CE

Assembly and operating instruction

practico alu 25/80

.bock

Dear customer,

In deciding to buy a nursing care bed from Bock you have opted for a care product that has a long service life and delivers first class functionality at the highest safety level. Our electrically adjustable care beds guarantee optimum comfort when lying, and support professional care activities. The focus is on people who need care, encouragement and protection.

We have created the basic requirements for this with our care products. We urge you to prevent potential malfunction and risk of accidents by complying strictly with the safety and operating instructions and carrying out the necessary maintenance.

Sincerely yours,

Klaus Bock

Content

1 Introduction and general information

The various bed systems that are made by Hermann Bock GmbH meet the special requirements for use in rehabilitation and therapy establishments as well as for care at home. Thereby reliable functionality and long-life-cycle are what characterize each single bed model as particularly high quality. Provided, that the bed is used in accordance with its purpose and serviced at regular intervals, the bed requires only a low level of maintenance. Each healthcare bed manufactured by the company Hermann Bock must pass a quality inspection and will be issued with a quality certificate by the TÜV before it leaves the production line. Hence, every healthcare bed meets the requirements of the directive 93/42/ EWG for medical devices (Class I). The beds have been manufactured and certified in accordance with the applicable standards for beds used for medical purposes.

Since April 2013, the standard applying to the beds has changed in line with the requirements of EN 60601-2- 52: 2010. The electrical component parts are in conformity with the safety standard EN 60601-1:2006 for medical devices.

The new standard distinguishes the beds between five different areas of application:

1. Intensive care in hospital, Intensive care bed
2. Short-term care in hospital or another medical facility, in-patient bed
3. Long-term care in medical environment, in-patient care bed
4. Home care treatment, sheer home care bed
5. Ambulant Care/Home care nursing service

1.1 Intended use

The health care bed has been designed for the positioning of people in need of care or patients of medical facilities as of the year of 12 and a body height of at least 150 cm. The beds are intended for use in retirement or care retirement homes, rehabilitation facilities and with respect to home care treatment. Its purpose is to provide relief from disabilities and to facilitate the care process. Any other use is considered to be not intended; therefore all and any liability is excluded, if any damages can be attributed to any such unintended use.

The Trendelenburg function is a special equipment and does not belong to the basic equipment. This function can only be carried out by specialized personnel. Beds, which are applied in the application area 4, will be equipped with the hand control without Trendelenburg.

The nursing care bed is not suited for the use in hospitals. In case that the nursing care bed is equipped with visible castors, it is suitable for the transport of the patient. The nursing care bed is movable while the patient is inside. To prepare the transport, fasten the castors; bring the nursing care bed into the lowest, horizontal position. Than unfasten the castors and move the bed. After the transport fasten the castors. In case that the nursing care bed is equipped with covered castors, it is only destined to be moved inside the patient´s room, for cleaning and access to the patient. If the nursing care bed is equipped with feet, it is not possible to move it.

Important: The beds are not equipped with any particular connections that provide for a potential equalization. Electrical medical devices connected to the patient´s intravascular or intracardiac system must not be used. The operator of the medical device shall be responsible for the conformity of the combination of the devices with the requirements of DIN EN 60601-1:2006.

This user´s manual contains safety notes. All persons working with the beds must be acquainted with the contents of these instructions. The improper use may involve hazards.

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 products shall generally be conducted by the operator.

User
Users are persons, whose training, experience, or briefing on the product allows them to operate the health care bed or carry out works on it. The user is capable of recognizing possible hazards or to prevent such from occurring and to assess the physical condition of the patient.

Patient / Resident
Persons in need of care, disabled or invalid persons lying in a care bed.

Professionals

Professionals include staff assigned by the operator, who are, owing to their training or briefing allowed to deliver, mount, dismount, and transport the bed. As a general rule, these persons must be instructed to the guidelines concerning the cleaning and disinfection of the health care bed.

1.3 **Safety notes**

The use of all moveable component parts in accordance with their intended use is not only crucial with respect to the hazard prevention for the patient but also when it comes to the safety of the relatives and/or the nursing staff. Another important aspect to be considered with respect to the operation of the bed is the individual physical condition of the patient and the kind and degree of their disability.

Please make sure that any hazards that might occur from unintended adjustments and incorrect operation are avoided by enabling the locking device. Whenever the operator, e.g. nursing staff or caring relatives leave the room, it is recommended to lock all operating functions of the bed; this can be done by means of the key at the hand control. For this purpose, the lying surface needs to be brought to the lowest position, and in a next step, the locking function can be enabled by means of the key, which can be found at the back side of the locking device. Just turn the key, pull it out and check, if the locking function is really working by trying the buttons of the hand control.

These recommendations are particularly important,

> if the patient´s disability hinders them to operate the hand control,

> if the patient or nursing staff could be at risk due to unwanted adjustments,

> if the side rails are raised, so that there is a risk of crushing or getting trapped,

> if there are unattended children in the room.

Always pay attention that the hand control is hooked into the handle at the bed so that it cannot drop down. As a general rule, the bed should be operated by instructed nursing staff or relatives, or in attendance of instructed persons. When making adjustments to the lying surface, it should be made sure, that the patient´s limbs are not positioned in the adjustment area of the side rails. The patient´s appropriate lying position is likewise important when it comes to adjustments to the side rails.

Prior to making any electrical adjustment, it should, as a general rule, be made sure that the

patient´s limbs are not positioned in the adjustment area between the chassis and the head- or foot board, resp. that there are no persons in the area between the floor and the raised lying surface. These areas exhibit a particular high risk of crushing injuries.

The permitted person weight depends on the total weight of the equipment that has been mounted to the bed (mattresses and other electronic medical devices). The respective max. safe capacity is specified on the name plate, which is attached to the frame of the lying surface.

1.4 Life time / gurantee

This nursing care bed has been developed, designed and constructed for a save and long use. In case of proper operation and use, the nursing care bed has an expected life time of approx. 15-20 years. The life time depends on the usage condition and frequency. Therefore a longer life time in the institutions is expected.

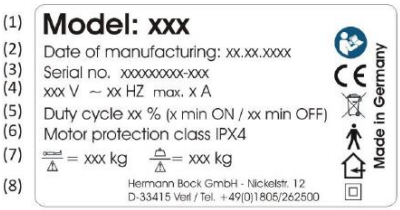
Attention:
In case of unauthorized technical modification of the product, all warranty claims extinguish.

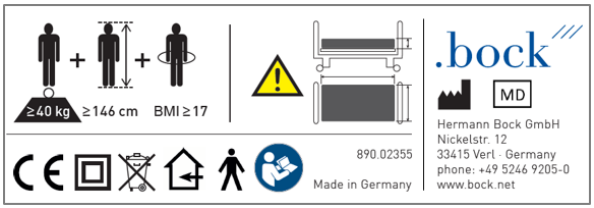
This product is not approved for the North American market, especially the United States of America (USA). The distribution and use of this nursing care bed, also by third parties is prohibited by the manufacturer.

