

## Assembly and operating instruction

# domiflex

- domiflex
- domiflex deluxe
- domiflex low
- domiflex classic low
- domiflex 185
- adi.flex 220

.bock<sup>///</sup>

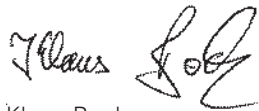


Dear customer,

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,

A handwritten signature in black ink, appearing to read 'Klaus Bock', written in a cursive style.

Klaus Bock

# Content

<b>4</b>	<b>1. Preamble and general information</b>
	1.1 Intended use
	1.2 Definition of person groups
	1.3 Safety instructions
	1.5 Type label
<b>9</b>	<b>2. General functionality description</b>
<b>14</b>	<b>3. Electric components</b>
	3.1 Drive unit
	3.2 Locking device for all functions
	3.3 Drive with level adjustments
	3.4 The lockable hand control
	3.5 Caution: Electrically operated drive
<b>18</b>	<b>4. The drives</b>
	4.1 The 24 volt drives
	4.1.1 The drive systems
	4.1.2 The external switched- mode power supply
	4.2 The drives with mains isolation
	4.2.1 Dual-drive systems
	4.2.2 The mains isolation
<b>22</b>	<b>5. Assembly and operation</b>
	5.1 Design and Purpose
	5.2 Technical data
	5.3 The model range domiflex
	5.4 The adi.flex 220
	5.5 Dismounting
	5.6 Relocation / Repositioning
	5.7 Transport- and storage conditions
	5.8 Information on the functionality
	5.9 Disposal
	5.10 Troubleshooting
<b>30</b>	<b>6. Accessories</b>
	6.1 Special dimensions
	6.2 Assembly – Bed extension
	6.3 Assembly – Accessories
	6.4 Mattresses
<b>36</b>	<b>7. Cleaning, maintenance and disinfection</b>
	7.1 Cleaning and maintenance
	7.2 Disinfection
	7.3 Hazard prevention
<b>40</b>	<b>8. Continuous functionality check including service</b>
<b>42</b>	<b>9. Guidelines and declaration of conformity</b>
<b>44</b>	<b>10. Declaration of conformity</b>
<b>46</b>	<b>11. Continuous functionality check (guideline)</b>
<b>48</b>	<b>12. Sales partners</b>

### > Bock Top Advice

The specification of which and how many components have to be available for the visual control, can be extracted from the relative user's manual. Starting with chapter 5.

### \* Bock Hazard Note

In order to avoid possible damages and malfunction during the assembly and operation, the assembly and operating instruction has to be read completely.

# 1. Preamble 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. Home care nursing service

## 1.1 Intended use

The health care bed has been designed for the positioning of persons 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 nursing care homes, rehabilitation facilities and with respect to home care treatment. Its purpose is to provide relief from disabilities and to facilitate the care process.

Furthermore, the health care bed has been developed as a comfortable solution for the care at home of frail people, people with the need of care, as well as for people with disabilities.

The medical supply in a domestic surrounding has been proven by the standard EN 60601-1-11:2010. These healthcare beds are determined for the application area 3 to 4. Any other use is considered to be not intended; therefore all any liability is excluded.

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 health care bed is not suitable for the use in hospitals. Besides, it has not been designed for the transport of patients. The beds must only be moved within the patient's room, for cleaning purposes or to enable the access to the patient.

**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.

### > Bock Top Advice

In the event of unidentifiable errors, malfunctions, or damages of the electrically driven bed or its accessory, the power plug should be disconnected immediately and the emergency lowering function should be enabled. Please inform the operator or the Hermann Bock support team.

### \* Bock Hazard Note

The operator has the responsibility to take special safety precautions for anxious or restless patients, to avoid the catch of single extremities or the falling out of bed. The bock service team will be pleased to advice you on possible solutions for this cases.

## 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 instructions

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 Type label (Example)



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


 CE- mark in accordance with the directive for medical product

**IPX4** Protection of the electrical equipment against splashing water

 Medical application device type B

 Only to be used in dry rooms

 Protection class II (double isolation, protective insulation)

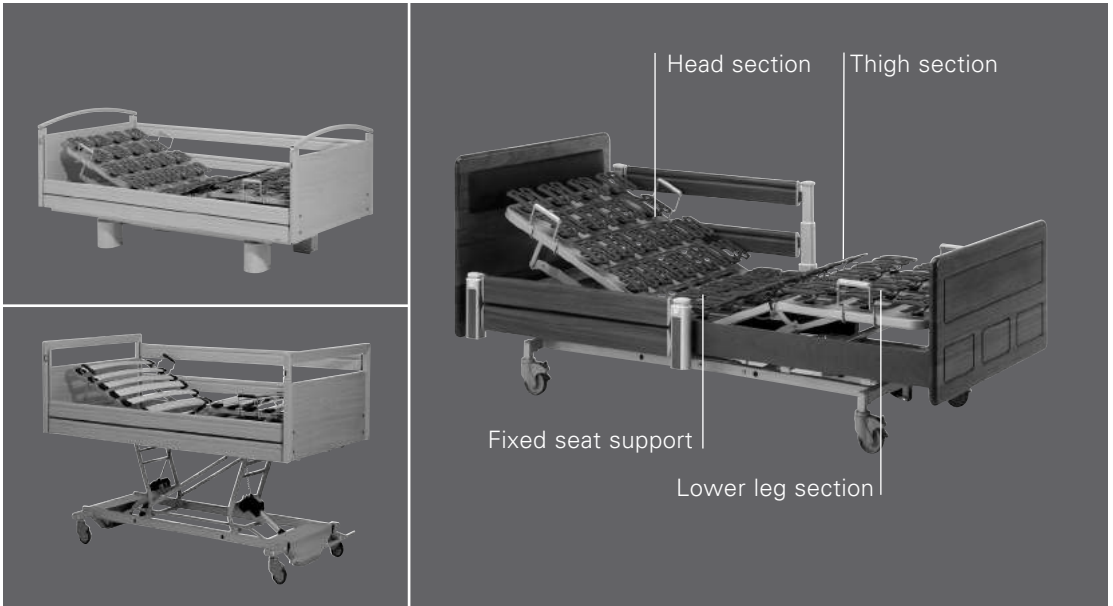
 When disposed within European Union, the product disposed to a separate waste collection. The product must be disposed to the separate domestic waste

 Symbol for max. person weight

 Symbol for max. safe capacity

 Symbol for attending the user's manual





## 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-enameled 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.

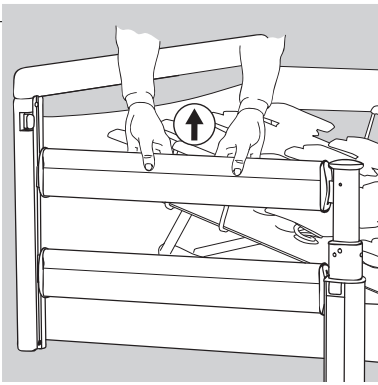


Fig. 6

**\* Bock Hazard Note**

Please note that the side rails should only be operated by instructed care personnel.

