User Manual

KANMED BABYBED

Art no: BB1-070/2
March 2007

CE

Caution
Please read this manual carefully.
Incorrect use may cause patient injury.

Manufactured by:
KANMED AB
www.kanmed.se

Distributed by:

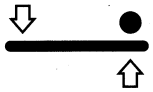
Contents

KANMED BABYBED
TWIN VERSION AND FIXED HEIGHT VERSION

1 General Description

The intended use of the Kanmed Babybed is to provide an ideal bed for premature and new born babies in hospital. It is also intended to be used with the Kanmed Babywarmer system.
It is designed for hospital use only and must be used according to the instructions given in this manual, according to your established clinical routines and by qualified personnel. Only persons that have been instructed in the use of the Kanmed Babybed shall be allowed to use the product.
Warning: Do not use the Kanmed Babybed with babies/small children that are capable to move so much that they might fall/climb out of the bed.
Do not leave a baby unattended with the side walls down.
Respect the weight limits.
Do not place electronic equipment on the shelf under the bed.

2 Description of Symbols

	Maximum Load permitted: **Bed surface for BB-1 and BB-3**: 10 kg. (Excl BABYWARMER Control Unit (3kg) and Water mattress (4.5kg)) **Bed surface BB-4**= 10 kg (Excl Two BABYWARMER Control Unit (2x3kg) and two Water mattresses (2x4,5kg) or one BABYWARMER Control Unit (3kg) and twin water mattress (9kg)) **Shelf under bed** surface:10 kg **Top shelf**: 5 **25 mm Side poles to top shelf**: 5 kg on each **Horizontal bars top shelf system**: 10 kg **Storage box system:** 10 kg
	Read users manual before use
	Symbol for raising and lowering the bed (not for BB-03)
	Symbol for tilt function
	Fulfils MDD 93/42 EEC
	AC current (not for BB-3)
	Protection grade Type B (Body) (not for BB-3)
	Approval symbol for the USA and the Canadian Markets
	When the Babybed reached end of life, it should be returned to the distributor for recycling in accordance with the EU 2002/96/EC (WEEE) directive if applicable.

3 Preparations before use

3.1 Mounting of the Wheels

Lay down the unit carefully on its side.
Be careful not to damage the side walls.
Note that the lockable wheels shall be mounted on the long legs.
Use the enclosed Allen key and tighten hard!
Be careful not to damage the paint.
Raise the unit to an upright position

3.2 Side Walls

If sidewalls are not mounted then please see section Service.
Raise the sidewalls gently and slide them into place and remove the protection film.

3.3 Tent pole, Tent and Mattress

Mount the tent pole in the rear bracket.
The Tent has a channel inside. Thread the Tent pole into the channel in order to secure it.
Place the mattress in the bed.

3.4 Check all bolts and screws

Make sure that all bolts and screws are properly tightened and that the bed feels stable. Run the electrical bed up and down and ensure that it moves smoothly without any unusual noise.

3.5 Kanmed Babywarmer

The Kanmed Babywarmer control unit is hung on its bracket under the bed.
The heating pad cable is preferably thread through one of the holes in the bed and connected to the control unit. The Kanmed Babywarmer is connected to mains power by its own cable.

3.6 First cleaning

The unit is factory clean but must be cleaned according to your hospital routines.
Please refer to section maintenance for cleaning before use with the first patient.

4 Handling and daily use

4.1 Foldable walls

The side walls and the front wall are folded down by lifting them upward until the upper guide pin is visible, then fold them down.
Note: When you close the side wall check that nothing gets trapped.

4.2 Moving the bed around

Note: Do not use the side walls for moving the bed.
Hold the corners to move the bed and to transport it longer distances.
Do not forget to unplug any cables.
Note: Use a low bed height when transporting with a baby inside.

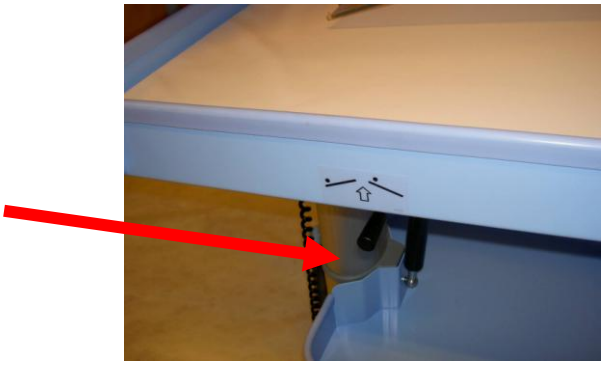
4.3 Connecting the lifting column to the mains (not for BB-3)

For connection of the lifting column use the included mains cable.
NOTE: The only way to break the power is to either disconnect the cable at the pillar or at the wall socket.

4.4 Adjusting height (not for BB-3)

The height is adjustable by the pushbuttons on the front.
The lifting column has an overload protection that will not be activated under normal conditions. Constantly adjusting height with heavy loads may activate the overload protection.
When the motor has cooled down the lifting column works as normal again.
Warning:
Do not block the movements when activating the electrical height adjustment.
When changing height, make sure that no person, cable or other items prevents the movement and that no cable is jammed or wrapped between the pillar and the wheelbase. Blocking the movement can damage the pillar and void warranty.