1.5 Type plate

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

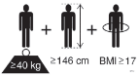
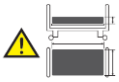
Individual and general type plate

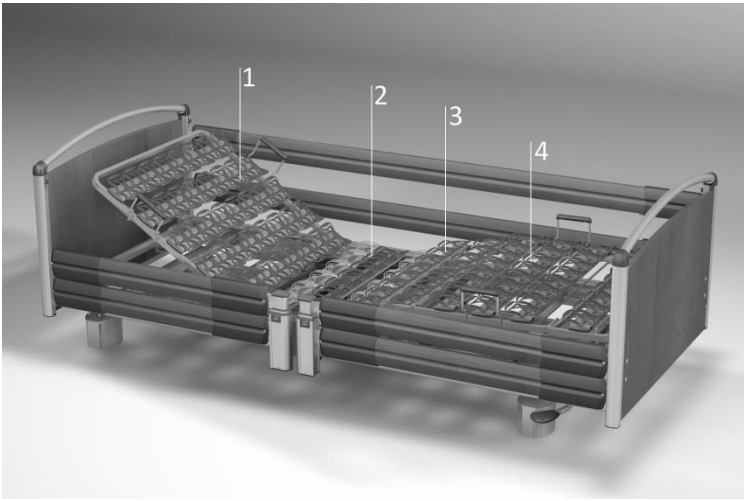




(1) Model description
(2) Date of manufacturing: Day, month, and year
(3) Serial number: Order confirmation number – serial number
(4) Supply voltage; mains frequency; power input
(5) Switch on time
(6) Drive protection type
(7) Max. person weight / safe capacity
(8) Manufacturer
(9) Symbols (on the right-hand 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



1 Back rest
2 Fixed middle part
3 Tight part
4 Foot part

2. General functionality description

Design configuration and functionality
The lying surface and its four sections
In the standard version, the lying surface comes with comfort wooden slats (may be supplemented with a metal lying surface or special suspension systems) and is made up of four sections: head section, fixed seat support, upper - and lower leg section. The complete frame of the lying surface has been welded from steel tubes and stove-enamelled using a PES-powder coating. The electrical stepless variable height adjustment of the lying surface is controlled by means of 24 V-direct current motors and the smooth-running keys of the hand control. The head section can be electronically adjusted. The leg part consists of a two-part feet bracket. The stepless adjustment of the position can be made by means of the hand control. The control via the electronic hand control allows also for an automatic triple function for the stretched elevation of the legs towards the heart- and knee bend. In the event of a blackout, the back- and leg part can be lowered by means of a 9 V battery.

The chassis
The height adjustment of the beds can either be made via two height-adjustable actuators or a basic frame which can be operated via a single or double-drive. The surface of this steel tube construction is stove-enamelled with a PES-powder coating.

The side rails

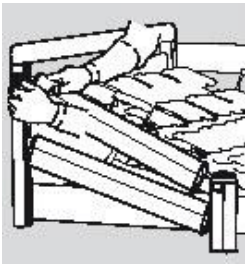
Every health care bed comes with integrated side rails on both sides and therefore, exhibits a special degree of safety. The side rails can be raised and lowered by means of a steel bar. Owing to an integrated slider, the sliding blocks are particularly smooth and the ends are provided with a well-designed sealing cap. An ergonomically shaped trigger button allows for the easy operation of the side rails. According to the bed model, customers can choose between long and short side rails.

Handling of the splitted side rail

Each side rail element can be adjusted individually. The locking mechanisms are on the middle bar and on the end panels. In order to lower the side rails please grab the upper part of the telescopic bar, lift it a little bit and with the other hand push the button of the locking mechanism .

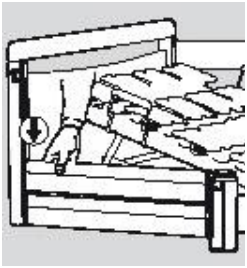
You are now able to lower this part of the side rail easily. The side rail is now in a diagonal position.

In order to lower the other part of the side rail, please grab the side rail on the other end panel. Push the locking device on the end panel and lower it slowly.



Now the side rail is in the lowered position.

When one of the side rails is to be adjusted to the top position so as to prevent the patient from slipping out, just hold the middle of the upper side rail in the handle hold and pull it to the upper side, until it locks into place on both sides. Now, the side rail is in the uppest position.



Bock-Hazard Notes

· Only use original bock side rails, which are available for every bock heath care bed
· Only use technical correct and undamaged side rails with the allowed distance.
· Make sure that the side rails lock in place safely.
· Control the side rails before every re-use. Make sure that the side rails and the mechanical parts of the beds are without damages.
· The operation of the side rails should always be carried out with the greatest care, in order to avoid bruises or other injuries of the fingers.

Fig. 1: Continuous wooden side rails , two side rails

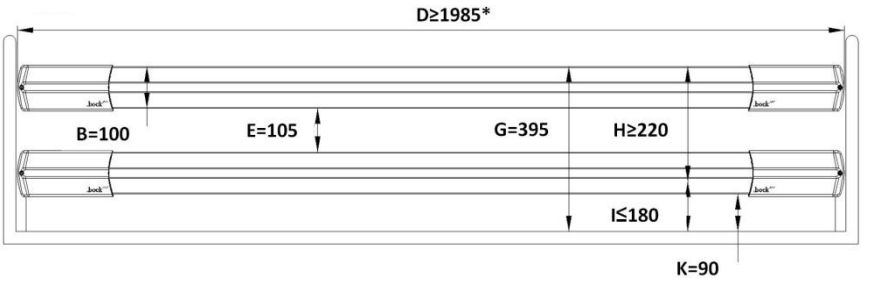


Fig 2: Telescopic wooden side rail, solo middle bar in the middle

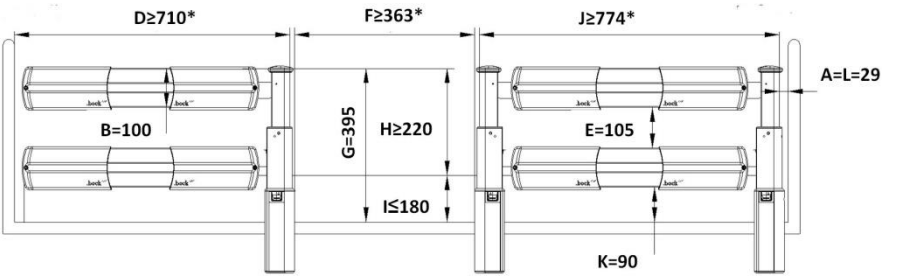
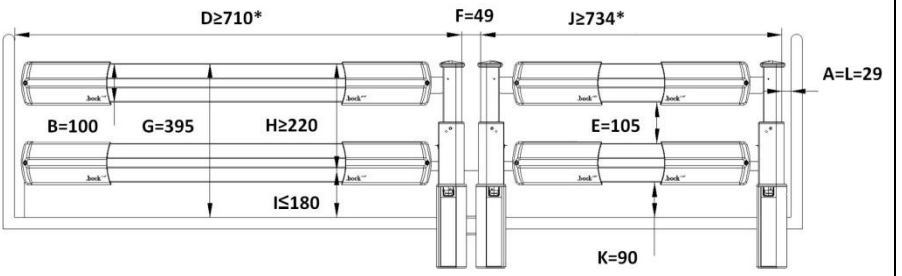


Fig. 3 Telescopic wooden side rails, duo middle bar



All dimensions in mm.