**\* Bock Hazard Note**

When making any electrical adjustment of the lying surface, please ensure that all patient's extremities are not in touch with the side rails. Furthermore, it is very important that, while operating the side rails, the patient lies in an appropriated position.

**\* Bock Hazard Note**

- Only use original Bock side rails, which are available as an accessory to all healthcare beds.
- Only use technical immaculate and undamaged side rails with the permitted clearance.
- Control all mechanical parts of the bed frame and side rails for damages, before mounting the side rails and before each redeployment.
- The operation of the side rails should always be carried out with the special diligence, as it might come to contusion of the fingers between the lateral bars.

**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-enameled 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 continuous side rail**

The release button for the adjustment of the continuous side rails is mounted at the top of the end panels on the inside, and can be found right next to the metal guide rails for the side rail mechanism.

In order to lower the side rails, grasp the upper side rail (Fig 1), slightly lift it and push one of the release buttons at the end panels (Fig. 2). Now, the side rail of the respective side gets released and can be easily lowered down to the end stop (Fig. 3). Now, the side rail has been brought into a diagonal position. In order to lower the other side, just repeat the steps mentioned above at the facing side. Now the side rail has been brought into the lowest position.

Provided, that one of the side rails is to be adjusted to the upper position so as to prevent the patient from slipping out, grasp the middle of the upper side rail and pull it to the upper side, until it locks into place at both ends. Now, the side rail is in the upper position.

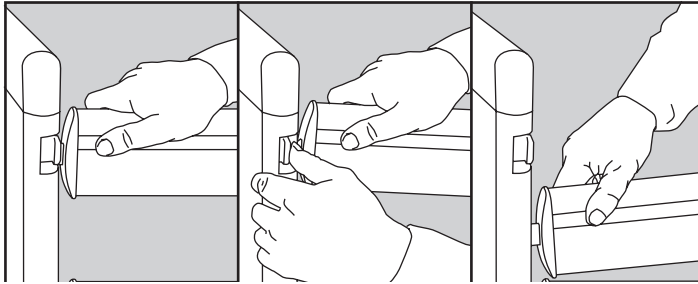


Fig. 1

Fig. 2

Fig.3

The main purpose of the side rails is to prevent the patient from falling out of the bed. This protection by means of the side rails does not automatically provide sufficient protection with very frail patients and therefore, it is necessary to provide further protective measures such as the additional mounting of side rail bumpers (accessories).

The distances between the side rails needs to be less than 12 cm. Note that the continuous side rails must not remain in diagonal position, when they are being used.

*Note:*

Provided, that the braces/mounting points of the side rails are positioned outside of the side rails (bright grey depiction), distance A which runs along the lower siderails towards the lying surface applies.

**> Bock Top Advice**

If from the diagonal position (Fig.3) the side rail should not be further lowered but should be raised, please grab the top of the middle bar and pull it up until it is locked in place.



**> Bock Top Advice**

When using different mattress thicknesses, the minimal height of 22 cm minus the compression, measured from the upper edge of the side rails above the mattress, must not be undershot. The use of higher mattresses requires an additional plug-on rails which is available as accessory. Various nursing beds by Bock provide special functions whose description can be found under chapter 5 in the assembly manual of the individual models.

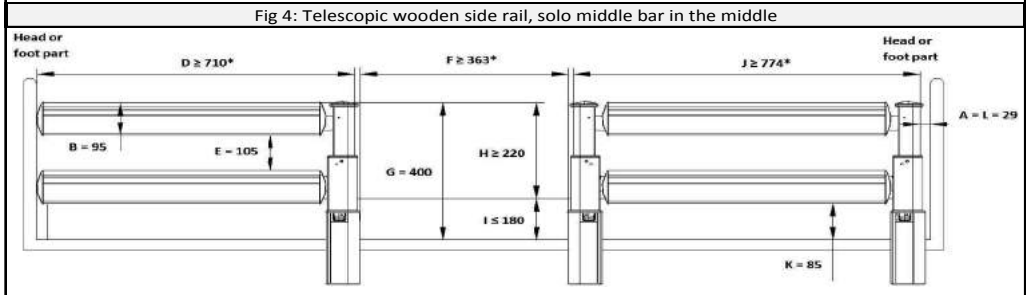
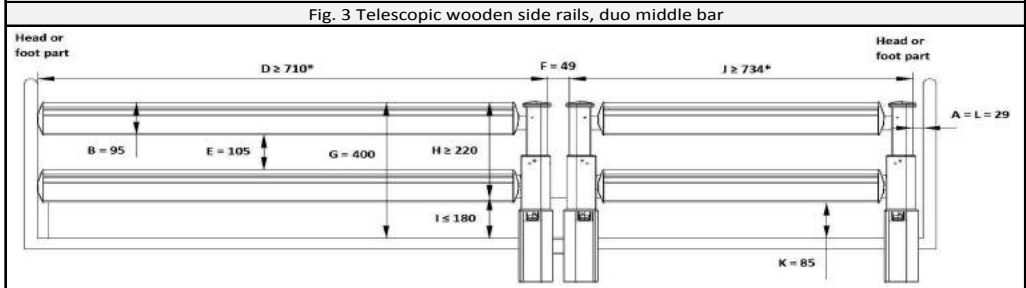
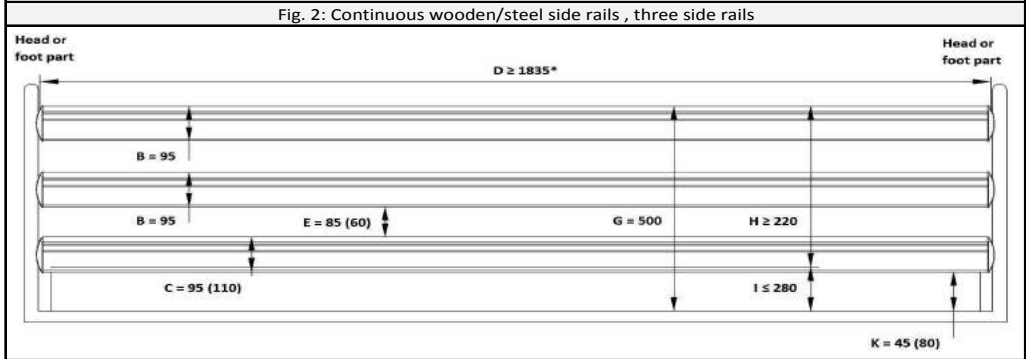
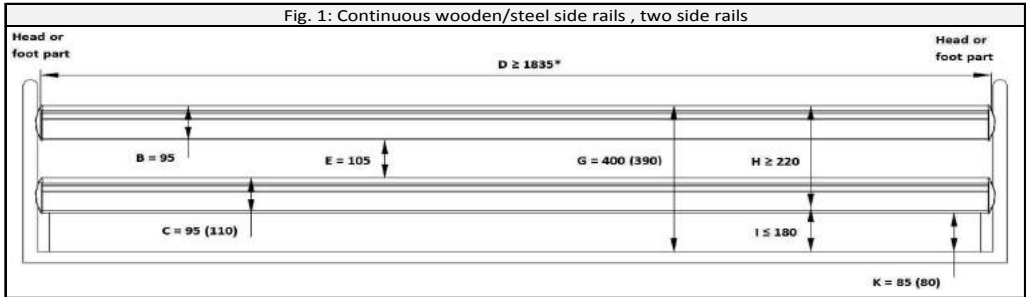
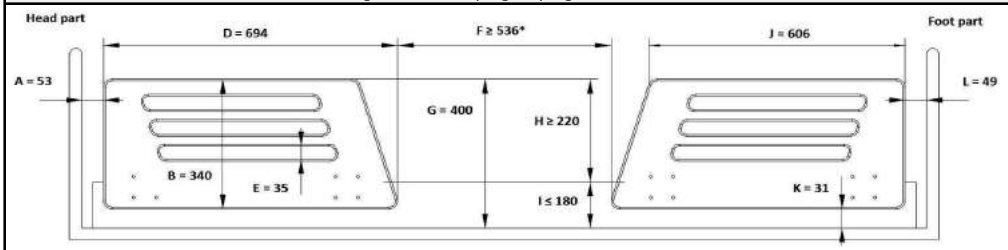


