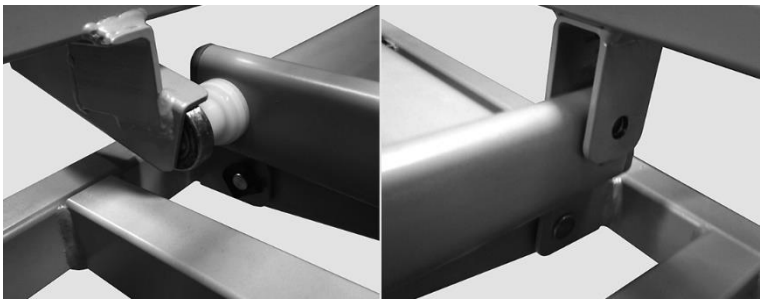


The box motor is fixed with the locking sliders on both sides. Be sure to push the locking sliders to the stopper as far as they will go.

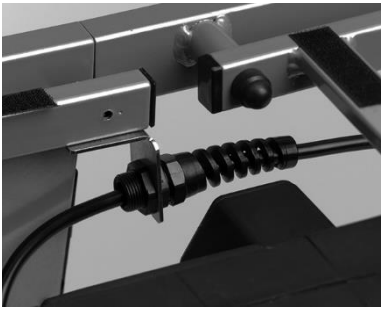


Connect the lying surface to the chassis so that the ball bearings in the upper part of the chassis can be inserted precisely into the U-profile on the underside of the lying surface.

Then fasten with the supplied



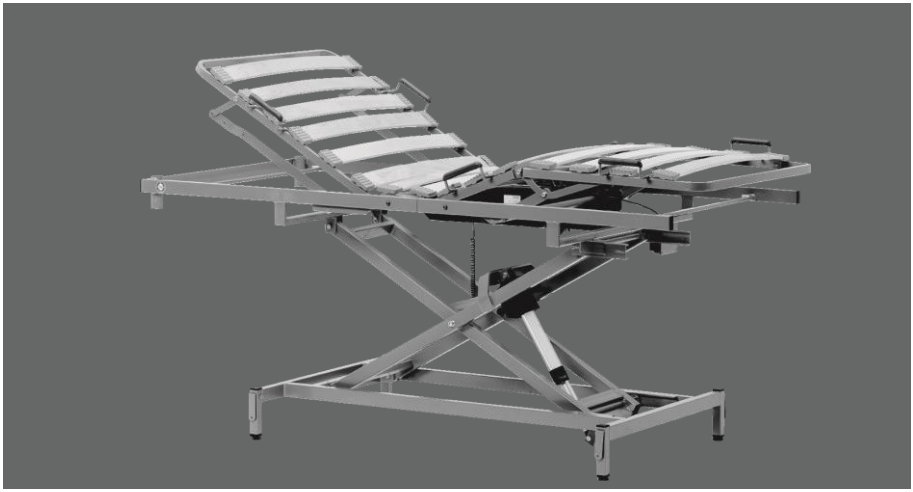
bolts and secure with the locking plate.



The power cable must be screwed to the lug of the lying surface with the strain relief provided on the cable.

Insert the plugs on the cable end of the lifting motors of the chassis into the matching sockets on the box motor.

After assembly or before putting the bed into operation, move the adjustment range of the lying surface over the controller to check the optimum positioning of the cables. The adjustment range must be passable without obstacles. The power cable must be routed outside the bed and the hand control must be freely accessible.



4.4 belluno bibs / unilift

The bed-in-bed systems belluno bibs and unilift have been specially designed to meet the requirements of care at home and in rehabilitation and care facilities. The above mentioned models provide a high degree of lying comfort for frail people, persons in the need of care and people with disabilities, and support the optimal care through an easy operation at the same time.