(*) Depending on the length of the bed. The single post at the head / foot is optional. The measure applies in parentheses optional.

Legend	
A:	Distance between head end and side rail
B:	Width 1 of the side rail
C:	Height 2 of the side rails
D:	Width 1 of the side rail
E:	Distance between the elements within the side rails
F:	Distance between the splitted side rails
G:	Distance between lying surface and upper edge of the side rail
H:	Height of the upper edge of the side rail above unpressured mattress
I:	Thickness of the mattress of intended use
J:	Width 2 of the side rail
K:	Smallest distance between side rail and lying surface (without side panneling of the frame if provided)
L:	Distance between foot end and side rail

Article numbers

Decription	Art.No.
Fig. 1: Continuous wooden/steel side rails, two side rails	91703
Fig 2: Telescopic wooden side rail, solo middle bar in the middle	91868
Fig. 3 Telescopic wooden side rails, duo middle bar	
Wooden side rails, long	91704
Wooden side rails, short	91705

Bock Hazard Note

The simultaneous use of electrical devices may cause, especially in the direct environment of the ready- to operate bed, low electromagnetic interactions between the electrical devices, such as radio noises. When such a rare case occurs, you should extend the distance between the devices. Do not use the same wall socket or switch off the noisy device temporarily.

If the bed is not operated in line with its purpose, thus simultaneously with electrical, medical devices, you should deactive the functions of the bed for the time being. The deactivation can be done by the integrated locking device on the back side of the hand control.

3. Electrical components

3.1 Drive unit

The drive unit consists of a twin drive which combines two separate drive units for the electrical adjustment of the back and leg part. A switch-mode supply with rectifier is part of the external motor system. This switch-mode supply converts the input voltage into low voltage of 29 V DC. With this non-hazardous low voltage the motors and the hand control are operated. The cables are isolated twice and the power plug disposes of a primary fuse.

The internal emergency lowering is carried out by a 9 V battery. In addition a power adjustment takes care of a constant velocity. The safety demands therefore corresponds to the safety class II and the moisture protection IPX4.

The maximum switch-on time is indicated on the bed (type label). E.g. 10% (2 min. on/ 18 min. off) means that each electronic adjustment should only be done for 2 min in 18 min (overheat control).

In case that the maximum operation interval of two minutes is exceeded, due to e.g. continuous operation of the hand control, overheating of the actuators resulting in the immediate disconnection of the bed´s power supply through the thermal fuse. It takes a cooling-down time of approx. one hour, until the power supply is automatically switched on again.

3.2 Locking device for all functions

The standard hand control comes with an integrated locking device enabling the nursing staff to lock all functions of the hand control by means of a key.

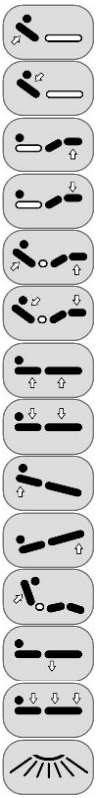
3.3 Level adjustment drive

The adjustment of the lifting appliance is effected through one or two integrated low-voltage direct current drives whose range of adjustment depends upon an integrated end-switch. The adjustment drive is connected with the control unit by means of a spiral cable.

3.4 The lockable hand control, fault safe operation

The extra-large, easily operable buttons positioned on the ergonomically shaped hand control provide the main functions and can be controlled at the touch of a finger. Each of the operating buttons is labelled with appropriate symbols. As long as the button for the adjustment of the actuators is pushed, the actuators are operating. A spiral-shaped cable provides the necessary clearance whilst the operation is being performed. The rear side mounted clip is rotatable by 90° on both sides. The radius is exactly in line with the radius of the side rail and the lifter, so that there are no unsteady clearances.

The possibly disturbing position of the hand control while performing cleaning or maintaining operations can be avoided simply by turning it to another side or easily clipping it onto any spot of the bed.



Back rest up

Back rest down

Foot part up

Foot part down

Auto contur up*

Auto contur down*

Lying surface up

Lying surface down

Foot down function (Anti Trendelenburg)

Head down function (Trendelenburg)

Comfort sitting position up **

Activation low function

Reset***

Light on/off

*availability depending on the bed model

** The comfort sitting position only goes up. All position have to be lowered separately.

Bock Hazard note
The maximum switch-on time of 2 minutes should not be exceeded. A subsequent break of at least 18 minutes has to be observed.

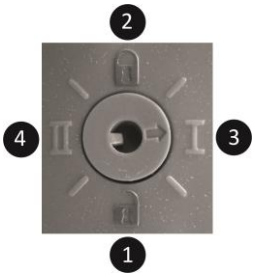
Bock Hazard note
Never open any drive components!
Both repair and exchange of components are only allowed to be done by especially authorised experts.

Moreover, on the back side the hand control disposes of an integrated locking device. That can be activated by using the provided nurse key. For the setting of the electronic functions of the bed, just put the key into the lock on the back side and turn it to the desired function.

Switch setting 1: Trendelenburg and activation low function are inactive

Switch setting 2: All function inactive

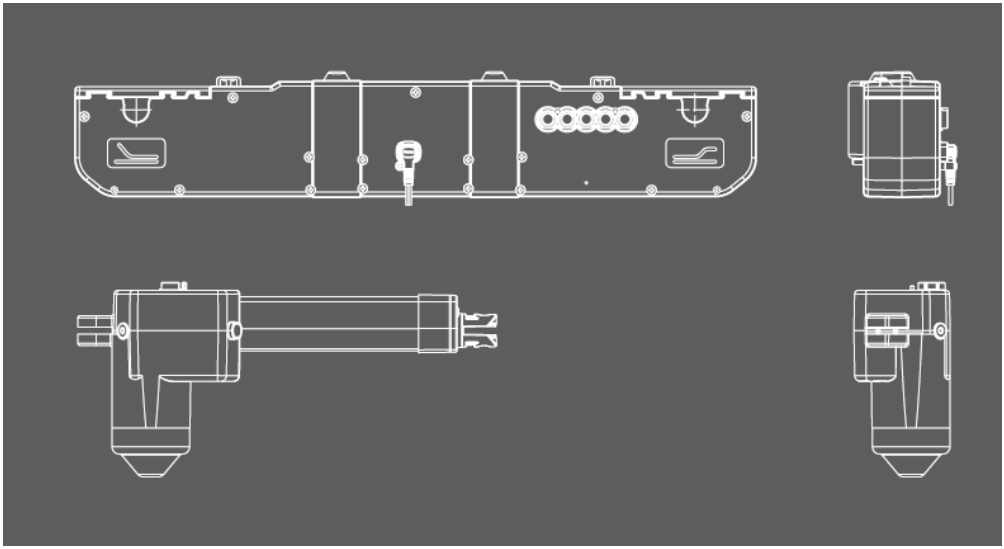
Switch setting 3+4: All function activate



3.5 Caution: Electrically operated drive

Hermann Bock calls its electrically operated nursing and therapy beds health beds, because they considerably facilitate the care recipient´s recovery process in both physical and mental aspects while relieving pain at the same time thanks to their versatile functions. When applied as medical product, electrically operated beds require particular consideration with respect to the continuous safety inspections. These include the safe and professional handling of the bed, the daily check of the electrical equipment, and the proper maintenance and cleaning.