Fig 5: Wooden plug-in/plug-on side rail



Description

All measures in mm.  
 \* Depending on the lying surface length  
 Single telespoci bar on the head/foot end are optional.  
 The meassures in brackets is valid as optional

Legend

Area	Description
A	Distance between head end and side rail
B	Height 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 number

Description	Art.No.
<b>Continuous wooden/steel side rails</b>	
2 side rails (Fig. 1)	
Wooden side rails (Set: 95 / 95mm)	90223
Wooden side rails (Set: 95 / 110mm)	91247
Steel side rails (Set: 95 / 110mm)	91314
Three side rails (Fig. 2)	
Wooden side rails (Set: 95 / 95mm)	91566
Wooden side rails (Set: 95 / 110mm)	91531
<b>Telescopic wooden side rails</b>	
Duo telescopic bar in the middle (Fig. 3)	
Duo telescopic bar in the middle (Fig. 3)	91210
Wooden side rails head end : (set: 95 / 95mm)	80344
Wooden side rails foot end (set: 95 / 95mm)	80345
Solo telescopic bar in the middle (fig. 4)	
Solo telescopic bar (head right, foot left)	91211
Solo telescopic bar (head left, foot right)	91212
Wooden side rails (set: 95 / 95mm)	80346
<b>Telescopic bar on head and foot end( without fig.)</b>	
Solo telescopic bar (head right, foot left)	91211
Solo telescopic bar (head left, foot right)	91212
Continuous wooden side rails( Set: 95 / 95mm)	80346
<b>Plug-in/plug on wooden side rails (Fig. 5)</b>	
Fitting plug-in	91264
Fitting plug-on	91260
Wooden side rail	80118

**\* Bock Hazard Note**

The maximum switch-on time should not be more than 2 minutes. A subsequent break of 18 minutes has to be observed.



*9-V-block battery for emergency lowering*

## 3. Electric 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 of 110-240 V AC at 50-60 HZ at 70-180 W into a 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 with its 6 buttons 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 Drive with level adjustments

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 6 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 labeled 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.



*The Bock hand control*

Function button 1	Head rest up
Function button 2	Head rest down
Function button 3	Foot part up
Function button 4	Foot part leg part down
Function button 5	Lying surface up
Function button 6	Lying surface down

#### > Bock Top Advice

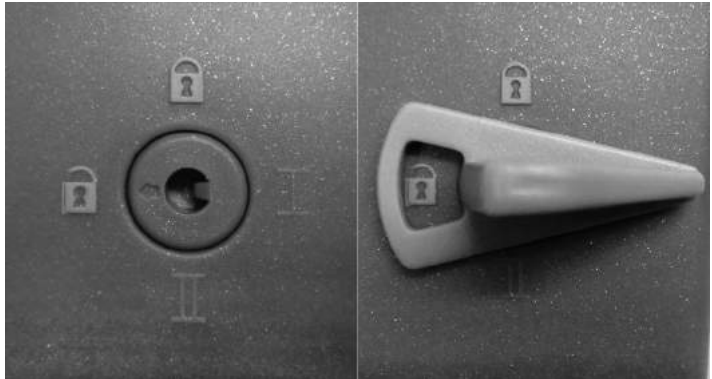
The drives with the E-transformer 24V: Due to the low standby- mode consumption (max. W) and the ideal efficiency of the power plug, the bed is remarkable economic in the energy consumption.

Drives with the mains isolation: Due to the mains isolation the bed is completely smog free and remarkable economic in the energy consumption. Electricity is only used when the bed is adjusted by the hand control

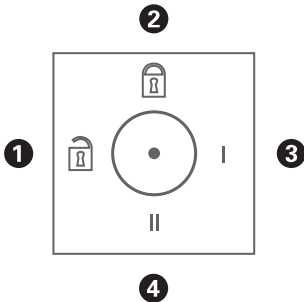
#### \* Bock Hazard Note

The high safety standards of Hermann Bock's health care beds is not understood as a exclusion of all risks. The strict compliance with all specifications and instructions concerning the intended use provide the prevention of all risks.

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.



Key for the locking device



- |                      |  |
|----------------------|--|
| Switch setting 1     | Hand control active  |
| Switch setting 2 & 4 | Hand control inactive  |
| Switch setting 3     | Activation of Trendelenburg function<br>(with beds providing the Trendelenburg function) |

### 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.

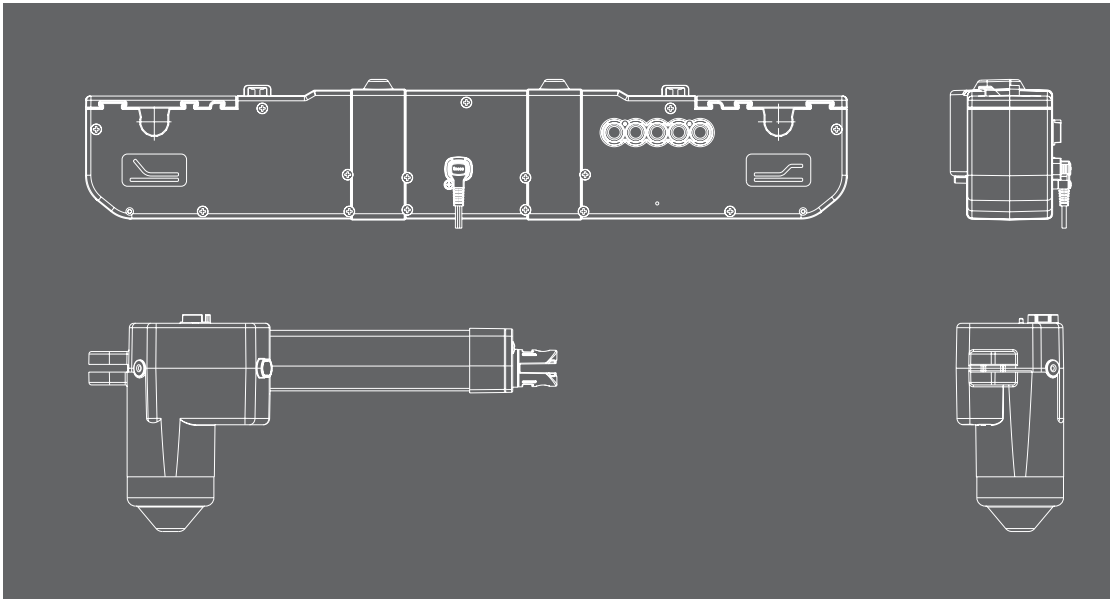


In order to avoid damages to the cables, the cable installation should be placed off-side potential damage areas. Also avoid contact with square-edged components. Notes for an appropriate cable installation can be found in chapter 5. All potential risks of exposure to too high contact voltages should 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.