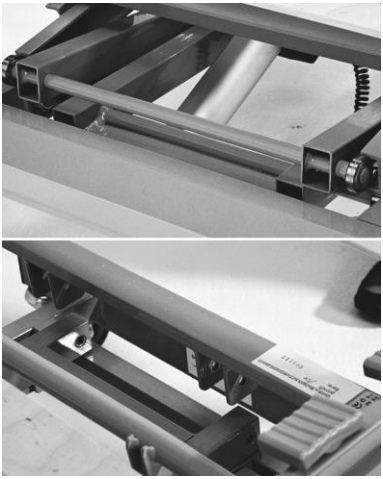
- The bed-in-bed systems are not suitable for hospital use.
- The bed-in-bed systems are suitable for persons in the need of care (adults) with a body height of 146 cm or more. The person's weight may not exceed 165 kg and must be over 40 kg. The body mass index (BMI) must be greater than or equal to 17.
- Under certain circumstances the bed-in-bed systems can be used (if necessary) for medical purposes with other electric medical equipment (e.g. suction devices, ultrasonic humidifier, food systems, anti-bedsore systems, oxygen concentrators and similar devices). In this event, disable all bed functions for the duration of the application via the integrated disabling function.

The bed-in-bed systems are ready for operation

Before proceeding with the further assembly, all packaging residues must be completely removed. Place the chassis on a free flat surface.

The power cable must be screwed to the lug of the lying surface with the strain relief provided on the cable.

To simplify assembly, the scissor should be raised to knee height. Remove the split pins at the other end of the lift. The ball bearings in the upper area of the scissor must be inserted into the U profile provided for this purpose at the lower end of the lying surface. bracketsLock the lying surface between the two brackets with the previously removed split pin. Secure the split pins against unintentional loosening with the cotter pin.



Pull out the side extensions to the width of the bed frame (max. 10 cm).

Screw the side extension to the bed frame.

Insert the plug at the cable end of the lifting motor into the suitable socket of the box motor and raise the lying surface.

Mount the side mattress brackets to 90 or 100 cm width with the enclosed screws as required so that the mattress is secured against lateral slipping.

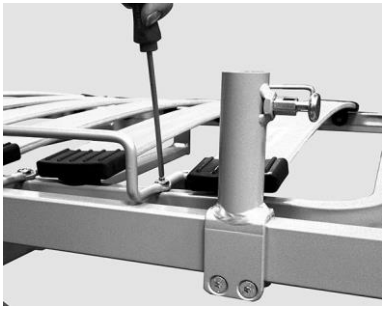
After assembly or before putting the bed into operation, move the adjustment range of the lying surface over the controller to check the optimum positioning of the cables. The adjustment range must be passable without obstacles. The power cable must be routed outside the bed and the hand control must be freely accessible.

4.5 Steel side protection for bed-in-bed systems

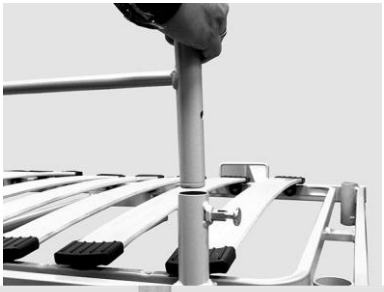
Please note that the total width of the bed insert increases by approx. 10 mm due to the clip-on steel side guard. It is therefore essential that you check the width of your bed base.

The mounting tubes for the side rail are pushed onto the head and foot ends of the lying surface frame and loosely fastened with the screws.

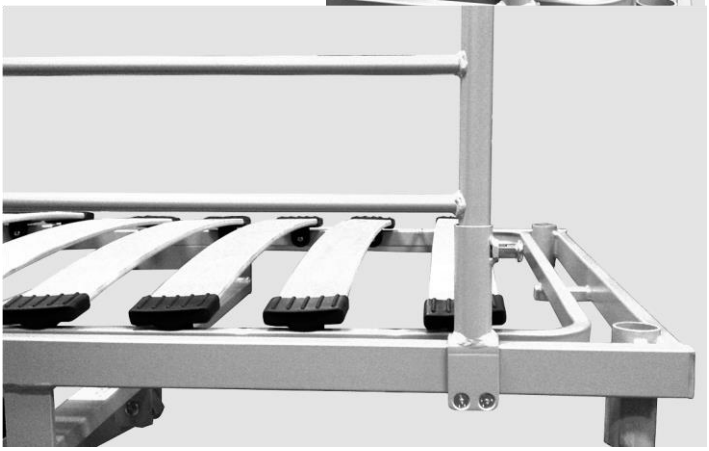
The mattress brackets on the corresponding side of the lying surface are removed.



