

.bock[®]///

adilec 280



Dear valued customer,

with your decision to purchase a therapy and rehabilitation bed from Hermann Bock GmbH, you will receive a durable care product with superior functionality at the highest safety level. Our electrically operated nursing care beds guarantee an optimal lying comfort and enable a professional care at the same time. This product was designed with a focus on persons in need of care, whose confidence must be reinforced and whose life needs protection. With this health care product, we meet these requirements.

We urge you to prevent potential malfunctions and the risk of accidents by complying strictly with the safety and operating instructions and by carrying out the necessary maintenance.

A handwritten signature in black ink, reading "Klaus Bock". The signature is written in a cursive, flowing style. The first name "Klaus" is written in a slightly larger, more prominent script than the last name "Bock".

Klaus Bock

Table of contents

1	Preface and general instructions	4
1.1	Intended purpose	4
1.2	Definition of person groups	5
1.3	Safety instructions.....	6
1.4	Service life / warranty	7
1.5	Requirements for the installation location	8
1.6	Type plate	8
2	General description of the functions.....	10
3	Electric parts	14
3.1	The drive unit	14
3.2	Caution: Electric drive	15
3.3	The drives with mains isolation	16
3.4	The external switch mode power supply SMPS	16
3.5	Connections of the double drive	17
3.6	Operating status display of the external SMPS power adapter	17
3.7	The hand control	18
4	Assembly and operation	20
4.1	Technical data	20
4.2	adilec 280	21
4.3	adilec 280 in individual parts.....	21
4.4	adilec 280 becomes operational	22
4.5	Change of location	24
4.6	Transport, storage and operating conditions.....	24
4.7	Function notes.....	24
4.8	Disposal	24
4.9	Troubleshooting	25
5	Accessories.....	25
5.1	Special dimensions	26
5.2	Assembly accessories	27
5.3	Mattresses.....	28
6	Cleaning, maintenance and disinfection	29
6.1	Cleaning and care	29
6.2	Disinfection	29
6.3	Avoidance of hazards	30
7	Guidance and manufacturer's declaration	31
8	Regular inspections with service.....	32

1 Preface and general instructions

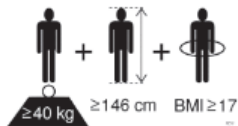
The various bed systems from Hermann Bock meet special requirements for the use in care and treatment facilities as well as for home care. Reliable functionality and a long product life make each bed particularly valuable. Our beds need little maintenance with proper operation and care. Each bed from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

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

These standards divide the beds in five different application environments:

1. Intensive care in a hospital, intensive care bed
2. Acute care in a hospital or other medical facility, patient bed in hospital
3. Long-term care in a medical environment, inpatient nursing care bed
4. Care at home, "HomeCare bed"
5. Ambulant care

1.1 Intended purpose



The nursing care bed is suitable for persons in need of care (adults) who are at least 146 cm tall. The person's weight must not exceed 280 kg and must be over 40 kg. The body mass index ($BMI = \text{Weight of the person (kg)} / (\text{body size of the person (m)})^2$) must be greater than or equal to 17.

adilec 280 is a special bed for the optimal care of severely overweight and obese patients. It is suitable for use in therapy and rehabilitation as well as for care at home. With adilec 280, people with a body weight of up to 280 kg can be cared for comfortably. The construction of adilec 280 has a highly stable ball guide system. The frame rigidity is additionally reinforced and two double motors ensure reliable functioning. adilec 280 offers a high level of lying comfort to frail persons suffering from diseases and in the need of care as well as to people with disabilities, while at the same time supporting an optimal care thank to its easy operation.

- adilec 280 is not suitable for hospital use.
- is not suitable for the patient transport. The beds must be only moved for cleaning purposes inside the patient's room or to allow access to the patient.
- is suitable for persons in need of care (adults) with a body height of 146 cm or more. The person's weight must not exceed 280 kg and must be over 40 kg. The body mass index (BMI) must be greater than or equal to 17.

- under certain circumstances adilec 280 can be used (if necessary) for medical purposes with other electric medical equipment (e.g. suction devices, ultrasonic humidifier, food systems, anti-bedsore systems, oxygen concentrators and similar devices). In this event, deactivate all bed functions for the duration of the application via the integrated locking function.

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

1.2 Definition of person groups

Operator

Operators (e.g. medical supply stores, specialist dealers, facilities and budget holders) include any natural or legal person who uses the beds or has the bed used for medical purposes. The briefing on the use of the product shall generally be conducted by the operator.

User

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

Patient/resident

Persons in need of care as well as disabled and fragile people who are lying in the nursing care bed.

Qualified personnel

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

1.3 Safety instructions

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

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

These recommendations apply particularly:

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

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

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

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

Prior to making any electrical adjustment, it should, as a general rule, be made sure that no limbs are positioned in the adjustment range between the chassis and the head or foot part, especially that there are no persons/animals in the area between the floor and the raised lying surface. Danger of being crushed is particularly high in these areas.

The permitted person's weight depends on the total weight of the equipment that has been mounted to the bed (mattresses and other electronic medical devices). Please refer to the type plate on the frame of the lying surface for the respective max. capacity.

Service and maintenance must not be carried out while the nursing care bed is being used by a patient.

The nursing care bed may only be used for the care and positioning of people. The adjustment options on the head and foot sides serve exclusively for the changeable positioning of the respective body area of a patient. The care bed may only be used for its intended purpose and may not be misused or used improperly.