**\* 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 deactivate 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.



**\* Bock Hazard Note**

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

## 4. The drives

### 4.1 The 24 Volt drives

Hermann Bock equipped their health care beds with various Limoss drive systems.

#### 4.1.1 The drives system

Both, the double drive for the stepless adjustment of the lying surfaces and the linear drive applied for the height adjustment of the lifting frames are each made up of four 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.

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 doubledrive stand out. The drive comes with a mains isolation in the mains plug and has an emergency lowering function.

#### 4.1.2 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.

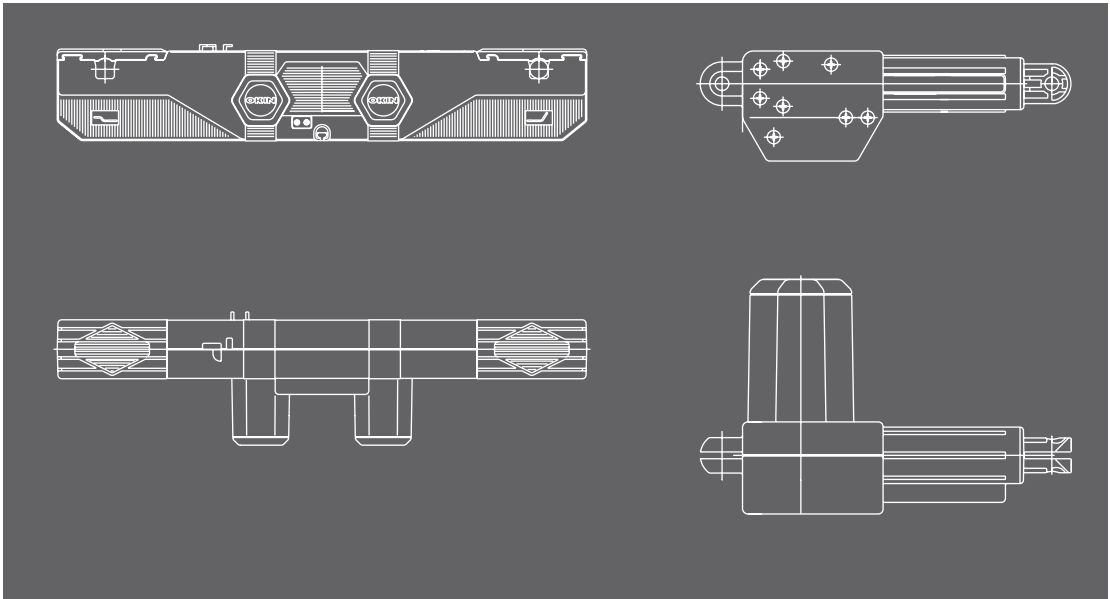
The wall power supply already corresponds to the upcoming new European standards for electronic domestic appliances. In the standby-mode it has an energy consumption of max.0.5 W. Due to its variable input voltage of 100 V-264 V it is applicable worldwide. With the SMPS power supply alternating electrical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

#### > **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.



*The external switch- mode power supply*



**\* Bock Hazard Note**

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

**4.2 The drives with mains isolation**

Representing the market leader in the field of manufacturing adjustment systems, ILCON stands out for their highly-qualified performance and excellent know-how. This synergy provides the basis for an ideal collaboration in the field of medical products, as it allows us to achieve a unique quality.

**4.2.1 Dual drive systems**

The dual drive systems that enable the stepless adjustment for lying surfaces combined with the linear drive that is used as a single drive for the height adjustment of the lifting appliances consist of four main components each.

- Housing
- Drive
- Gearbox
- Spindle with nut

The designs of the housing for the dual drive and linear drive ensure the durable functionality of all drive components. The specific design principle is based on two load-absorbing housing cases.

Due to its internal construction, the housing fulfills an essential requirements for the installation of the drives. Especially the easy assembly/dismounting of the battery and electronic by stable holding sheets characterize this dual drive. The dual drive can be combined with any ILCON motors. The dual drive disposes of a mains isolation and an emergency lowering device.

#### 4.2.2 The mains isolation

The integrated ILCON-mains isolation in the mains plug provides, besides a high safety guarantee, many practical advantages when in use. In the net free mode, the mains isolation prevents any magnetic and electric AC fields in the bed. The mains isolation is self-contained and requires no additional transformer for its stand-by. With the drive working in disconnected mode, no energy is consumed and a switching sound in the relay serves as indicator of the correct operation. The mains isolation is compatible with superordinate mains isolation.

The ILCON-mains isolation in the mains plug can be activated at the touch of the button on the hand control. A direct current loaded capacitor in the drive conducts current to the double-pole relay in the mains connection and activates the transformer whilst the drive is in use. In this process, the capacitor is being reloaded in order to be ready for the next actuation. Everytime the hand control button is being let go, the mains is disconnected from both poles by the relay. A switching sound indicates the performance of this function.

The 9-volt battery for the emergency actuation which is a standard installation in the control, buffers the capacitor of the mains isolation for the case of need, if it has not been used for a longer period and has, therefore, lost its voltage. Should the capacitor and the 9-volt buffering battery be used up, it just takes a touch on the green button so that the mains isolation starts working as usual again.

#### > **Back 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.



*9-V-block battery for the emergency lowering*



*domiflex classic low,  
domiflex*

## 5. Assembly and operation – model line domiflex

### 5.1 Design and Purpose

The model line domiflex consisting of domiflex, domiflex deluxe, domiflex low, domiflex classic low, domiflex 185 and adi.flex 220 have been especially designed for the daily continuous operation in the care at home. The above mentioned models offer fragile people, people in the need of care and people with disabilities a high lying comfort and simultaneously, due to their easy handling, they support the ideal care. The model line domiflex:

- > domiflex is not suitable for the use in hospital
- > domiflex is not suitable for the transport of patients. The beds must only be moved within the patient rooms, for cleaning purposes or to enable the access to the patient.
- > domiflex is suitable for persons up from twelve years and a body height of 150 cm.
- > Under certain circumstances, domiflex 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, oxygen 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.