The side rail is inserted at the head and foot ends into the previously mounted mounting tubes. Pull out the safety clip on the mounting tube, push in the side rail completely in, and let the safety clip engage.



Tighten the screws of the mounting tubes completely. The side rail is now fully assembled.



When installing the side rail, please note that the distance between the head part on your bed base, and the side rail is less than 60mm (letter A in the sketch). The distance between the foot part and the side rail must be more than 318 mm (letter L in the sketch).

The side rails first and foremost serve as a fall prevention. In the case of very emaciated persons in need of care, this protection is no longer sufficiently provided by the side rails and additional protective measures must be taken, e.g. by adding a push-fit side rail padding (accessory).

4.6 Change of location

If the bed must be moved to another location, please follow these safety instructions:

- Bring the lying surface to the lowest position.
- Before conducting the movement, pull out the mains plug and attach it with the suspension device to the frame to secure the power cable against falling and being crushed. Make sure that the cable is not dragged over the floor.
- Before inserted the mains plug again, inspect the power cable visually for mechanical damage (dents and kinks, abrasions and bare wires).
- Place the power cable in a way that it will not be rolled over or strained during the operation of the bed or could be damaged when inserting the mains plug again.

4.7 Transport, storage and operating conditions

	Transport and storage	Operation
Temperature	0°C to +40°C	10°C to +40°C
Relative humidity	20% to 80%	20% to 70%
Air pressure	800hPa to 1060hPA	

4.8 Function notes

To fix the bed in place, the brakes on the castors (if any) of the chassis must be locked. To accomplish this, use your foot to move the locking lever on the chassis downwards.

When using mattresses of different thickness, the minimum height of 22 cm, measured from the top edge of the side rail above the mattress without compression, may not be underrun (additionally, an attachment guard must be used).

4.9 Disposal

Each of the components made of plastic, metal and wood are recyclable and can be disposed/recycled in compliance with the relevant legal provisions. Please note that electric adjustable nursing care beds or nursing beds are considered commercially used electronic scrap according to the WEEE-EC directive 2012/19/EC (b2b). All replaced electrical and electronic components of the electrical adjustment system must be handled in accordance with the requirements of the Electrical and Electronic Equipment Act (ElektroG) and disposed of properly.

4.10 Troubleshooting

This overview helps you to detect and correct malfunctions on your own and explains, what kind of malfunctions require the consultation of suitably qualified service personnel.

Malfunction	Potential causes	Remedy
The drive units cannot be controlled via the hand control	Power cable is not connected	Insert power cable
	No voltage in the socket	Check the socket or the fuse box
	Plug connector of the hand control not fixed firmly	Check the plug-in connection on the motor
	Hand control or drive unit defective	Notify the operator or Bock customer service
	Mains isolation not activated	Activate the mains isolation by pressing the green button, additionally check the 9V battery
	Disabling function or control box in the hand control activated	Disabling function or control box in the hand control deactivated
When buttons are pressed, the drive units stop after a short time	There is an obstruction in the adjustment range	Remove obstruction
	The safe working load has been exceeded	Reduce the load
The drives stop after a longer adjustment time	The adjustment time or safe working load has been exceeded and the polyswitch in the transformer of the controller has responded to increased heat	Allow the drive system to cool down sufficiently for at least one minute
Opposite functions when operating the hand control	Motor connector switched internally	Notify the operator or Bock customer service
Individual drive units run in one direction only	Hand control, drive unit or controller defective	Notify the operator or Bock customer service
Drive units stop and bed remains in a tilted position	Constant operation of adjustment functions	Move lying surface in bottom or top position as this will straighten it again horizontally. Activate disabling function in hand control

5 Accessories

Hermann Bock GmbH offers practical and mobility-promoting accessories to ensure that each nursing care bed is tailored even more precisely to the individual needs of the person in need of care. The installation is done in a quick and easy manner using the fixing points on the bed that have already been prepared for this purpose. It goes without saying that every element of our additional equipment offer meets the special quality and safety standards of Bock. In addition to the standard accessories included in basic equipment, the customer can also choose from our variety of accessories, which is available for each bed model. These optional accessories vary depending on the bed model and are fitted to its special functions and location of use. The range stretches from technical elements over mattresses up to the occasional extra bed. A wide range of wooden finishes and a variety of colours allow for the harmonious integration of each nursing care bed with any kind of furniture.