In order to avoid damages to the cables, the cable installation should be places off-side potential damage areas. Also avoid contact with square-edged components. Notes for an appropriate cable installation can be found in chapter 7.7. All potential risks of exposure to too high contact voltages should be excluded, as this helps to prevent injuries caused by any electrical shock. This may especially occur when the mains connection has been damaged, the leak currents are unacceptable or too high, or liquids have penetrated the motor housing, e.g. caused by improper cleaning. These damages might lead to malfunction of the drive and as a consequence to unintended movements of single bed elements, that involve a higher risk for injuries of care personnel and user.



4. The drives

4.1 The 24 Volt drives

Hermann Bock provides their health care beds with various drive systems.

4.2 The drives system

The dual drive and actuator consists of 4 main components.

– Housing
– Drive
– Gearbox
– Spindle with nut

The housing principle and its double drive and the single drive guarantees the permanent function of all drive components. The special construction design is based on two load absorbing housing cases. Owing to a detailed internal engineering, the patented design of the inner housing constitutes an essential requirement for the precisely fitting intake of the drive technology. We do not use pre-assembled components. The totally easy assembly/disassembly and the spacious installation compartment for battery and electronics positioned above the robust hinged cover make the housing of the double drive stand out. The drive has an emergency lowering function.

4.3 The external switch-mode power supply SMPS

The SMPS wall power supply (switch-mode power supply) is an electronic transformer, which has an integrated performance control. A constant voltage until the maximum load (without lost in velocity) and a safety against overload are given. The external transformer offers safety beginning at the wall socket, as there the line voltage is directly converted into 29V low voltage, with which the bed is operated. The transformer is connected to the motor cable and can be changed separately in case of damages.

The wall power supply already corresponds to the upcoming new European standards for electronic domestic appliances. In the standby-mode it has an energy consumption of max. 0.5 W. Due to its variable input voltage of 100 V-264 V it is applicable worldwide. With the SMPS power supply alternating electrical magnetic fields are not measurable and in use comparing to motors with mains isolation even lower (due to the concurrent flow).

The external switch-mode power supply

Bock Top Advice
Once a year the 9 Volt battery of the motor should be tested and if necessary exchanged.
Furthermore regular visual inspections should be done.

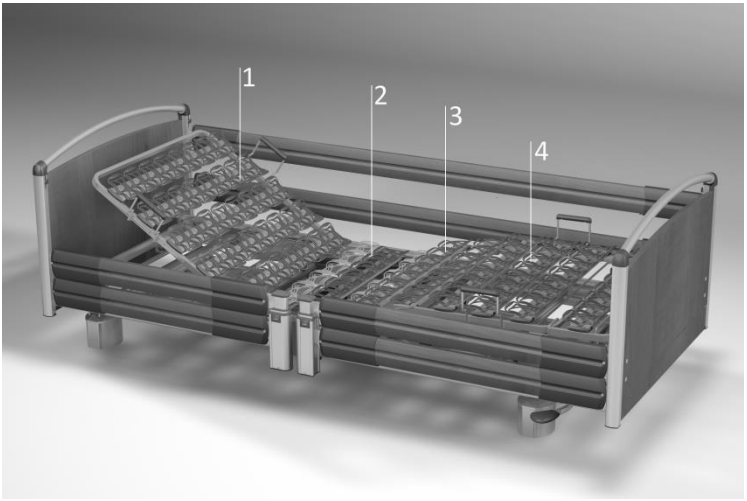
Bock Hazard Note
Never open any drive components!
Both repair and exchange of components are only allowed to be done by especially authorised experts..

5. Assembly and operation

5.1 Technical data

Technical data			practico alu 25/80
Lying surface dimension: cm			90 x 200
External dimension: cm			101,5 x 208,5
External dimension with end panel type 20: cm			101,5 x 210
Max. safe capacity: kg			220
Max. person weight: kg			185
Height adjustment: cm			25 - 81
max. indicated angel towards horizontal:			
- Back bar			70°
- Foot bar			20°
- Trendelenburg-Position			15°
Side rail height with wooden slats: cm			39,5
Side rail height with ripolux®: cm			35
Possible side rail solutions:			
- Continuous wooden			•
Lifter space: cm			> 15
Sound leval: dB(A)			< 65
Weights:			
Total weight incl. wooden side rails: kg			160
Lying surface: kg			50
Base: kg			53
Holzendstück: kg			11
Continuous wooden side rails: kg /set			12,5
Splitted wooden side rails: kg / set			18
Electrical data			
Motor		Input voltage: V	100-240
		Frequency: Hz	50/60
		max. Power consumption: A	2,1

All parts and data are subjected to constant enhancements and therefore might differ from the listed data.



1 Back rest
2 Fixed middle part
3 Tight part
4 Foot part

5.2 practico alu 25/80

A bed for all eventualities, that combines technique and cosiness. Sophisticated technique: practico alu 25/80 can be extended without tools; therefore it is adaptable to the patients 'individual needs. That is easy: the fully ergonomic, real bed extension is installed in no time at all. The side rails are designed for all lengths. practico 25/80 alu provides persons in need of care, invalid and disabled persons with a high degree of lying comfort, while the nursing staff benefits from the advantages given with respect to the care of the care-dependent person at the same time.

- practico alu 25/80 is not suitable for the use in hospitals.
- Provided that the practico alu 25/80 nursing care bed models are equipped with visible castors, the nursing care beds are suited for the transport of the patient. The nursing care bed is moveable while the patient is inside. To prepare the transport, fasten the castors; bring the nursing care bed into the lowest, horizontal position. Than unfasten the castors and move the bed. After the transport fasten the castors. In case that the nursing care bed is equipped with covered castors, it is only destined to be moved inside the patient´s room, for cleaning and access to the patient.
- practico alu 25/80 is suitable for persons up from twelve years and a body height of 150 cm.
- Under certain circumstances practico 25/80 alu, can (if required) be used in combination with medical purposes and other electrical medical devices (e.g. draining devices, ultrasound nebulizers, nutrition systems, anti-decubitus systems, oxyen concentrators,etc.). In this case, it would be necessary, to deactivate all bed functions by means of the integrated locking device, until the treatment is completed.