## 5.2 Technical data

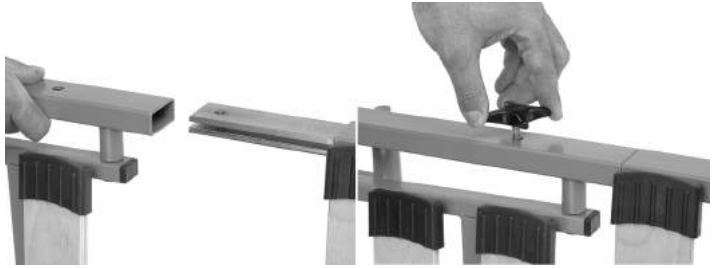
<b>Technical data</b>									
	domiflex	domiflex deluxe	domiflex low	domiflex low	domiflex classic low	domiflex 185	adi.flex 220		
<b>Construction height</b>	-	-	19	24	-	-	-		
Lying surface dimension: cm	90 x 200	90 x 200	90 x 200	90 x 200	90 x 200	90 x 200	120 x 200		
External dimension: cm	103 x 220	103 x 220	103 x 220	103 x 220	103 x 220	103 x 220	133 x 217		
Safe capacity: kg	170	170	170	170	170	220	255		
Max. person weight: kg	135	135	135	135	135	185	220		
Height adjustment: cm	40 - 81	40 - 81	19 - 60	24 - 65	21 - 62	40 - 81	23 - 83		
<b>Max. indicated angel towards horizontal:</b>									
- Back bar	70°	70°	70°	70°	70°	70°	70°		
- Foot bar	18,2°	18,2°	18,2°	18,2°	18,2°	18,2°	18,2°		
- Trendelenburg-position (optional)	15°	15°	15°	15°	15°	15°	15°		
Side rail height with wooden slats: cm	39	39	*	39	39	39	39		
<b>Possible side rail solutions:</b>									
- Continuous wooden/steel side rails	*	*	*	*	*	*	*		
Lifter space cm	> 15	> 15	-	-	> 15	> 15	> 15		
Sound level: dB(A)	< 65	< 65	< 65	< 65	< 65	< 65	< 65		
<b>Weights:</b>									
Total weight incl. continuous wooden side rails: kg	74	77	66*	91	79	76	126		
Lying surface - back bar: kg	13,8	13,8	13,8	13,8	13,8	13,8	19,6		
Lying surface - foot bar: kg	11,6	11,6	11,6	11,6	11,6	11,6	17,4		
Lying surface - lying surface motor: kg	4,6	6,8	4,6	4,6	4,6	4,6	4,6		
End panel incl. actuator: kg / piece	16	16,8	17,8	24,7	18,7	17,5	36,5		
Continuous woode side rail: kg / set	11,5	11,5	-	11,1	11,5	11,5	11,5		
Continuous steel side rail: kg / set	15,8	15,8	-	15,8	15,8	15,8	15,8		
Special dimension: Length: cm	180 - 220	180 - 220	180 - 220	180 - 220	180 - 220	180 - 220	180 - 220		
Special dimension: Width: cm	not possible	not possible	not possible	not possible	not possible	100	not possible		
<b>Electrical data</b>									
Supplier llcon	Input voltage: V	230	230	230	230	230	230		
	Frequency: Hz	50	50	50	50	50	50		
	Max. current consumption: A	2	2	2	2	2	2		
Supplier Limoss	Input voltage: V	100-240	100-240	100-240	100-240	100-240	100-240		
	Frequency: Hz	50/60	50/60	50/60	50/60	50/60	50/60		
	Max performance: W	90	90	90	90	90	90		

\*without side rails

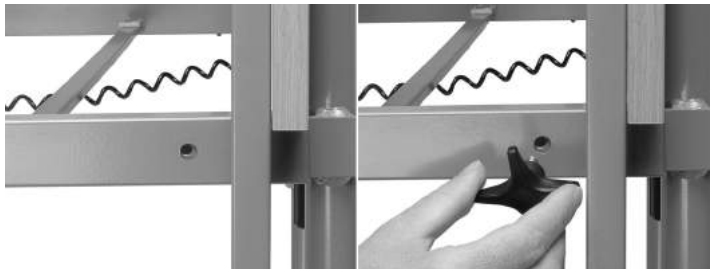
### 5.3 The model range domiflex ready for use

Please remove all packaging (incl. cable ties) from the health care bed before carrying out the assembly process.

1. Remove the two bolts that keep the lying surface attached to the transport system.
2. Take the two lying surface components out of the transport system, put them together and fasten the two components using the previously removed bolts. Now, position the drive in such a way, that the connection sleeves are facing the middle of the bed. Then fasten them by means of the sealing caps.

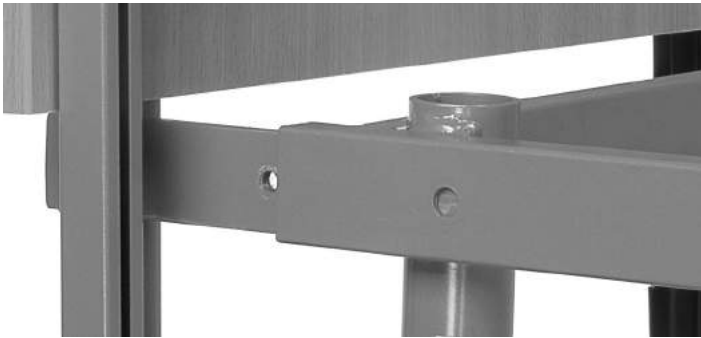


3. Slide one of the end pieces completely onto one side and fasten it.



4. Slide the other end piece only as close toward the thread cap, that it is directly positioned in front of it.





5. In a next step, hook the wooden- or steel side rails into the preassembled metal guide bars and bring them into a central position.

It is of **UTMOST** importance, that the labeling is positioned on the top and bottom side of the side rails, since any errors must definitely be avoided.



#### *Mounting of the side rails*

6. Slide the other end piece towards the thread hole and fasten it.





Abb. 1

7. Fasten the mains cable to the bracket of the lying surface at the provided cable relief. Now connect the mains cable.
8. After the assembly process resp. prior to the initial operation of bed, it will be necessary to run the adjustment area of the lying surface using the control, in order to check for the ideal positioning of the cables. The adjustment area must be accessible without any obstacles.
9. When it comes to the domiflex 185, the first step is the removal of the metal reinforcement braces from its packing and to mount them on the end piece of the provided assembly kit, before fastening it using the provided bolts (see figures 1, 2)



Abb. 2



Fig. 1



Fig. 2

Domiflex 185 is now ready for operation!

## 5.4 The adi.flex 220 ready for use

Please remove all packaging (incl. cable ties) from the health care bed before carrying out the assembly process.