5.1 Special dimensions

Special dimensions are an essential part of the production Hermann Bock GmbH. Optimal lying comfort for persons in need of care who have a particular physique can only be achieved by means of custom-built models. With its customized models, Hermann Bock GmbH enables customers to have their nursing care bed tailored to fit the individually physical requirements of the person in need of care. From a height of 180 cm, Hermann Bock GmbH recommends the use of a nursing care bed with a lying surface length of 220 cm. This enables even tall people to lie comfortably while maintaining the same level of functionality.

Hazard note from Bock

When using accessories on the bed or medically necessary devices as infusion stands in close proximity to the bed, ensure particularly that there are no risks of crushing or shearing for the person in need of care when adjusting the back and leg rests.

The representative of the service hotline of Hermann Bock are looking forward to informing you about the best retrofitting
solution for your bed. Hotline no. 0180 5262500 (14 cents/min. for calls from landline phones, 42 cents/min. for calls from mobile phones).
A wide product range of auxiliary furniture complements the various bed models up to the complete interior design of your home. This combination creates a care and living comfort resulting in perfect harmony.

5.2 Mounting accessories

The following standard accessories can be combined with the bed models:

Lifting pole with triangle handle, 6.5 kg

The safe working load of the lifting pole is max. 75 kg.
Delivery includes:
1 piece lifting pole with hook-up loop
1 piece triangle

- Place the lifting pole with triangle handle in the provided hook-up loop at the head part and adjust it accordingly.
- Make sure to only use mattress with a required mattress height as described by the company Bock. You can find this information in section 5.2.

ATTENTION: The lifting pole with a triangle handle must not swivel outside of the lying surface.

When used in line with its intended purpose, the service life of the triangle handle is approx. 5 years. If a lifting pole with triangle handle installed to the bed, it must be tested during each safety technical control, but must be replaced no later than after 5 years. The handle can be infinitely adjusted within a range of 350mm. This allows an adjustment range between triangle handle and mattress of at least 550mm to 850mm, depending on the mattress thickness. The total height of the nursing care bed increases by 1300 mm when using a lifting pole.

5.2 Mattresses

In general, foam and latex mattresses are suitable for the Hermann Bock nursing care beds. A volumetric weight of at least 35kg/m^3 is required along with the dimensions of 90 x 190 cm, 100 x 190 cm, 90 x 200 cm and 100 x 200 cm.
The height of the mattress used may not exceed:

- 15 cm for aluminium or springwood lying surfaces and
- 12 cm for lying surfaces with spring systems

When using foam mattresses, we recommended the use of a cut foam mattress to allow a better combination with the lying surface.

Hazard note from Bock

For safety reasons use only original Bock accessories when furnishing your nursing care bed further. Those accessories must be approved by Hermann Bock for the respective bed model. A detailed overview of the accessories and extras for your bed can be found on a separate data sheet. Hermann Bock assumes no liability for accidents, damages and hazards arising from the use of other accessories!

6 Cleaning, maintenance and disinfection

The individual bed elements consist of high quality materials. The surfaces of the steel tubes is covered with a durable polyester-powder coating. All surfaces of the wooden parts are surface-sealed with an ecologically coating that is low on harmful substances. All bed elements are easy to clean and cared for using wipe and spray disinfection means according to the applicable cleaning requirements with respect to the various areas of application. Observing the following care instructions will retain the usability and visual appearance of your nursing care bed for a long time to come.

6.1 Cleaning and care

Steel tubes and vanished metal parts:
Please use a wet wipe and a regular mild household detergent for the cleaning and care of these surfaces.

Wooden-, decorative-, and plastic elements:
All standard furniture cleaners and cleaning detergents can be used. Using a wet wipe without detergent additives for the cleaning of the plastic elements should generally be sufficient. For care of the plastic surfaces use a product that is specifically suitable for plastics.