The patient must be immediately removed from the bed in case of malfunction or equipment failure. Use of incompatible side rails may result in entrapment of extremities. To deactivate the nursing care bed and safely end operation of the bed, remove the mains plug from the socket.

Block safety note

When the user, e.g. the nursing staff or caring relatives, leaves the room, the lying surface should be moved to the lowest position in order to minimise the risk of injury if the patient falls out.

When the user, e.g. the nursing staff or caring relatives, leaves the room, the complete operating functions of the nursing bed should be locked using the key of the hand control.

1.4 Service life / warranty

This nursing care bed was developed, designed and manufactured for safe operation over a long period of time. With proper operation and use, this nursing care bed typically has an expected service life of 15 to 20 years in the institutional area. The service life depends on operating conditions and frequency.

Attention:

Unauthorised technical changes to the product voids all warranty claims.

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

1.5 Requirements for the installation location

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

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

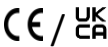
Hazard note from Bock

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

1.6 Type plate

Each nursing care bed is marked with an individual type and a general type plate. You will find the type plates on the longitudinal frames of the lying surface (inside or outside, depending on the model).

Explanation of the symbols:



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 via 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



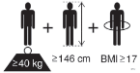
Symbol for safe working load



Maximales Bettengewicht inklusive sichere Arbeitslast



Symbol for the labelling of a medical device



Patient population



Follow the instructions appropriate for mattress size and thickness



Address of the manufacturer

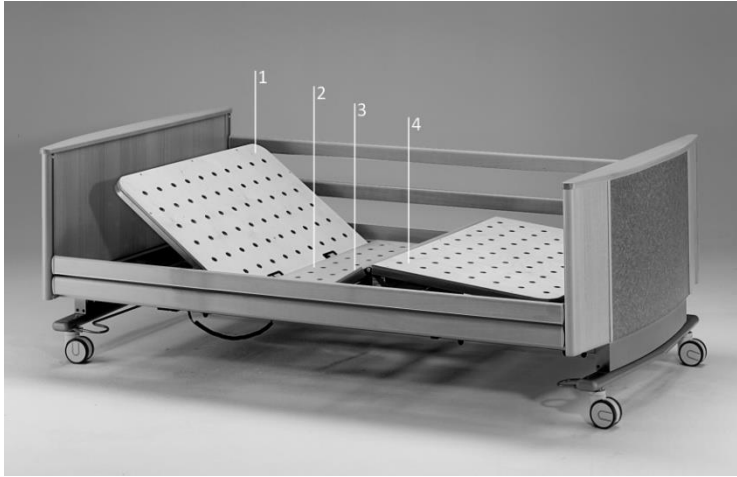


Anschrift des gesetzlichen Vertreters Schweiz



Anschrift des gesetzlichen Vertreters UK

2 General description of the functions



- 1 Back rest
- 2 Seat part (fixed)
- 3 Upper leg rest
- 4 Lower leg rest

Construction design and function

The lying surface with 4 function areas

The lying surface consists of a solid wood panel as standard and is divided into four functional areas: back rest, fixed seat part, upper and lower leg rest.

The comprehensive lying surface frame is welded from a steel tube and stove-enamelled with a PES-powder coating. The variable height adjustment of the lying surface is electric and stepless. It is carried out by 24 V DC motors and controlled by the smooth keys of the hand control. The back rest can be adjusted electrically. The leg part consists of a foot support that is divided into two parts. With a touch of a button on the hand control, each individual position can be adjusted continuously. The electronic hand control also allows an automatic 3-way function to set a stretched leg elevation, the chest and the knee bending position. In the event of a power failure, the back and leg sections can be lowered using a 9-volt battery.

The chassis

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

The side rails

Each nursing care bed is equipped with two integrated side rails on both sides at a special safety height. The side rails can be lifted and lowered through a rail. The sliding pieces run particularly smoothly and quietly with an impact damper, and the ends are fitted with attractive looking caps. The side rail can be easily operated through an ergonomically designed release button.

The operation of the continuous side rails

The release button for adjusting the continuous side rails is located at the top of the inner sides of the head and foot end panels directly next to the metal guides for the side rail bars.

If the side rails are to be lowered, grasp the provided gripping groove of the upper side rail bar (Fig. 1), lift the side rail slightly and press the release button on one side of the head or foot end panel (Fig. 2). The side rail is released on the corresponding side and can easily be lowered down to the stop

(Fig. 3). The side rail is now diagonal. To lower the other side as well, carry out the previously described steps on the opposite end. The side rail is now in a lowered position.

Please note: Be sure to raise the side rail slightly, and only then press the release button!

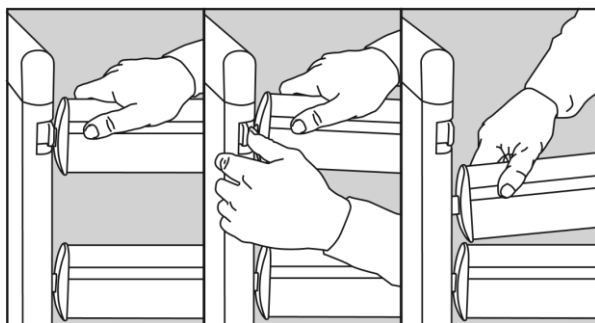


Abb. 1

Abb. 2

Abb. 3

If the side rails are to be brought into the upper position as protection against falling out, grasp the upper side rail bar in the middle of the gripping groove and pull the side rail upwards until it audibly clicks into position at both ends. The side rail is now in its raised position.