1. Remove the two bolts from the lying surface fitting and the 4 bolts mounted to the actuators that keep the components attached to the transport system.
2. Now, remove the lying surface drive and the two lying surface elements. Place the two actuators in parallel to the length of the lying surface on the ground. Now fasten the two lying surface elements with the actuators (see fig 1).
3. Mount the two elements as is shown in fig 2 and slide the lying surface components about 5 cm into each other.
4. The mounting of the lying surface requires the same steps as those mentioned under section 5. In a next step, slide the lying surface elements into each other and fasten them. Then mount the lying surface drive as is depicted with the symbols and install the single drives.
5. Upon completion of 7 and 8 as set out on the previous page, adi.flex 220 is ready to put into operation.

## 5.5 Dismounting

Make sure to disconnect the mains power plug prior to beginning the works with respect to the disassembly. The disassembly of the domiflex takes place in reverse order of the assembly description.

## 5.6 Relocation/Repositioning

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

- Adjust the lying surface to the lowest position.
- Disconnect the mains power 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 isn't dragged across the floor.
- Remove the plug-in appliance from the 9-V battery block. Remount the plug to the dual drive upon the restart of the bed.



*Castor with single brakes*

### \* 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 of this assembly manual.

#### \* Bock-Gefahren-Hinweis

The motors comply with the IPX4 splashwater protection level. The cables must not be squashed. Movable parts must only be adjusted in keeping with the rules for proper usage. Hermann Bock GmbH will not assume any liability for unapproved technical modifications.

- Carry out a visual check for any mechanical damages (bending- and pressure marks, abrasions, and bare wires) prior to reconnecting the mains power cable.
- Position the mains power cable in such a way, that it can't be torn, rolled over, or damaged due to moveable parts of the bed, before reconnecting the power plug.

#### 5.7 Transport- and storage conditions

- 0° C to 40° C
- Humidity 20% – 80%
- Air pressure between 700 and 1060 hPa

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

#### 5.8 Information on functionality

The mounting of the bed at a fixed place requires the locking of the castors' brakes. For this purpose, push down the pedals which are provided at the castors of the locking appliances.

If required, the integrated side rail must be raised as high so that both rails click into place at both ends. In order to lower the side rail, just lift it a little bit and push the release buttons slightly towards the outer frame. 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 rails).

#### 5.9 Disposal

Each of the components made of plastics, metal, and wood are recyclable and can be disposed in compliance with the relevant legal provisions.

## 5.10 Troubleshooting

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

Malfunction	Potential causes	Remedy
The drive units cannot be controlled via the hand control	Mains cable not connected	Connect the mains cable
	No voltage in the socket	Check the socket or fuse box
	Plug 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
When buttons are pressed, the drive units stop after a short time	Disabler or control box in the hand control activated	Deactivate disabler or control box in the hand control
	There is an obstruction in the adjustment range	Remove the obstruction
The drives stop after a longer adjustment time	The safe capacity has been exceeded	Reduce the load
	The adjustment time or safe capacity has been exceeded, and the Polyswitch in the transformer of the control unit has responded to increased heat	Let the drive system cool down sufficiently for at least a minute
Individual drive units run in one direction only	Hand control, drive unit or controller defective	Notify the operator or Bock customer service

## 6. Accessories

As it is our goal to satisfy every need of our customers, Hermann Bock offers many different kinds of practical and mobility-promoting equipment and accessories, so that each health bed can be exactly customized to the individual needs of the care recipient. The fitting 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 equipment offer 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 decors 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 make up 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.

## 6.2 Assembly – Bed extensions (therapy beds)

The scope of supply for a lying surface extension comprises the following parts:

- 7 The scope of supply for a lying surface extension comprises the following parts:
  - 2 Adapter units for left and right foot part
  - 1 wire bracket for the foot part
  - 1 set of side rails
  - Fixing bolts

### \* Bock Hazard Note

For safety reasons, it's highly recommended to use only original equipment of Hermann Bock that is available for the respective bed model, if you'd like to extend the functions of your health bed. A detailed overview of the equipment and accessories can be found in the separate data sheet. Hermann Bock assumes no liability for accidents, damages or hazards that may occur due to the use of other equipment and accessory parts!

### > Bock Top Advice

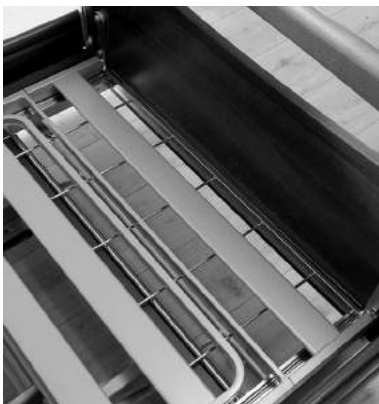
The fitting of the bed extensions constitutes a part of the service by the service-team of Hermann Bock.

It is generally recommended by Hermann Bock that there are used mattresses and duvet covers that comply with the standards of DIN EN 597, i.e. that are made of flame-resistant material.





Fig. 1



Readily mounted bed extension

The easy way to assemble your health care bed:

1. Take off the mattress from lying surface.
2. Remove foot end.
3. Plug adapter units into the frame of the lying surface at the foot end and fasten with screws.
4. Put wire bracket into the frame of the lying surface, drill holes (d = 4.2 mm) and fasten with screws.
5. Do not slide the foot end further than shortly before the release button.
6. IMPORTANT: Make sure to read the labels attached on the top and bottom of the side rails' end caps, as these must not be confounded with each other.
7. Next is to hook the side rails into the pre-assembled metal guide way and connect with each other.
8. Push the release button towards the inside and slide it into the foot end until it clicks into place with the provided drilling.

**Assembly:**

1. Take off the mattress from the lying surface
2. Remove bolts from the foot end and pull out the extension, while at the same time removing the side rails.
3. Insert sealing element incl. panels for the lying surface and fasten the elements
4. Mount the side rails
3. Put the side panels in place and fasten them.

**With the model pratico comfort (Model with wing rails):**

- 1 sealing element for the lying surface (lying surface extendable by 270mm)

**Mounting pratico comfort (Model with wing rails):**

1. Take off the mattress from the lying surface
2. Remove bolts from the foot end and pull out the extension
3. Insert sealing element for the lying surface and fasten the elements
4. Put the side panels in place and fasten them



### 6.3 Assembly of the accessory

The following standard equipment can be combined with the bed model domiflex:

#### Side rail extension (Fig. 1)

Scope of delivery: Fully assembled side rail extension

- Open the plastic cap, plug in the side rail extension, position it into the middle and close the cap. Please make sure, that the release button of the side rail extension faces outwards.

Important note:

*The bock-side rail extension has been designed for the use along with all bock wooden side rail models. Company Bock assumes no liability for damages arising from the use in combination with third-party products.*

#### Lifting pole with triangle handle, 6,5 kg (Fig. 2)

The guaranteed work load of the erection support device is at max. 75 kg.

Scope of delivery: 1 Lifting pole with triangle handle incl. hook-up loop, 1 Triangle

- Put the lifting pole with triangle handle into the provided loop at the head part and adjust it accordingly. Afterwards, the triangle can be hooked into the loop.
- Measured from the upper edge of the mattress (mattress height 100 mm and 120 mm) to the lower edge of the horizontally running handle of the triangle, the height adjustment range of the triangle handle must be less than 550 mm and not exceed 700 mm.