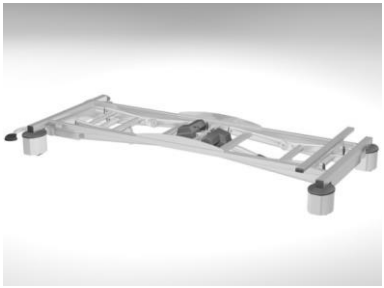
Important: The beds are not equipped with any particular connections that provide for a potential equalization. Electrical medical devices connected to the patient´s intravascular or intracardiac system must not be used. The operator of the medical device shall be responsible for the conformity of the combination of the devices with the requirements of DIN EN 60601-1-1.

Particular features

practico alu 25/80 can be extended without tools; therefore it is adaptable to the patients´individual needs. That is easy: the fully ergonomic, real bed extension is installed in no time at all. The side rails are designed for all lengths. The result: comfort everywhere!

Getting practico alu 25/80 ready for use

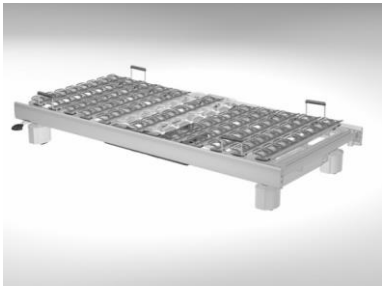
Remove all connections toward the transport packaging. Position the base in a free space.



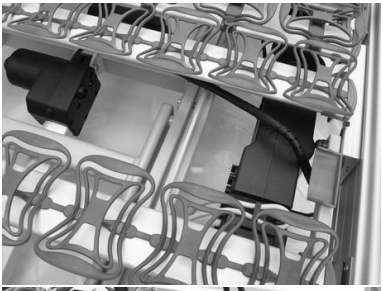
Put the lying surface on top of the base.

Mind the back and foot part of the base.

On the picture on the left side is the trip lever of the central braking. On the right side is the back rest of the lying surface.



Position the lying surface on the base that way, that you have enough free space to mount the cable.



Plug connection of the main motor:

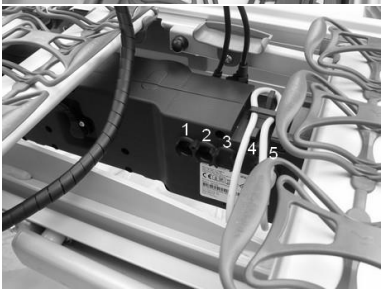
1. Foot part base

2. Head part base

3. Not defined

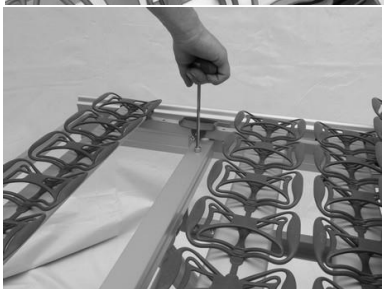
4. Not defined

5. Hand control



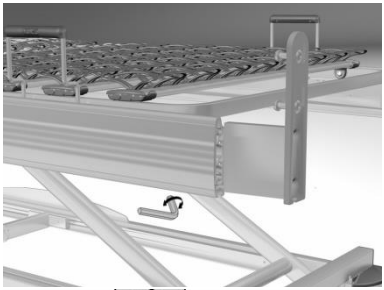
Connect the cable as in the picture.

Slide the lying surface so far on the base, so that you can fasten it with the 4 provided screws and screw-nuts.

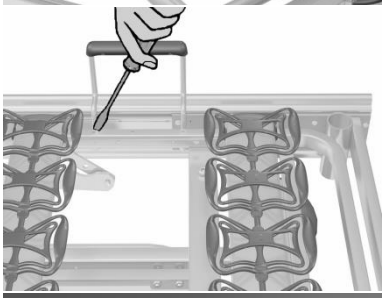


In case that, the connecting links for the end panels are dismounted, please fasten them with the provided self-cutting cross-head screw.

If the connecting links for the end panels are mounted, please slide them into the longitudinal frame of the lying surface and fasten them from below.

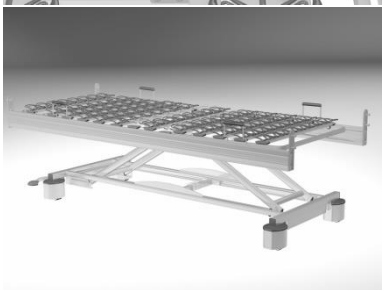


Now please mount the mattress brackets with the provided sheet metal screws.



For the further assembly, please rise the base.

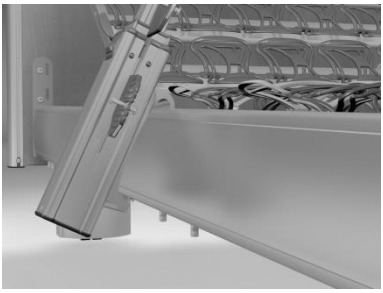
Apply the central braking, in order to avoid an unintended movement of the bed.



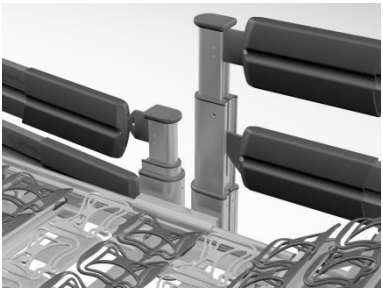
Fasten the end panels with the lying surface.

For the telescopic side rails:

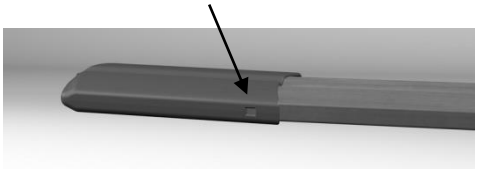
Position the middle telescopic bar approximately in the middle of the longitudinal frame of the lying surface.

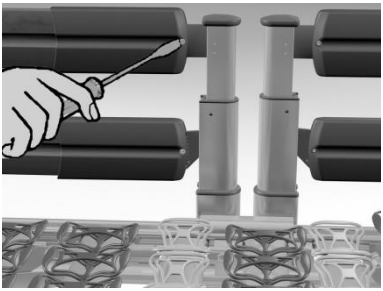


Plug the side rail bars onto the fittings and fasten them.

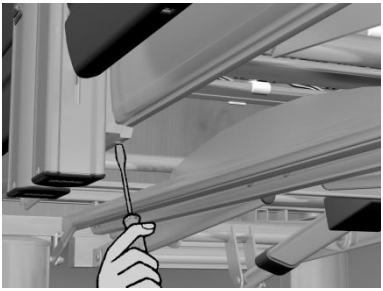


The marking on the side rail fitting has to point to the button.





Adjust the telescopic middle bar and fasten it.