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

The distances between the continuous side rails must be less than 12 cm. When using the continuous side rails, they must not remain in the diagonal position.

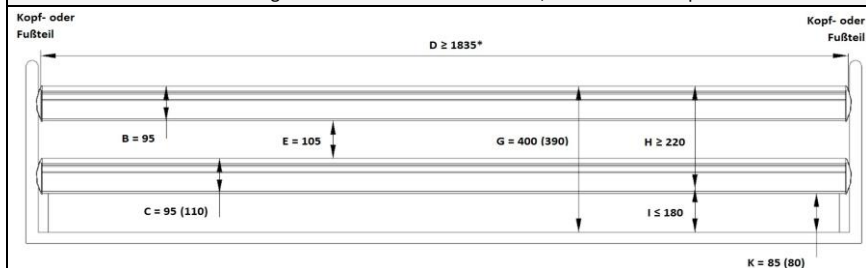
Hazard note from Bock

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

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

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

Fig. 1: Continuous wooden side rail, divided into two parts



Description

All dimensions in mm.

* Depending on the length of the lying surface

The single post at the head and foot end is optional.

The dimension in brackets is optional

Part numbers

Designation item no.

Continuous wood side rail

Two-part (Fig. 1)

Wooden side rail (set: 95 / 95 mm) 90843

Legend

Area	Description
A	Distance between the headboard and side rail
B	Height 1 of the side rail
C	Height 2 of side rail
D	Width 1 of the side rail
E	Distance between elements of the side rail system
F	Distance between the divided side rails
G	Distance between lying surface and the top edge of the side rail system
H	Height of the top edge of the side rail system above the mattress without compression
I	Thickness of the mattress in accordance with intended use
J	Width 2 of the side rail
K	Smallest distance between side rail system and lying surface (or the panel, if present)
L	Distance between the footboard and side rail

3 Electric parts

3.1 The drive unit

The drive unit consists of a double drive with two separate drive units for the electrically movable adjustment of the backrest and leg rest. The level adjustment of the lifting frame is adjusted via one or two individual drives (depending on the model). The level adjustment drive is connected to the control box via a helical cable. The power supply unit converts the input voltage to a safety extra-low voltage of max. 35V DC (direct current). This safety extra-low voltage is used to operate the motors and the hand control. Cables are double-insulated and the power supply unit has a primary fuse.

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

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



9 V block battery for emergency lowering

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

Hazard note from Bock

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

3.2 Caution: Electric drive

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

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

Hazard note from Bock

All drive components must not be opened!

Troubleshooting or exchanging single electrical components may only be performed by specifically authorised professionals.

Hazard note from Bock

The motors comply with splash water protection IPX4. The cables must not be crushed. Adjustment of moving parts may only be used for the intended use. Hermann Bock GmbH assumes no liability for unauthorized technical changes.

Hazard note from Bock

Never attempt to repair electrical equipment yourself. In some cases there may be a risk of life-threatening electric shock! Contact either the Customer Service department at Hermann Bock GmbH or an authorised professional electrician to repair any defects in accordance with all applicable VDE guidelines and safety requirements.

3.3 The drives with mains isolation

Hermann Bock GmbH equips the adilec nursing care bed with drive systems from the company Limoss.

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

- Housing
- Motor
- Gearbox
- Spindle with nut

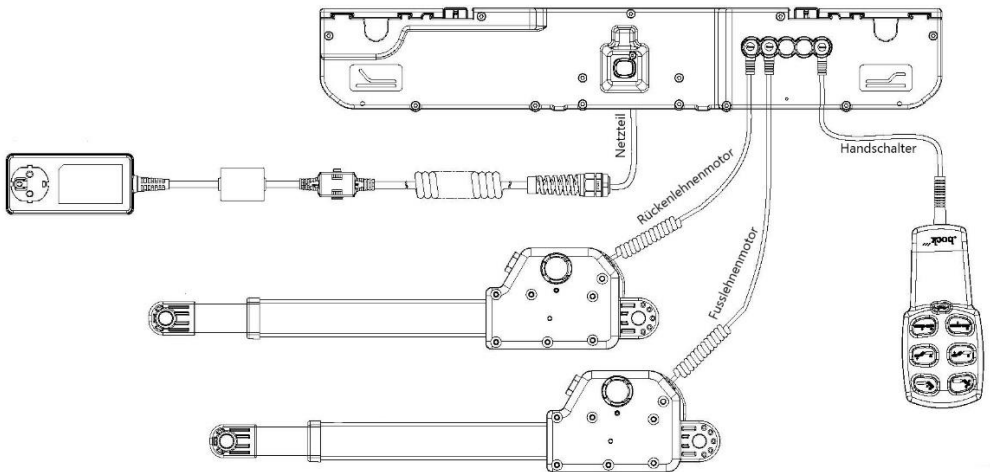
The housing principle of the double drive and the single drive guarantees the permanent function of all drive components. The special design principle is based on two force-absorbing housing shells. Due to a detailed interior structure, the construction of the housing interior creates an essential prerequisite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

3.4 The external switch mode power supply SMPS

The drive has a primary fuse in the power supply unit and an emergency lowering function. The SMPS adapter (Switch-Mode-Power-Supply) is an electronic transformer, which only warms up a minimally under load and is equipped with electronic performance monitoring. The result is a constant voltage up to the maximum load (no loss of speed) and a high level of protection against overloading. The external transformer ensures safety right from the socket because it converts the mains voltage directly into the safety low-voltage which is used to actuate the nursing care bed. It is connected to the mains supply cable by means of a coupling so that it can be replaced separately if it is defective.