**CAUTION:** The lifting pole with 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 should at least last for 5 years. We refer to the STK-inspection.

#### \* 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.



Fig. 1



Fig. 2

### > Bock-Top-Tipp

Hermann Bock's staff on the service hotline is looking forward to informing you on the best retrofitting solution for your bed. Call us hotline: 0180.5262500 (14 cents for calls from landline phones, 42 cents 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 a perfect harmony



Fig. 4

### Tray, 4.0 kg (Fig. 4) Scope

Scope of delivery: 1 Tray

- The tray is applied to the side rails and prevented from getting out of place using two distance pieces.

### Universal clamp, (0,6 kg)

Scope of delivery: 1 Clamp, 1 fastening ring

The universal clamp is a special holding appliance that provides more flexibility as basis element and allows for the flexible positioning of the modular functional equipment. It is optionally possible to attach quivers, fixtures for urine bottles, infusion systems or a lamp individually or together. Furthermore, the swan neck-universal clamp can be shifted along the side rails according to preference or requirement.

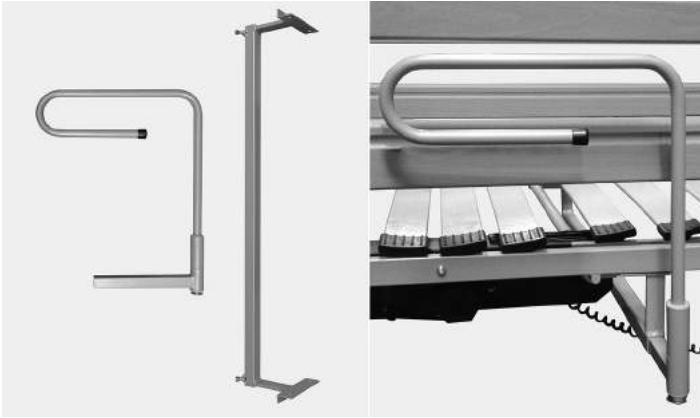


*Universal clamp with drainage bottle support, urine bottle fixture, swan neck, and hand control holder (from left to right)*

- The swan neck is clamped onto the upper side of the side rails and fixed with the fastening ring.

### Assist handle with cross-bar for actuator beds, 3,0 kg

Scope of delivery: 1 Getting-up aid incl. 1 cross bar support, 4 Bolts 4 mm



Left side: Scope of delivery, right side: mounted getting-up aid

- Put the cross-bar support to frame of the lying surface from the bottom up and mark the drill holes on the frame. (Fig. 1).
- Drill holes into the previously marked spots (3.5 mm) of the lying surface frame. (Fig 2)
- Use the provided bolts to fasten the cross-bar with the lying surface frame (Fig 3).
- Push the getting-up aid into the cross-bar bracket (Fig 4), adjust it to the desired position and fasten it. (Fig. 5).

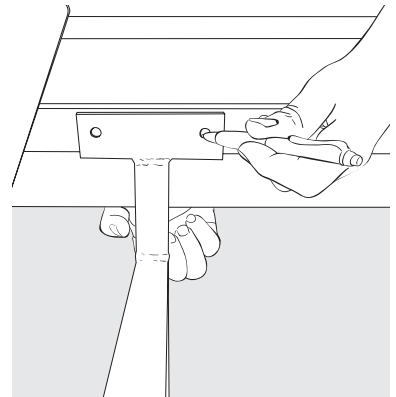


Fig. 1

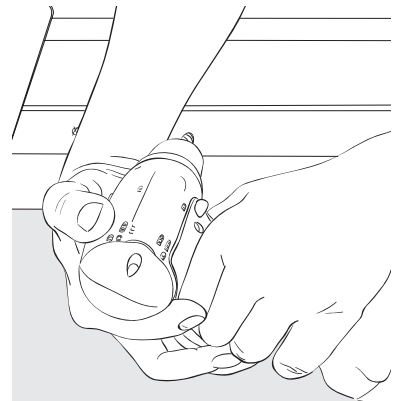


Fig. 2

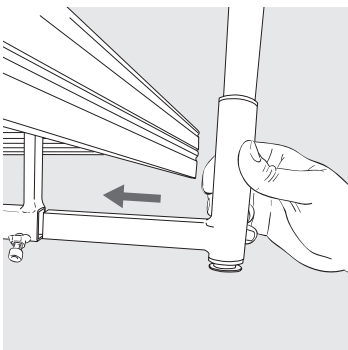


Fig. 4

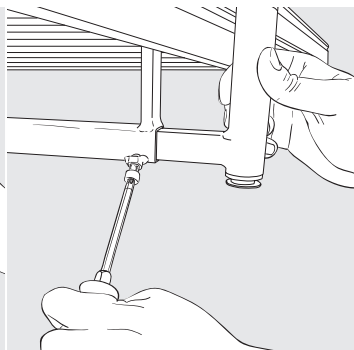


Fig. 5

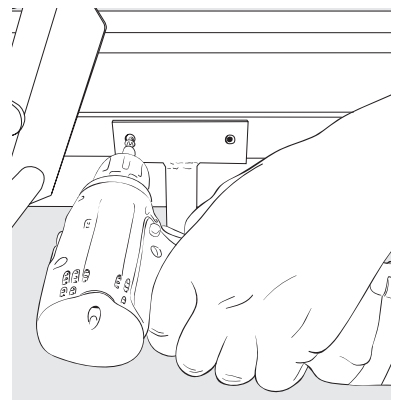


Fig. 3



#### **6.4 Mattresses**

There are, in general foam and latex mattresses suitable for the Hermann Bock health beds. However, a volumetric weight of at least 35 kg/m<sup>3</sup> 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 max. height with steel-, aluminum-, spring wood-, or ripoplan lying surfaces must not exceed 15 cm (with object beds max. 16 cm) resp. with spring systems a height of 12 cm.

If the height limit is exceeded, an additional plug-in rail would be required which is available as additional equipment. When using foam mattresses, it is recommended to use a cut foam mattress pad to allow a better fitting with the lying surface.



### > **Back Top Advice**

Scrapes and varnish chip-pings that go through the entire varnish coating should be preventively sealed with appropriate repair means against the infiltration of moisture.

## 7. Cleaning, maintenance and disinfection

The several bed elements consists of high-quality materials. The surface of the steel tubes is covered with a durable polyester 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.

#### *Spring systems ripolux, ripoplan and 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 supporting- and spring elements as well as the plastic surfaces. In case of heavy contamination, just remove the spring elements from the supporting elements. The dismantled plastic 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. If required you can also remove each of the individual lying surface elements from the frame to clean them. Remount the elements after they have completely dried. If required you can also remove each of the 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 reestablish the connection. Put the bed out of operation immediately, attach an appropriate visible labeling and get in contact with the manufacturer/ supplier.

### \* 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..



#### > 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.

## 8. 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](http://www.bock.net).

This nursing care bed was developed, constructed and manufactured for a long term use. If properly used the expected life time of this nursing care bed amounts to 2-10 years. The life time is regulated by the usage condition and frequency. Therefore in institutional use an even longer life time years can be expected.