Drive:
To prevent the intrusion of moisture into the motor housing, we recommended using only a damp rag to clean outside housing.

Spring systems ripolux neo:
Use a damp rag without adding any detergents, or, if deemed necessary, a detergent that is exclusively suitable for plastics and clean the spring elements made of plastics. In case of heavy contamination, remove the spring elements from the supporting elements and the supporting elements from the frame of the lying surface. The dismounted plastics elements can be rinsed or spray-washed with hot water to get them clean. For the disinfection, the components should be sprayed with a detergent suitable for plastics. Most of the moisture drips off the plastic surface by slightly shaking it, while the rest will dry on its own within a very short time. Remount the elements after they have completely dried. If required, you can also remove each of the individual lying surface elements completely from the frame to clean them.

6.2 Disinfection

Disinfect the nursing care bed with a wipe disinfectant. Please adhere to the tested and recognised procedures of the Robert Koch Institute (RKI). You can use commercially available cleaning and disinfecting agents approved by the RKI. Only mild and gentle agents should be used for the disinfection, in order to maintain the material resistance of the plastic elements such as the motor housing and decorative elements. Concentrated acids, aromatic and chlorinated hydrocarbons as well as detergents containing highly concentrated alcohol, ether, ester and ketone may damage the material and should therefore be avoided. The list of disinfectants and disinfection methods tested and approved by the Robert Koch Institute can be found on the Internet at www.rki.de.

6.3 Avoidance of hazards

In order to avoid dangers in connection with cleaning and disinfection, you must first observe the following regulations in connection with the electrical components of your nursing care bed. Non-observance of these guidelines may result in considerable damage of the electrical lines and the drive.

1. Pull the mains plug and position it in such a way that contact with excessive amounts of water or detergents can be excluded.
2. Check all plug-connections for correct position according to the instructions.
3. Check the cables and electrical component parts for damage. Should you detect any damage, do not perform any cleaning operations but first have the defects repaired by the manufacturer or an authorised/ licensed electrician.
4. Before starting the operation, check the mains plug for residual moisture and dry or blow out the device, if necessary.
5. On any suspicion of the intrusion of moisture into the electrical components, disconnect the mains plug immediately and do not re-establish the connection. Put the bed out of operation immediately, attach an appropriate visible label and contact the manufacturer/supplier.

Hazard note from Bock

Use of abrasive cleansers and/or detergents containing grinding particles, cleaning pads or stainless steel cleaners for the cleaning is absolutely not recommended. Neither use organic solvents such as halogenated/aromatic hydrocarbons and ketones nor detergents containing acid or alkaline.
Under no circumstances must the bed be sprayed with a water hose or high-pressure cleaner, as liquid penetrates into the electrical components, and as a result malfunctions
and dangers could occur.

Clean and disinfect the bed before using it again. Also, at the same time, perform a visual inspection to check for any mechanical damages. You will find detailed information on this in the inspection list.

7 Guidance and manufacturer's declaration

Guidance and manufacturer's declaration

– Electromagnetic emission

The *medizinisches Bett* is intended for use in the electromagnetic environment specified below.
The customer or the user of the *medizinisches Bett* should assure that it is used in such an environment.

Emission test	Complliance	Electromagnetic environment - guidance
RF emissions CISPR 11 (partly)	Group 1	The medical used bed uses RF energy only for its internal function. Therefore, its RF emissions are very lowand are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11 (partly)	Class B	The medizinisches Bett is suitable for use in all establishments other than domestic and those directly connected to the public-voltage power supply network that supplies buildings used for domestic purpose.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

– Electromagnetic immunity

The *medizinisches Bett* is intended for use in the electromagnetic environment specified below.
The customer or the user of the *medizinisches Bett* should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrostatic transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	< 5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles < 5 % U_T (>95 % dip in U_T) for 5 sec	< 5 % UT (>95 % dip in UT) for 0.5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles < 5 % UT (>95 % dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the medizinisches Bett requires continued operation during power mains interruptions, it is recommended that the medizinisches Bett be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Note: U_T is the a. c. mains voltage prior to application of the test level.