The power supply unit complies with the European directives for electrical household appliances and therefore has a low energy consumption of max. 0.5 watts even in standby mode and can be used internationally with variable input voltages from 100 V to 240 V. Electromagnetic alternating fields are not measurable on the SMPS adapter and in operation still lower than mains isolation.

3.5 Connections of the double drive



3.6 Operating status display of the external SMPS unit

The SMPS (switch-mode power supply) unit has an LED that can indicate the following operating states:

- LED On: Ready for operation
- LED Off: Discharged, not connected
- LED Flashing: Error, thermal overload, or short circuit

After disconnecting the mains plug or the connection to the motor, the LED "glows" and then turns off.

3.7 The hand control

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

The lockable hand control, first-fault protected

The ergonomically shaped hand control allows users to control the bed's basic functions with either six or ten large, safe-to-operate buttons. Each button is marked with an appropriate symbol. The position adjustment motors will continue to run as long as the corresponding button is pressed. A coiled cable offers the necessary freedom of movement during use.

The rear-mounted hanger can be used to hang the hand control on the nursing care bed, e.g. during cleaning or when providing patient care. To keep the hand control from getting in the way, simply clip it anywhere on the bed frame.



Back rest upwards



Back rest downwards



Lower leg rest upwards



Lower leg rest downwards



Lying surface upwards



Lying surface downwards



Lighting on/off

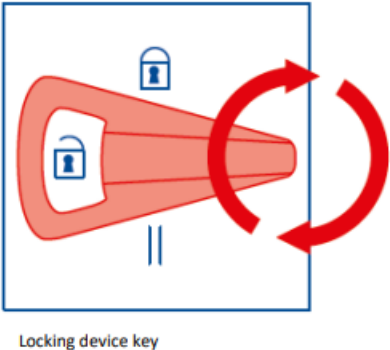
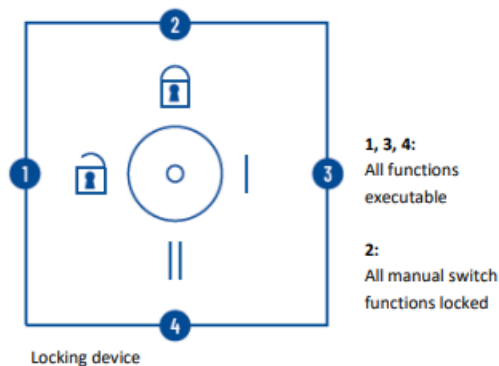
Hazard note from Bock

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

Hand control - lock functions

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

Locking device 1 (standard)

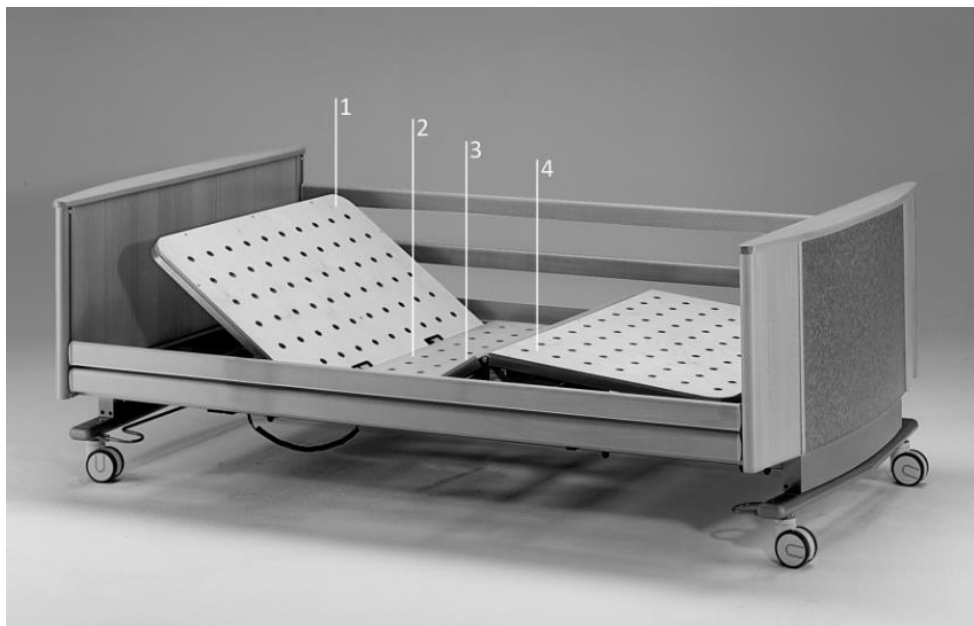


4 Assembly and operation

4.1 Technical data

Technical data			adilec 280	
Lying surface dimension: cm			100 / 120 x 200	
Outer dimension: cm			116 / 136 x 223	
Safe working load: kg			315	
Max. weight of person: kg			280	
Height adjustment: cm			40 - 81	
Max. adjustment angle to horizontal:				
- Back rest			70°	
- Lower leg rest			20°	
- Trendelenburg position			no	
Selection options for side rails:				
- Continuous wooden side rail			•	
Lift space clearance: cm			15	
Sound level: dB(A)			<65	
Weights:				
Total incl. continuous wooden side rail: kg			210	
Continuous wooden side rail: kg/set			12.5	
Metal lifting column: kg			34	
Wooden end panel: kg			22	
Lying surface: kg			81	
Electric data				
Motor		Input voltage: V	230	
		Frequency: Hz	50	
		max. power consumption: A	2	

All parts and Information are subject to a constant further development and therefore may differ from the mentioned data.