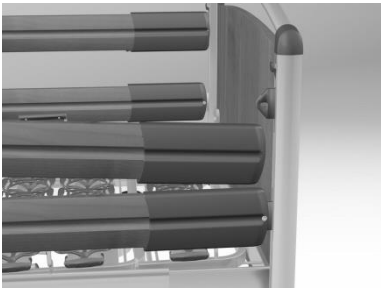


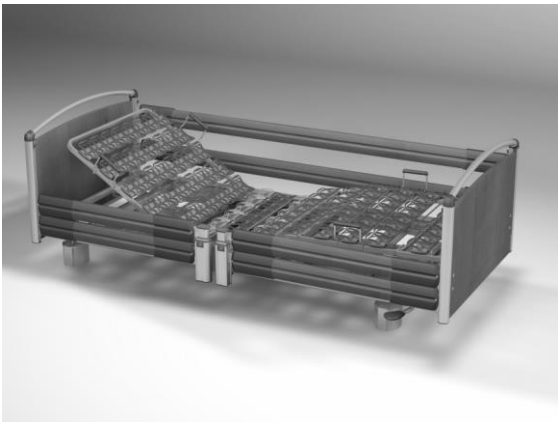
For standard continuous side rails:

Unfasten the screws of the connecting links of the head end panel and pull them out a little bit.

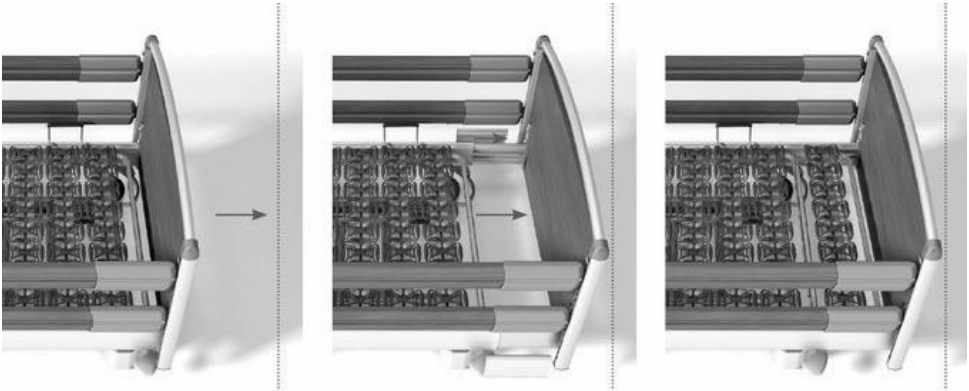
Plug the side rail bars onto the fixation and bolt them together.

When all side rails are mounted, please push the head end panel back into its original position and fasten it.





Control all screws before the bed is used.

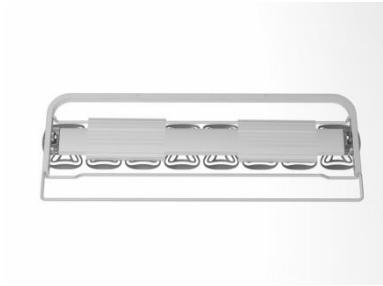


Bed extension

Please remove the lower screws of the end panel fixation on the foot end panel.

Pull out the foot end panel to approx. 220 cm.

Take the foot part extension of the lying surface *(available as an accessory)* and remove the clipped on aluminium caps, as well as the clip –hand- screw.



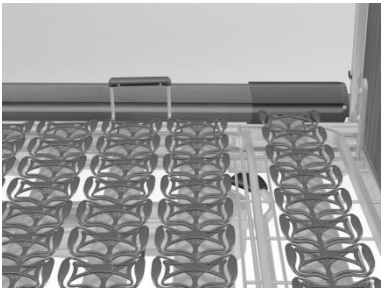
Bock Hazard Note
Bed models with covered castors are not suitable for patient´s transport. The beds are only destined to be moved within the room, for cleaning or for access to the patient.

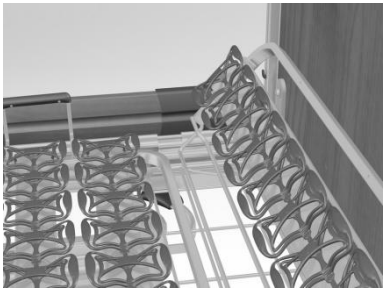
Clip the foot part extension onto the extended lying surface frame.

Push the foot end panel back, so that the lateral frame and the foot part extension are aligned.

Please fasten the end panel with the two hand screws.

Insert the foot bar extension as shown in the picture.





Bock Hazard Note
The motors fullfill the IPX 4 requirements. The cables should not be crushed. The adjustment of the movable parts must be used for the intended purpose only. Hermann Bock GmbH assumes no liability for damages, occurred by unauthorized technical modifications.

Bock Hazard Note
Never try to repair any defects or malfunctions in the electrical equipment on your own. Your life may be threatened! Please contact either the customer support of Hermann Bock or authorized specialist dealers for electronic devices, as these experts will perform the repair in compliance with all relevant VDE-directives and safety regulations.

The bed has to be cleaned and disinfected before using it for another person. Do also make a visual inspection so that possible damages are detected early. Learn more about this in the safety guidelines set out in chapter 8.

5.3 Relocation/ Repositioning

In case, the bed is supposed to be moved to another place, please make sure to observe the following safety instructions:

- Bring the lying surface to the lowest position.
- Disconnect the mains plug and put it into the hook-up appliance at the wooden side rail, in order to prevent the mains power cable from dropping down and getting rolled over. Please make sure, that the cable is not dragged across the floor.
- Disconnect the 9 V battery. If it should be used again, please re-connect it to the Ilco Flexx 581.
- Before connecting the mains plug, check the net cable for visual and mechanical damages (kinks, marks, open wires).
- Position the mains cable in such a way, that it cannot be torn, rolled over, or damaged due to moveable parts of the bed, before reconnecting the power plug.

5.4 Transport- and storage conditions

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

5.5 Information on the functionallity

In order to fix the bed into one location the castors on the base have to be locked. This is done by bringing the trip lever on the base with the feet to the button.
If needed the integrated side rails have to be brought to the uppest position.
With different mattress thicknesses, the minimum height must not be below 22 cm, taken from the upper edge of the side rail above the mattress excl. compression (besides, it is recommended to mount a third plug-in railing).

5.6 Disposal

Each of the components made of plastics, metal, and wood are recyclable and can be disposed in compliance with the relevant legal provisions. Please keep in mind, that electrically adjustable health care beds are considered to meet the requirements of the WEEE-EG standard 2002/96/EG, i.e. industrially used electrical waste. All electrical and electronical components, which have been replaced have to be treated and disposed in line with the requirements of the Act for electrical- and electronic devices (briefly Electro-A).