– Electromagnetic immunity

The *medizinisches Bett* is intended for use in the electromagnetic environment specified below.
The customer or the user of the *medizinisches Bett* should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 V 150kHz-80MHz 3 V/m 80MHz-2500MHz	3 V 150kHz-80MHz 3 V/m 80MHz-2500MHz	Portable and mobile RF communications equipment should be used no closer to any part of the EQUIPMENT medizinisches Bett, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = \left[\frac{3,5}{3}\right]\sqrt{P}$ 150 kHz to 80 MHz $d = \left[\frac{3,5}{3}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{3}\right]\sqrt{P}$ 800 MHz to 2,5 GHz where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site surveya, should be less than the compliance level in each frequency rangeb. Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection form structures, objects and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, en electromagnetic site survey should be considered. If the measured field strength in the location in which the medizinisches Bett is used exceeds the applicable RF compliance level above, the medizinisches Bett should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the medizinisches Bett.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the medizinisches Bett

The medizinisches Bett is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled.
The customer or the user of the medizinisches Bett can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the medizinisches Bett as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = \left[\frac{3,5}{3}\right]\sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3,5}{3}\right]\sqrt{P}$	800 MHz to 2,5 GHz $d = \left[\frac{7}{3}\right]\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,37	0,37	0,74
1	1,17	1,17	2,33
10	3,69	3,69	7,38
100	11,67	11,67	23,33

For transmitters rated at a maximum output power not listed above the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

8 Regular inspections with service

Regular inspections facilitate the maintaining of the highest possible safety level, and are considered to be an important safety precaution. Medical devices must be inspected regularly in terms of safety according to the stipulated regulations of the manufacturer and the generally accepted rules of technology. The safety-related protection measures are subject to different requirements and demands. This also applies to the potential wear and tear in the daily use. To prevent such risks, constant and consistent compliance with the deadlines for regular functional testing is absolutely necessary. The manufacturer has no influence on the operator's adherence with respect to the observance of these regulations concerning electric beds. Bock facilitates the observance of the necessary precautionary measures to be taken by means of their time-saving services.

The execution of the inspection, assessment and documentation must be performed only by or under supervision of professional persons such as electricians or electro-technically instructed persons who have a thorough knowledge of the relevant provisions and are able to recognize possible impacts and hazards.

In the event that no person on the part of the user is eligible for the regular inspections or is commissioned, the Bock service offers you the assumption of the regular inspections with simultaneous control and observance of the corresponding intervals for a fee.

The company Hermann Bock GmbH specifies an inspection interval which stipulates that a safety-technical inspection is to be executed at least once annually, and with each reuse of the bed.

For support purposes, Hermann Bock GmbH will provide you with the inspection list in the assembly and operation manual for carrying out all the necessary tests. Please copy the checklist as a form for your inspection. The checklist serves as evidence report of the performed inspection and must be kept on file.

The inspection list can also be downloaded from the Internet: www.bock.net.

Attention: Unauthorised technical changes to the product voids all warranty claims.

Inspection list for Bock nursing care beds	Page 1 of 2	Issuing date: 09.10.2018
Model designation		.bock
Serial / Inventory-No.:		
Year of manufacture:		
Manufacturer:	Hermann Bock GmbH	

Visual inspection:

No.	Description	Yes	No	Remark
General:				
1	Type plate/sticker present on bed and legible?	☐	☐	
2	Operating manual available?	☐	☐	
3	Is the safe working load as per type plate (patient weight + mattress weight + accessory weight) observed?	☐	☐	
4	Are the accessories (e.g. lifting pole incl. handle and belt, stand-up aid, wall deflector rollers, etc.) in perfect condition? Are all accessories securely fixed and without signs of wear? Is the handle on the lifting pole not older than 5 years (service life of the handle according to the manufacturer's specifications)?	☐	☐	
Electric components:				
5	Power cables, connecting cables and plugs without cable breaks, pressure and kinking points, abrasions, porous points and exposed wires?	☐	☐	
6	Strain relief firmly fastened and efficient?	☐	☐	
7	Correct and secure cable leading and cable connections?	☐	☐	
8	Housings of motors and hand control without damages?	☐	☐	
9	Motor lift pipes without damages?	☐	☐	
Chassis (with scissors construction beds) / end panels (of actuator beds):				
10	Chassis construction free of defects with no ruptured welding seams?	☐	☐	
11	Are the castors and bumper rollers (if available) without damages?	☐	☐	
12	Plastic end caps and mechanical connecting elements (screws, bolts, etc.) complete and without damages?	☐	☐	
Lying surface and end panels:				
13	Sprung wooden slats, aluminium/steel bars, carrier plate and/or springs without damages? (No cracks, no fractures, tight fit, enough pressure, etc.) *Only for nursing care bed dino:* Distance between aluminium bars less than 6 cm?	☐	☐	
14	Frame of lying surface and lifting parts free of defects with no ruptured welding seams?	☐	☐	
15	Plastic end caps and mechanical connecting elements (screws, bolts, etc.) complete and without damages?	☐	☐	
16	Tight fit and no cracks or breakages of head and foot end piece?	☐	☐	
Side rail:				
17	Are the side rails without cracks, breakages or damages?	☐	☐	
18	Is the distance between side guard rails is not more than 12 cm? *Only nursing care bed dino:* Distance between bars less than 6 cm? Distance between side rail and lying surface smaller than 6 cm?	☐	☐	
19	Is the height of the side rail above the mattress at least 22 cm? *Only nursing care bed dino:* Is the height of the side rail above the mattress at least 60 cm?	☐	☐	
20	*Only with split side rails:* Is the distance between the end part and side rails and/or distance between divided side rails less than 6 cm or greater than 31.8 cm?	☐	☐	

Inspection list for Bock nursing care beds	Page 2 of 2	Issuing date: 09.10.2018
Name / location:		.bock
Address / Postcode / City:		
Station / Room:		
Name of examiner / Date:		

Functional testing:

No.	Description	Yes	No	Remark
Side rail:				
21	Are the side rails running smoothly in the tracks and locking into place safely? *Only nursing care bed dino:* Smooth running of the doors on the aluminium profiles? Doors lock securely into the locking mechanism?	☐	☐	
22	Are the side guard rails/parts sufficiently mounted and firmly seated?	☐	☐	
23	Was the load stress test of the side rail without deformation?	☐	☐	
Lying surface:				
24	Back part, leg part adjustment and special functions properly and without any obstacles?	☐	☐	
25	Safe grid mechanism of lower leg rest (if available) in every step, even under stress?	☐	☐	
26	*Only domiflex 2 nursing care bed:* Is the clamping effect of the 6 eccentric clamps sufficient? If this is not the case, the stop nut must be tightened slightly!	☐	☐	
Chassis (with scissors construction beds) / end panels (of actuator beds):				
27	Hub adjustment properly and without any obstacles?	☐	☐	
28	Safe braking effect, blocking and free running of wheels?	☐	☐	
Electric components:				
29	Testing of hand control (keys and disabling function) all working properly without any defects?	☐	☐	
30	Battery/Bock battery/emergency lowering: Function properly and without any defects?	☐	☐	
General:				
31	Function of the accessories flawless and safe? (e.g. lifting pole incl. grab handle and belt, stand-up aids, wall deflector holder, etc.)	☐	☐	

Electric measuring:

No.	Description	Yes	No	Remark
Insulation resistance - (must be only measured on old models before manufacture year of 2002.)				
32	Insulation resistance – measured value larger than 7 MΩ?	☐	☐	
Device leakage current - (This measurement does not have to be carried out for nursing care beds with a limoss drive set for nursing care beds manufactured from 2018-05 onwards, or for nursing care beds with a Dewert drive set for nursing care beds manufactured from 2015-07 onwards during the first 10 years of service life, if the visual and functional testing is passed, if this is a nursing care bed with a limoss or Dewert switched-mode power supply (SMPS). With these nursing care beds, the mains voltage is directly converted into a safety extra-low voltage of max. 35 V in the switch-mode power supply unit.)				
33	Device leakage current - measured value smaller than 0.1mA?	☐	☐	

Evaluation

No.	Description	Yes	No	Remark
34	All values/inspection within the permissible range passed?	☐	☐	

In the event the inspection result did not pass:	☐Repair ☐Singling out
Date / Signature	**Next inspection**

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