4.2 adilec 280

Special features

adilec 280 has a special and extremely stable ball guide system as a special quality feature. The adjustment height of the bed is extremely large and particularly practical. The electrical adjustment of the back and leg sections of the 4-fold lying surfaces is carried out via the hand control with automatic 3-fold function.

4.3 adilec 280 in individual parts

You will receive adilec 280 either fully assembled by Hermann Bock or it will be assembled by our specialist personnel or via your local specialist dealer. The following assembly instructions are therefore intended as a guide for the persons authorised to carry out the assembly.

The scope of delivery of the Bock nursing care bed adilec 280 includes the following parts:

Lying surface with box motor	1 piece
Lifting columns with single drive and castors	2 pieces
Wooden side rails	4 pieces
Side panels	2 pieces
Head and foot end panel	2 pieces

4.4 adilec 280 becomes operational

Before proceeding with the further assembly, all packaging residues must be completely removed.

- The wooden end panel is to be pulled down from the lifting column on both sides.
- Pull both lifting columns off the metal transport lock.
- Insert the two lifting columns into the guide tubes underneath the lying surface and screw them tight with the enclosed screws.
- Remove the transport lock (cable tie) from the lying surface.
- Plug in the electrical connection cables on the lifting column motor.
- Mount the strain relief. Ensure that the cables are laid neatly.

To facilitate further assembly and installation work, the bed should be raised completely.

Screw the lying surface to the lifting columns on both sides. Only use screws (M8x60 and M8x40) with washers.



Put the wooden end panels over the lifting columns. The lifting columns must engage in the recess inside the wood end panel.



Screw the wooden end panels firmly to the lying surface on all four sides. (M8x35 screws).



Fit the wooden side panels to the lying surface, with the soft edge facing upwards.



Disassembly

Pull out the mains plug before disassembly. Disassembly is carried out in reverse order to the assembly description.

4.5 Change of location

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

- bring the lying surface to the lowest position.
- disconnect the mains plug before moving and secure the power cable against falling and being run over
- before reinserting the mains plug, visually inspect the power cord for any signs of mechanical damage (kinks or pinched areas, abrasions or exposed wires).)
- place the power cable in a way that it will not be rolled over or strained during the operation of the bed or could be damaged when inserting the mains plug again

4.6 Transport, storage and operating conditions

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

4.7 Function notes

To keep the nursing care bed in a particular location, the brakes on the bed frame castors must be locked. To do this, push the locking lever on the lower frame downwards with your foot.

When needed, the integrated side rails must be pulled up until they click into position. When using mattresses of different thicknesses, a minimum distance of 22 cm must be maintained between the top edge of the side rail and the mattress without compression; otherwise, a third top-mounted rail should be used.

4.8 Disposal

Each of the components made of plastic, metal and wood are recyclable and can be disposed/recycled in compliance with the relevant legal provisions. Please note that electrically adjustable nursing care beds are considered as waste electrical equipment used for professional purposes (b2b) according to the WEEE-EG Directive 2012/19/EU. All replaced electrical and electronic components of the electrical bed adjustment system must be handled in accordance with the requirements of the German Act on Electrical and Electronic Devices (Elektro- und Elektronikgerätegesetz, ElektroG) and properly disposed of..

4.9 Troubleshooting

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

Malfunction	Potential causes	Remedy
Drive system cannot be operated via hand control	Power cable is not connected	Insert power cable
	No voltage in the socket	Check wall socket and/or fuse box
	Hand control plug not fully in place	Check the plug-in connection on the motor
	Hand control or drive unit defective	Notify the operator or Bock customer service
	Locking mechanism or lock box on hand control is activated	Deactivate locking mechanism or lock box on hand control
Motors stop working when button is pressed after running for a short time	Obstacle preventing bed from changing position	Remove obstacle
	The safe working load has been exceeded	Reduce the load
The drives stop after a longer adjustment time	Adjustment time or safe operating weight exceeded – PolySwitch in control device's transformer has reacted to overheating	Allow the drive system to cool down sufficiently for at least one minute
Opposite functions when operating the hand control	Motor connector internally reversed	Notify the operator or Bock customer service
Individual drive units run in one direction only	Hand control, drive unit or controller defective	Notify the operator or Bock customer service
Drive units stop and bed remains in a tilted position	Constant operation of adjustment functions	Move the lying surface to its lowest position and align it again horizontally. Activate locking function in hand control

5 Accessories

To adapt each nursing care bed more closely to each patient's individual needs, Hermann Bock GmbH offers practical accessories to promote patient mobility. These accessories can be quickly and easily installed at their predetermined attachment points on the nursing care bed. Naturally, each additional piece of equipment meets Bock's highest stand-

ards of quality and safety. In addition to the standard accessories provided as basic equipment for each nursing care bed, Bock also offers an extensive range of optional extra accessories. The available extras vary by bed model, and are adapted to each model's specific functions and location of use. The spectrum of options here ranges from technical components to mattresses and even a side bed.