5.7 Troubleshooting

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

Fault	Possible cause	Corrective
Hand control does not work	Mains cable is not plugged in	Plug in mains cable
	Wall socket without power	Check wall socket or fuse box
	The hand control is not plugged in correctly	Check the connection of the cables to the motor
	Faulty hand control or motor	Inform the operator or customer support of H. Bock GmbH
	The locking appliance or locking box of the hand control is activated.	Deactivate the locking appliance or locking box of the hand control.
Drives stop after a short time upon button actuation.	There is an obstacle in the adjustment area.	Remove the obstacle
	The maximum safe capacity has been exceeded	Reduce the work load
Drives stop upon long adjustment response	The adjustment time or max. tolerated work load has been exceeded and the polyswitch in the transformer has responded to the increased heat	Allow the drive system to cool down, wait at least a minute before continuing the operation.
Opposing functions while operating the hand control	The motor cables have been mixed up	Inform the operator or customer support of H. Bock GmbH
Several drives move only in one direction	Defective hand control, drive, or control device	Inform the operator or customer support of H. Bock GmbH
Drives stop and bed remains in inclined position	Constant operation of the adjustment functions	Put the lying surface to the lowest position in order to realign it horizontally, activate the locking device of the hand control.

6. Accessories

As it is our goal to satisfy every need of our customers, Hermann Bock offers a wide range of practical and mobility-promoting accessories, so that each health bed can be exactly customized to the individual needs of the care recipient. The assembly is done in a quick and easy manner using the fixing points on the beds that have already been prepared for this purpose. It goes without saying, that every element of our additional accessories meets the special quality and safety standards of Bock. The bed extensions available for lengths of up to 220 cm makes it also possible for tall people to benefit from the high lying comfort with equal functionality. In addition to the standard equipment included in the delivery as basic equipment, you can also choose from our variety of accessories, which is available for each bed model. This optional accessory varies depending on the bed model and is fitted to its special functions and place of use. The range stretches from technical elements over mattresses up to the occasional extra bed. A wide offer of wooden colours and a variety of colours allow for the harmonious integration of each health bed with any kind of furniture.

6.1 Special dimensions:

Special dimensions are an essential part of the manufacture at Hermann Bock. Ideal lying comforts 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 enables customers to have their health bed tailored to fit the individually physical constitution of the person in need of care. For body heights up from 190 cm, Hermann Bock recommends the employment of a bed extension that allows an extension of the lying surface to a length of up to 220 cm. That way, the high lying comfort can also be ensured for tall persons, and, of course the functionality remains the same.

Bock-Hazard Note
The bedside use of accessories or medically necessary appliances, e.g. I.V.poles requires the nursing person´s careful attention with regard to the avoidance of crush and shear zones to the care recipient when adjusting the back or leg rests.

Bock-Top-Advice
Our friendly and professional hotline service awaits your questions regarding the safety of Bock health beds, the Bock Safety-technical control-trainings and gladly provides you with practical advice when you face problems with the handling of electrically operated beds. Call our hotline service under 01805262500 from Monday to Friday 9 a.m. to 4 p.m. and our experts will be at hand with support and advice for you.
The operator bears the responsibility concerning the handling of the locking devices, whose use should be considered based on the physical and mental condition of the person in need of care.

7. Cleaning, maintenance and disinfection

The several bed elements consists of hight-quality materials. The surface of the steel tubes is covered with a durable PES powder coating. All surfaces of the wooden parts are sealed with an ecologically compatible overlay. 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 bed for a long time.

7.1 Cleaning and care

Steel tubes and vanished metal parts:
Please use a wet wiper and a standard, 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. The cleaning of the plastic elements using a wet wiper without detergent additives should generally be sufficient. For the care of the plastic surfaces you should use a product, which is specifically suitable for plastics.

Drive:
In order to prevent the intrusion of moisture into the drive, it is recommended to use a slightly moist wiper to clean the housing of the drive.

Lying surface system ripolux neo:
Use a moist wiper without adding any detergents or, if deemed necessary, a detergent which is exclusively suitable for plastics to clean the spring element. In case of heavy contamination, just remove the spring elements from the supporting elements. The dismounted plastics elements can be rinsed or spray-washed with hot water to get them clean. As regards 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 short time. Remount the elements after they have completely dried. f required you can also remove each of the individual lying surface elements from the frame to clean them.

7.2 Disinfection

All methods in accordance to the standard EN 12720 can be used for the wipe disinfection. However, you should apply only mild and gentle methods so as to retain the material resistance of the plastic elements such as the drive housing, decorative elements, ripolux and ripolan. 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.

7.3 Hazard avoidance

Please make sure to consider the following guidelines with respect to the electrical component parts of your nursing beds as it is crucial to avoid hazards related to cleaning and disinfection. The non-observance of these guidelines may result in considerable damage of the electrical lines and the drive.

1. Disconnect the mains supply 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 wires and electrical component parts for damages. Should you detect any damages, do not perform any cleaning operations, but first have the defects repaired by the manufacturer or authorized staff.
4. Check the mains supply for residual moisture before starting the operation and dry or blow out the device, according to need.
5. On any suspicion of the intrusion of moisture into the electrical components, disconnect the mains supply immediately and do not re-establish the connection. Put the bed out of operation immediately, attach an appropriate visible labelling and get in contact with the manufacturer/supplier.

Bock Hazard Note

The bed has to be cleaned and disinfected prior to every re-use. This provision is accompanied by the requirement of a visual inspection which needs to be carried out in order to prevent mechanical.

Bock Hazard Note

It is absolutely not recommended to use abrasive cleansers resp. detergents containing grinding particles, cleaning pads or stainless steel cleaners for the cleaning. Do neither use organic solvents such as alkyl/aromatic haloids and ketones nor detergents containing acid or alkaline. Never clean the bed using a water hose or high-pressure cleaner, as this might lead to the intrusion of fluid into the electrical components which causes malfunctions and hazards.

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.

Emissions test	Compliance	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 emissi-ons are very low and 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 purposes.
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 ines ± 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 % UT (>95 % dip in U_T) for 5 sec	< 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	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	3 V	3 V	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: $d = [\frac{7}{E_1}]\sqrt{P}$ $d = [\frac{3,5}{E_1}]\sqrt{P}$ 80 MHz to 800 MHz $d = [\frac{7}{E_1}]\sqrt{P}$ 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).[b] Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	3 V/m	3 V/m	

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 from 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, an 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 [V_1] 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

	Separation distance according to frequency of transmitter m		
Rated maximum output of transmitter W	150 kHz to 80 MHz $d = [\frac{3,5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3,5}{E_1}]\sqrt{P}$	800 MHz to 2,5 GHz $d = [\frac{7}{E_1}]\sqrt{P}$
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.

9. Declaration of conformity

Manufacturer:	Product description/ model
Hermann Bock GmbH Nickelstraße 12 33415 Verl	Medical used bed in general
Classification:	**Choosed conformity evaluation process:**
Medical products class I, norm 1 and 12 referring to appendix IX of MDD	Appendix VII of MDD

Hereby we declare that, the above specified products fulfill the precautions of the guideline 93/42/EWG of the advice for medical products. The entire associated documentation is kept in the premises of the manufacturer. This declaration of conformity is valid from 1.4.2013.