**Caution:**

**Unauthorized technical modifications on the product result in an exclusion of all guarantee claims.**

**> Bock Top Advice**

The Bock-Safety-technical control-training takes place either on your site or at ours and trains your technical staff in the performance of the inspection of the Safety-technical control on Bock health beds, so that they will be in the position to carry out safety-technical inspections in an appropriate way.

**\* 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 damages.

# 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 emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11 (partly)	Class B	The <i>medizinisches Bett</i> 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 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 % 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 <i>medizinisches Bett</i> requires continued operation during power mains interruptions, it is recommended that the <i>medizinisches Bett</i> 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 <i>medizinisches Bett</i> , including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  Recommended separation distance: $d = \left[ \frac{7}{3} \right] \sqrt{P}$  $d = \left[ \frac{3,5}{3} \right] \sqrt{P}$ 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). <sup>5</sup>  Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, <sup>6</sup> should be less than the compliance level in each frequency range. <sup>5</sup>  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<sub>r</sub>] 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.

## Declaration of conformity

<u>Manufacturer:</u>	Hermann Bock GmbH Nickelstraße 12 33415 Verl
<u>Product description/ model</u>	Medical used bed in general
<u>Classification:</u>	Medical products class I, norm 1 and 12 referring to appendix IX of MDD
<u>Chooosed conformity evaluation process:</u>	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.

---

<u>Applied standards:</u>	Harmonized standards for which the proof of concordance can be supplied:
DIN EN 60601-1:2007-07	<u>Medical electronic devices- Part 1:</u> General definitions for the safety including the essential characteristics
DIN EN 60601-1-2:2007-12	<u>Medical electronic devices- Part 1-2:</u> General definitions for the safety including the essential characteristics – complement standard: electromagnetic tolerance – requirements and testing
DIN EN 60601-2-52:2010-12	<u>Medical electronic devices- Part 2-52:</u> Special definitions for the safety including the essential characteristics for medical beds
DIN EN ISO 14971:2013 Verl, 2. Juni 2014	Application of the risk management for medical products



Klaus Bock



Dr. Stefan Kettelhoit



# Constant functionality checks

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



Test specimen:  Bed  Insert frame  Controller/main drive

Model name: \_\_\_\_\_

Series /inventory number: \_\_\_\_\_

Location: \_\_\_\_\_

Person in charge: \_\_\_\_\_

Date, examinant: \_\_\_\_\_

Visual, mechanical and electrical step of examination	
1. Is the overall condition of the bed alright? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. All stickers, EC registrations and type plates present on bed? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Manufacturer's details such as safety guidelines and assembly or operating instructions present? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Mechanical construction defect free with no welds, bent metal frames/lifting poles, wooden elements? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. Firm fit and completeness of all plastic end caps and mechanical connecting elements (screws etc.)? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Sprung slats, carrier plates and dowels for ripolux/ripoplan without cracks or breakages? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. Tight fit in correct position of all sprung slats and carrier plates? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
8. Tight fit and straight alignment of all spring elements? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. Do spring elements return to their original position after pressure load? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Tight fit and no cracks or breakages of head and foot end panels? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. Adjusting space of lying surface and room for lifting height sufficient without obstructions at current location? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
12. Safe grid mechanism of lower leg section in every step even under charge? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
13. Side rail bars without cracks, breakages or damages? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
14. Adequate fastening and respectively secure fit of side rails? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
15. Load test of side rails without distortion? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
16. Easy run of side rail bars within the tracks and easy locking? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
17. Correct functions of side rails? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No
18. Distance between side rail bars not more than 12 cm? Description of defects:	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

# .bock<sup>®</sup>///

Hermann Bock GmbH  
Nickelstr. 12  
D-33415 Verl

Telefon: +49 (0) 52 46 92 05-0  
Telefax: +49 (0) 52 46 92 05-25  
Internet: [www.bock.net](http://www.bock.net)  
E-Mail: [info@bock.net](mailto:info@bock.net)



#### Our SALES PARTNERS:

Our business partners pursue the same strategy as we do, thus quality, innovation and outstanding standards, which are approved worldwide. We can rely on our business partners as you can rely on us.

Please note that repairs, spare part deliveries, train-ings, safety controls and services can only be carried out by authorized personnel and our sales partners. Otherwise all warranty claims will exsinguish.

Australia	alphacare   <a href="http://alphacare.com.au">alphacare.com.au</a>
Belgium	Axamed nv-sa   <a href="http://www.axamed.be">www.axamed.be</a>
Great Britain	Carebase   <a href="http://www.carebase.net">www.carebase.net</a>
Estonia	ITAK Ltd.   <a href="http://www.itak.ee">www.itak.ee</a>
Finland	RESPECTA OY   <a href="http://www.respecta.fi">www.respecta.fi</a>
Greece	Wheel Rehabilitation Product   <a href="http://www.wheel.gr">www.wheel.gr</a>
Israel	Israel Quality of Life Center   <a href="http://www.iqlc.com">www.iqlc.com</a>
Italy	Enrico Spadoni   <a href="mailto:SaEn@online.de">SaEn@online.de</a>
Croatia	BEZ LIMITA d.o.o.   <a href="http://www.bezlimita.hr">www.bezlimita.hr</a>
Lebanon	Albert Massaad s.r.a.l.   <a href="http://www.albertmassaad.com">www.albertmassaad.com</a>
Luxembourg	Stoll   <a href="http://www.matelas.lu">www.matelas.lu</a>
New Zealand	Cubro Ltd   <a href="http://www.cubro.co.nz">www.cubro.co.nz</a>
Netherlands	Eureva B.V.   <a href="http://www.eureva.nl">www.eureva.nl</a>
Norway	Medema Norge AS   <a href="http://www.medema.no">www.medema.no</a>
Austria	Reha Service GesmbH   <a href="http://www.rehaservice.at">www.rehaservice.at</a>
Poland	Timago International Group Sp.z.o.o.   <a href="http://www.timago.pl">www.timago.pl</a>
Portugal	Machados   <a href="http://www.machadosmadeira.com">www.machadosmadeira.com</a>
Romania	Donis srl   <a href="http://www.donis.ro">www.donis.ro</a>
Russia	Lazerlink
Swiss	Sodimed   <a href="http://www.sodimed.ch">www.sodimed.ch</a>
Serbia	Proxi-Med d.o.o.   <a href="http://www.proxi-med.co.rs">www.proxi-med.co.rs</a>
Slovenia	Medimaj d.o.o.   <a href="http://www.medimaj.com">www.medimaj.com</a>
Slovakia	Servis Invo   <a href="http://www.servisinvo.sk">www.servisinvo.sk</a>
Bock Spain	Ferran Asensio Jou   <a href="http://www.bock.net/es/">www.bock.net/es/</a>
Czech	Ortoservis   <a href="http://www.ortoservis.cz">www.ortoservis.cz</a>
Ukraine	ADS Ukraine

Art.No. 890.02023 | Issued: 11/2014

Subject to technical modification

® registered trade mark