5.1 Special dimensions

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

Hazard note from Bock

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

The representative of the service hotline of Hermann Bock are looking forward to informing you about the best retrofitting solution for your bed. Hotline no. 0180 5262500 (14 cents/min. for calls from landline phones, 42 cents/min. for calls from mobile phones).

A wide product range of auxiliary furniture complements the various bed models up to the complete interior design of your home. This combination creates a care and living comfort resulting in perfect harmony.

5.2 Assembly accessories

Lifting pole with triangle grip, 6.5 kg

The safe working load of the lifting pole is max. 75 kg.

Delivery includes:

1 piece lifting pole with mounting loop

1 piece triangle grip

- Insert the lifting pole with triangle grip in the provided socket at the head section and hang the triangle handle through the mounting loop.
- Make sure to only use mattress with a required mattress height as described by the company Bock. You can find this information in section 5.3.



ATTENTION: The lifting pole must not swing outside of the lying surface!

Under normal use conditions, the triangle grip has a service life of approximately 5 years. If a lifting pole with triangle grip is installed on the nursing care bed, the bar must be checked as part of each inspection and replaced after no more than 5 years. The grip can be infinitely adjusted within a range of 350 mm. This allows an adjustment range between triangle handle and mattress of at least 550 mm to 850 mm, depending on the mattress thickness. The total height of the nursing care bed increases by 1300 mm when using a lifting pole.

Side rail height extender

The side rail height extender weighs 1.0 kg.

Includes:

Side rail height extender, fully assembled



Open plastic closure, place height extender on top of rail, position in the centre of the rail, and close the closure. Be sure that the height extender's release button is facing outward once installed.

Important note:

The side rail height extender is designed for use with all varieties of Bock wooden side rails. Hermann Bock GmbH assumes no responsibility for use with side rails from other manufacturers!

Side rail bumpers, 1.4 kg

Delivery includes: 1 pc. cover, 1 pc. padding

- Open zipper of the cover and pull the padding from the top over the side rail.
- Pull the foam padding from the inside of the bed into the cover and close the zipper and/or the hook and loop fastener.

**5.3 Mattresses**

Fundamentally, all foam and latex mattresses with a density of at least 35 kg/m³ can be used for Hermann Bock nursing care beds.

For the height of the mattress used, the functional instructions in chapter 4.7 must be considered.

For higher mattresses, an additional side rail attachment must be used, which is available as an accessory. When using foam mattresses, we recommend the use of mattresses with cutting/notches to allow a better combination with the lying surface.

**Hazard note from Bock**

For safety reasons, use only original Hermann Bock accessories that are approved for use with your specific bed model. A detailed overview of accessories and extras available for your bed model is provided on a separate data sheet. Hermann Bock cannot be held liable for any accidents, damages or hazards that may result from use of other accessories!

6 Cleaning, maintenance and disinfection

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

6.1 Cleaning and care

Steel tubes and vanished metal parts:

Please use a wet wipe and a regular mild household detergent for the cleaning and care of these surfaces.

Wooden-, decorative-, and plastic elements:

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

Drive:

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

6.2 Disinfection

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

Manufacturer	Product name	Concentration
Ecolab	Incidin Plus	0.5% solution
Bode Chemie	Bacillol AF	0.5% solution
Schülke	Terralin Protect	0.5% solution

6.3 Avoidance of hazards

Read the following guidelines for the electrical components of the bed in advance to avoid any hazards related to cleaning and disinfection. Failure to follow these guidelines may lead to a risk of injury and significant damage to electric cords and to the drive system.

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

Hazard note from Bock

Use of abrasive cleansers and/or detergents containing grinding particles, cleaning pads or stainless steel cleaners for the cleaning is absolutely not recommended. Neither use organic solvents such as halogenated/aromatic hydrocarbons and ketones nor detergents containing acid or alkaline.

Under no circumstances must the bed be sprayed with a water hose or high-pressure cleaner, as liquid penetrates into the electrical parts, and as a result malfunctions and dangers could occur.

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

7 Guidance and manufacturer's declaration

Guidelines and manufacturer declaration

– Electromagnetic emissions

The nursing care bed is intended for use in an environment meeting the criteria listed below. The customer or user of the nursing care bed should verify that the bed is being operated in an appropriate environment.

Emitted interference measurements	Compliance	Electromagnetic environment – Guideline
HF emissions per CISPR 11 as	Group 1	The nursing care bed uses HF energy only for its internal functions. Its HF emissions are therefore very low, and it is unlikely that nearby electrical devices will be affected by interference. The nursing care bed is suitable for use in all facilities excluding those in living areas and those that are directly connected to a public power grid that also supplies buildings used for residential purposes.
HF emissions per CISPR 11 as	Class B	
Emission of harmonics as per IEC 61000-3-2	Class B	
Emission of voltage fluctuations/flicker as per IEC 61000-3-3	Compliant	

– Electromagnetic interference immunity

The nursing care bed is intended for use in an electromagnetic environment meeting the criteria listed below. The customer or user of the nursing care bed should verify that the bed is being operated in an appropriate environment.