Applied standards:	Harmonized standards for which the proof of concordance can be supplied:
DIN EN 60601-1:2007	Medical electronic devices- Part 1: General definitions for the safety including the essential characteristics
DIN EN 60601-1-2:2007	Medical electronic devices- Part 1-2: General definitions for the safety including the essential characteristics – complement standard: electromagnetic tolerance – requirements and testing
DIN EN 60601-2-52:2010	Medical electronic devices- Part 2-52: Special definitions for the safety including the essential characteristics for medical beds
DIN EN ISO 14971:2013	Application of the risk management for medical products

Verl, 26. February 2014

Klaus Bock
(General Manager)

Dr. Stefan Kettelhoit
(General Manager)

10. Continuous functionality check including service

The safety standards of an electrically operated nursing bed are subject to the compliance with the specified European standards. This includes the manufacturer´s strict adherence to the specifications as well as official standards defined by the government which are in accordance with the safety recommendations of the BfArM (Federal institution for drugs and medical devices) for the enforcement of the Medical Products Act. Regularly conducted inspections ensure the maintenance of high safety standards and in order to avoid hazards from occurring, the continuous and strict adherence to the regular inspection of the proper functionality is mandatory. The manufacturer may have no influence on the operator´s adherence with respect to the observance of these instructions concerning the beds. However, 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 case that there is no suitable person on part of the operator in order to perform the Safety-technical control, Bock´s service offers you to carry out the Safety technical control including check and observance of the respective inspection terms for a charge.
It is stipulated by the company Hermann Bock GmbH to execute an Safety-technical control for at least once a year and before and after each re-use of the bed.
In order to facilitate the execution of all necessary safety inspections, the company Hermann Bock GmbH provides you with the Safety-technical control-checklist which can be found in the assembly- and operation manual. Please make a copy of the checklist as a form for your safety-technical inspection. The Safety technical control-checklist serves as evidence report of the performed inspection and needs to be kept on file. The Safety technical control-checklist is also available as download from our website: www.bock.net.

Attention:
In case of unauthorized technical modification of the product, all warranty claims extinguish.

Bock-Top-Advice

Our friendly and professional hotline service awaits your questions regarding the safety of Bock health beds, the Bock Safety-technical control-trainings and gladly provides you with practical advice when you face problems with the handling of electrically operated beds. Call our hotline service under 01805262500 from Monday to Friday 9 a.m. to 4 p.m. and our experts will be at hand with support and advice for you.

Constant functionality checks

In accordance with MPBbetriebV, BGV A3 and DIN EN 62353 (electrical measurements)

Test specimen: O Bed O Insert frame O Controller/ Main drive

Model name:

Serial/ inventory number:

Location

Person in charge:

	Visual,mechanical and electrical examination	Result	
1.	Is the overall condition of the bed alright? Description of defects:	☐ Yes	☐ No
2.	Are the address/ type labeling on the bed and on the motors visible? Description of defects:	☐ Yes	☐ No
3.	Manufacturer's details such as safety guidelines and assembly or operating instructions present? Description of defects:	☐ Yes	☐ No
4.	Mechanical construction defect free and without torn welding seams? Description of defects:	☐ Yes	☐ No
5.	Firm fit and completeness of all plastic end caps and mechanical connecting elements (screws etc.)? Description of defects:	☐ Yes	☐ No
6.	Wooden slats, carrier plates and dowels for ripolux/ripoplan without cracks or breakages? Description of defects:	☐ Yes	☐ No
7.	Tight fit in correct position of all sprung slats and carrier plates? Description of defects:	☐ Yes	☐ No
8.	Tight fit and straight alignment of all spring elements? Description of defects:	☐ Yes	☐ No
9.	Preassure load of the spring elements? Description of defects:	☐ Yes	☐ No
10.	Tight fit and no cracks or breakages of head and foot end panels? Description of defects:	☐ Yes	☐ No
11.	Adjusting space of lying surface and room for lifting height sufficient without obstructions at current location? Description of defects:	☐ Yes	☐ No
12.	Safe grid mechanism of lower leg section in every step even under charge? Description of defects:	☐ Yes	☐ No
13.	Side rail bars without cracks, breakages or damages? Description of defects:	☐ Yes	☐ No
14.	Adequate fastening and respectively secure fit of the side rail bars? Description of defects:	☐ Yes	☐ No
15.	Load test of the side rails without distortion? Description of defects:	☐ Yes	☐ No
16.	Easy run of side rail bars within the tracks and easy locking? Description of defects:	☐ Yes	☐ No
17.	Correct functions of side rails? Description of defects:	☐ Yes	☐ No
18.	Distance between side rail bars max. 12 cm? Description of defects:	☐ Yes	☐ No
19.	Height of side rails above mattress at least 22 cm? Description of defects:	☐ Yes	☐ No

20.	Bed-accessories (lifting pole, triangle grab handle, belts, control box etc.) without damages and with secure fixing? Description of defects:	☐ Yes	☐ No
21.	Safe breaks, arresting and free running of wheels? Description of defects:	☐ Yes	☐ No
22.	Mains cable, connecting cables and plugs without scratches, dents, kinks, porous parts or bare wires? Description of defects:	☐ Yes	☐ No
23.	Pull relief fastened and efficient? Description of defects:	☐ Yes	☐ No
24.	Internal plugs fully inserted and connected with strain relief? Description of defects:	☐ Yes	☐ No
25.	Mains cable and plug without damage? Description of defects:	☐ Yes	☐ No
26.	Correct and secure cable leading and cable connections? Description of defects:	☐ Yes	☐ No
27.	Housings of motors and hand controls sealed and without damages? Description of defects:	☐ Yes	☐ No
28.	Leak-prevention of motor for models older than 2001 present? Description of defects:	☐ Yes	☐ No
29.	Motor lifting poles without damages? Description of defects:	☐ Yes	☐ No
30.	Testing of hand controls: all buttons fully usable? Description of defects:	☐ Yes	☐ No
31.	Testing of disabler on hand control: everything correct? Description of defects:	☐ Yes	☐ No
32.	Testing of battery: faultless function? Description of defects:	☐ Yes	☐ No
33.	Resistance of protective conductor: not applicable, because no protective conductor present (security class II) Description of defects:	☐ Yes	☐ No
34.	Resistance of isolator (for old appliances) (initiate proof voltage and measure resistance; measured value must be more than 7 MΩ): Description of defects:		
35.	Alternative leakage current, maximum value (device over 200 V, security class II, type B, threshold value = 0,1 mA): Description of defects:	☐ Yes	☐ No
36.	Exceeds the patient-, mattress and accessory weight the assigned safe capacity (see technical data)? Description of defects:	☐ Yes	☐ No

Overall condition of the bed: everything faultless? ☐ Yes ☐ No

Notes:

Place and date:

Signature of examinant:

Next examination:

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