Interference immunity tests	IEC 60601 test level	Compliance test level	Electromagnetic environment – Guidelines
Electrostatic discharge (ESD) as per IEC 61000-4-2	Contact discharge: ± 8 kV Air discharge: ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV	Contact discharge: ± 8 kV Air discharge: ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV	Floors should be made of wood or concrete or be covered with ceramic tiles. If the floor is covered with synthetic material, the relative humidity must be at least 30%.
Electrical fast transients/bursts as per IEC 61000-4-4	± 2 kV for mains power cables ± 1 kV for input and output cables	± 2 kV for mains power cables ± 1 kV for input and output cables	The quality of the power supply should correspond to that of a typical business or hospital environment.
Surge voltages as per IEC 61000-4-5	± 1 kV differential mode voltage	± 1 kV differential mode voltage	The quality of the power supply should correspond to that of a typical business or hospital environment.
Voltage drops, short interruptions and supply voltage fluctuations as per IEC 61000-4-11	0% UT; ½ period; at 0,45,90,135,180,225,270 and 315 degrees; 0% UT; 1 period; 70% UT; 25/30 periods; single-phase at 0 degrees 0% UT, 250/300 periods	0% UT; ½ period; at 0,45,90,135,180,225,270 and 315 degrees; 0% UT; 1 period; 70% UT; 25/30 periods; single-phase at 0 degrees 0% UT, 250/300 periods	The quality of the power supply should correspond to that of a typical business or hospital environment. If the user of the nursing care bed requires continued functionality even in the event of interruptions to the power supply, it is recommended that the nursing care bed be powered from an uninterruptible power supply or a battery.
Magnetic field at supply frequency (50/60 Hz) as per IEC 61000-4-8	30 A/m	30 A/m	Magnetic fields at the mains frequency should correspond to the typical values seen in business or hospital environments.

NOTE: U_T is the mains AC voltage before application of the test level.

– Electromagnetic interference immunity

The nursing care bed is intended for use in an electromagnetic environment meeting the criteria listed below. The customer or user of the nursing care bed should verify that the bed is being operated in an appropriate environment.

Interference immunity tests	IEC 60601 test level	Compliance test level	Electromagnetic environment – Guidelines
Conducted HF disturbances as per IEC 61000-4-6	3 V 150kHz-80MHz	3 V 150kHz-80MHz	
Radiated HF disturbances as per IEC 61000-4-3	6 V in ISM and amateur radio frequency bands	6 V in ISM and amateur radio frequency bands	
Special frequencies as per IEC 61000-4-3, Table 9 were tested as well	10 V/m 80MHz-2700MHz	10 V/m 80MHz-2700MHz	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2 These guidelines may not be applicable in all cases. Emanation of electromagnetic effects is influenced by absorption and reflection by buildings, objects and people.

* The field strength of fixed transmitters, e.g. base stations for mobile phones and land mobile radios, amateur radio stations, AM and FM radio broadcasters and TV broadcasters, cannot be theoretically predicted with accuracy. To determine the electromagnetic environment with regard to fixed transmitters, an investigation of the specific site should be considered. If the field strength measured at the site where the nursing care bed is being used exceeds the upper compliance limit, the nursing care bed should be monitored to ensure that it is functioning as intended. If unusual performance characteristics are observed, additional measures may be necessary, e.g. changing the orientation or location of the nursing care bed.
b Above the frequency range from 150 kHz to 80 MHz, the field strength should be less than 3 V/m.

8 Regular inspections with service

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

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

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

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

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


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

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

Inspection checklist for Bock Nursing care beds

Page 1 of 2

Publication date: 01/09/2021 / Ver. 08

Model number / Year of manufacture:		
Serial/Inventory no.:		
Manufacturer:	Hermann Bock GmbH	


Visual/Functional inspection:

No.	Description	Yes	No
General:			
1	Type plate/Sticker present on bed and legible?	<input type="checkbox"/>	<input type="checkbox"/>
2	User manual available?	<input type="checkbox"/>	<input type="checkbox"/>
3	Does operator's use comply with the product's intended use?	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the safe working load indicated on the type plate (patient weight + mattress weight + accessory weight) complied with?	<input type="checkbox"/>	<input type="checkbox"/>
5	Are accessories (e.g. lifting pole incl. grip and strap, grab rail, bumper wheels, etc.) safe and free of defects? Are all accessories securely fastened in place and free of any signs of wear? Is the grip on the lifting pole no older than 5 years (usable service life of the grip as per manufacturer guidelines)? Is the correct attachment method used for the lifting pole ((welded instead of edged), or has it already been retrofitted?	<input type="checkbox"/>	<input type="checkbox"/>
6	For retrofitted lifting pole sleeve: Screw tightened to 6-9 NM?	<input type="checkbox"/>	<input type="checkbox"/>
7	Are mechanical fasteners (screws, bolts etc.) complete and free of defects? Screws fully tightened?	<input type="checkbox"/>	<input type="checkbox"/>
8	Can any splinters, cracks or other damage be seen in the wood?	<input type="checkbox"/>	<input type="checkbox"/>
Electrical components:			
9	Are power cables, connecting cords and plugs free of breaks, kinks or pinched areas, abrasions, porous areas and exposed wires?	<input type="checkbox"/>	<input type="checkbox"/>
10	Strain relief device firmly screwed into place and working properly?	<input type="checkbox"/>	<input type="checkbox"/>
11	Safe, correct cable management?	<input type="checkbox"/>	<input type="checkbox"/>
12	Motor and hand control housings free of damage? Has any moisture made its way inside?	<input type="checkbox"/>	<input type="checkbox"/>
13	Is the power supply unit free of damage?	<input type="checkbox"/>	<input type="checkbox"/>
14	Motor's lift tube and clevis free of damage and defects?	<input type="checkbox"/>	<input type="checkbox"/>
15	Hand control (buttons and lock mechanism) free of defects? Limit switch functioning correctly?	<input type="checkbox"/>	<input type="checkbox"/>
16	Block battery/Emergency lowering system: Working correctly and free of defects?	<input type="checkbox"/>	<input type="checkbox"/>
17	<i>For adi.flex bed only:</i> Has the lift tube been sprayed with silicone spray?	<input type="checkbox"/>	<input type="checkbox"/>
Lower frame (for scissor lift beds) / end panel s (for control unit beds):			
18	Is the frame construction free of defects and cracked welding joints?	<input type="checkbox"/>	<input type="checkbox"/>
19	Are castors and bumper wheels (if present) free of damage?	<input type="checkbox"/>	<input type="checkbox"/>
20	Plastic end caps and mechanical fasteners (screws, bolts etc.) complete and free of defects?	<input type="checkbox"/>	<input type="checkbox"/>
21	Vertical adjustment working correctly and free of defects?	<input type="checkbox"/>	<input type="checkbox"/>
22	Safe brake and locking operation, wheels spinning freely?	<input type="checkbox"/>	<input type="checkbox"/>
Mattress support frame and end panels:			
23	Wooden slats, aluminium/steel slats, support plate and/or springs free of defects? (no cracks or fractures, firmly seated, adequate load pressure, etc.) <i>For dino bed only:</i> Aluminium slats no more than 6 cm apart?	<input type="checkbox"/>	<input type="checkbox"/>
24	Mattress support frame and lifting components free of defects, and no damage to welding joints?	<input type="checkbox"/>	<input type="checkbox"/>

Inspection checklist for Bock Nursing care beds

Page 2 of 2

Publication date: 01/09/2021 / Ver. 08

Client:		
Address:		
Location:		

25	Plastic end caps and mechanical fasteners (screws, bolts etc.) complete and free of defects?	<input type="checkbox"/>	<input type="checkbox"/>
26	Head and foot end panels firmly seated and free of damage?	<input type="checkbox"/>	<input type="checkbox"/>
27	Back/leg rest adjustment and special functions working correctly and without obstruction?	<input type="checkbox"/>	<input type="checkbox"/>
28	Secure position-locking mechanism at every stage in lower leg rest (if present), including under load?	<input type="checkbox"/>	<input type="checkbox"/>
29	<i>domiflex® 2 bed only:</i> Does the 6 tappet spanner provide adequate clamping? The lock nut must be tightened to at least 6 NM.	<input type="checkbox"/>	<input type="checkbox"/>

Side rails:			
30	Side rails in place and free of cracks, breaks or damage?	<input type="checkbox"/>	<input type="checkbox"/>
31	Side rail beams no more than 12 cm apart? <i>For dino bed only:</i> Vertical bars no more than 6 cm apart? Distance between side rail system and lying surface no more than 6 cm?	<input type="checkbox"/>	<input type="checkbox"/>
32	Top of side rail more than 22 cm above mattress surface? <i>For dino bed only:</i> Top of side rail more than 60 cm above mattress surface?	<input type="checkbox"/>	<input type="checkbox"/>
33	<i>For divided side rails only:</i> Distance between end panel and side rail no more than 6 cm, and distance between separated side rails greater than 31.8 cm?	<input type="checkbox"/>	<input type="checkbox"/>
34	Side rails slide easily in tracks and lock securely into place? <i>For dino bed only:</i> Gates slide easily along aluminium profiles? Gates lock securely into locking mechanism?	<input type="checkbox"/>	<input type="checkbox"/>
35	Side rails/sections adequately anchored or seated?	<input type="checkbox"/>	<input type="checkbox"/>
36	Side rail stress test with no deformation?	<input type="checkbox"/>	<input type="checkbox"/>

Electrical tests:

Insulation resistance – (Only needs to be measured for models built before 2002.)			
38	Insulation resistance – measured value greater than 7 MΩ?	<input type="checkbox"/>	<input type="checkbox"/>
Device leakage current – (This measurement does not need to be done for beds manufactured in May 2018 or later for beds with a drive unit from Limoss, or for beds manufactured in July 2015 or later for beds with a drive unit from Dewert in the first 10 years of their useful service life if a visual and functional inspection has been conducted, provided that the bed in question is a nursing care bed with a switch-mode power supply (SMPS) from Limoss or Dewert. For these beds, the SMPS converts the mains voltage directly into a safety extra-low voltage no greater than 35 V.)			
39	Direct measurement of device leakage current – measured value less than 0.1 mA?	<input type="checkbox"/>	<input type="checkbox"/>

Evaluation:

40	All values in acceptable range, inspection passed?	<input type="checkbox"/>	<input type="checkbox"/>
If inspection not passed:		<input type="checkbox"/> Repair <input type="checkbox"/> Reject	
Date / Inspector's name in block letters / Inspector's signature			Next inspection



Hermann Bock GmbH
Nickelstr. 12
D-33415 Verl, Germany

Phone: +49 (0) 52 46 92 05-0
Fax: +49 (0) 52 46 92 05 -25
Internet: www.bock.net
E-Mail: info@bock.net



Our SALES PARTNERS

Our business partners pursue the same strategy as we do: quality, innovation and above-average standards that are internationally recognised. You can rely on our business partners as you can rely on us.

Please note that training, spare parts supply, repairs, inspections and other services can only be guaranteed by our authorised personnel and our sales partners. Otherwise, all warranty claims will be void.

A listing of our current distributors can be found under <https://en.bock.net/contact/distribution-partners/>