4.5 Tilting



When tilting the bed, press the release handle upward or downward to release the bed.
At the same time, press the bed's corner upward or downward till the desired tilt is achieved.
The release handle can be reached and manoeuvred from both sides of the bed.

4.6 Accessories

Note! Only use accessories approved by KANMED.
Respect the load limits.

5 Cleaning and Maintenance

Recommended controls	Executed by	Time schedule	Additional information
Cleaning of the bed	User	Hospital routines	Use a surface cleaning and disinfecting agent recommended by your internal hygienist. Note: KANMED Baby Warming Bed must under no circumstances be showered with any fluid. Do not clean it in disinfecting chambers.
Cables and connectors	User	Every day	Make sure that they are in good condition.
Mattress	User	Hospital routines	See label on Mattress edge
Tent	User	Hospital routines	See label tent
Kanmed Babywarmer	User		See Kanmed Babywarmer user manual
Control of functions and adjustments.	Technician	At least once a year	See service section

6 Trouble shooting

Symptom	Possible cause	Action
The lifting column does not move as wanted. (not for BB-3)	No mains	Check the cables.
	Something blocking the movement	Check that nothing blocks
	Electrical connection broken or not properly connected	Technical service
You can not tilt the bed properly. It gets stuck in utmost positions. It does not keep the position	Control is out of order or needs adjustment	Technical service
	Something is blocking it	Check that nothing blocks it
Bed feels unstable	Loose screws or wheels	Technical service
Height adjustments makes unusual noises		Technical service

7 Warranty Statement

KANMED warrants the purchaser that the Babybed is free from defects in materials and workmanship for a period of 12 month from the date of delivery.
The sole obligation of KANMED with respect to any such defect is limited to the repair with new or re-manufactured parts or, at the discretion of KANMED, replacement of the equipment or refunding of the purchase price.
This warranty shall not apply if the product has been modified, adjusted or repaired other than by KANMED or by organisations authorised by KANMED or modified, adjusted or repaired not in accordance with written instructions provided by KANMED. Neither shall the warranty apply if the equipment has been subject to misuse, negligence or accident.
These warranties are made on the condition that prompt notification of a defect is given to KANMED or its authorised dealers within the warranty period.
KANMED shall have the sole right to determine whether a defect exists.
KANMED shall not in any case be liable for special or consequential damages arising from the breach of warranty, reach of contract, negligence or any other legal theory.

8 Technical Data

	BB-1 Standard	BB-4 Twin	BB-3 Fixed height
Outer dimensions:	760mm x 560mm	850x700mm	760mm x 560mm
Bed surface:	Inner dims 665mm x 445mm	Inner dims 765mmX640mm	Inner dims 665mm x 445mm
Height:	Max 990mm	Max 990mm	Fixed to 800mm
	Min 700mm	Min 700mm	
Weight:	About 33 kg	About 40kg	About 25 kg
Wheels base:	700mm x 500mm	700mm x 500mm	700mm x 500mm
Wheels:	Diameter 125mm.	Diameter 125mm	Diameter 125mm.
	Front wheels with brakes.	Front wheels with brakes.	Front wheels with brakes.
	Roller bearings.	Roller bearings	Roller bearings.
Tilt:	± 22°	± 22°	± 22°
Mattress:	Polyurethane with PVC cover. (665x445x30mm)	Polyurethane with PVC cover. (765x640x30mm)	Polyurethane with PVC cover. (665x445x30mm)
Tent:	100% Bedton. Washable 60°C	100% Bedton. Washable 60°C	100% Bedton. Washable 60°C
Shelf:	Min 400mm x 400mm	Min 400mm x 400mm	Min 400mm x 400mm
Colour:	Unisex light blue	Unisex light blue	Unisex light blue
Voltage	100-240Vac, 50/60Hz	100-240Vac, 50/60Hz	NA
Power:	100VA	100VA	NA
Fuses:	NA	NA	
Protection:	Class I	Class I	NA
Used standards:	SS EN 60 601	SS EN 60 601	

Modifications	Any modifications on Kanmed Babybed including home made accessories will void KANMED's responsibilities totally and are not allowed without written consent of KANMED.
Creating Systems	Any person connecting the Kanmed Babybed to any other systems mains socket may have created a "system" according to IEC 60601-1 section 16, and must be qualified to evaluate any consequences that may harm staff, patient and equipment.
Expected Lifetime	Kanmed warrants a safe lifetime of 10 years from first day of use. This is under the condition that the unit has been serviced according to the user and or service manual and that the unit has not been modified or changed in any way or for any reason.

Products carries the CE-mark.
Conforms to UL 60601-1 Certified to CAN / CSA – C22.1 No 601.1

EMC
The Kanmed Babybed contains no electronics sensitive to EMC.
Highly sensitive equipment connected to the same electrical outlet as the Kanmed Babybed may be affected by the lifting column electrical motor. The motor may generate a moderate amount of flicker during start.

Environmental data
In use: +10 to + 40ºC, <85% RH
Transport: -20 to +60ºC, non condensing.

Lifting column limitations
Observe that the total load in the bed surface is limited to 10kg (BABYWARMER system and water mattress not included).
The electrical motor in the lifting column is not designed for continues use.
Continued operation should be limited to 2 min, max 5 cycles per minute.

9 Technical service and maintenance

NOTE: All spare parts used for replacement or repairs shall be supplied by KANMED or its authorised distributor. Use of "non KANMED permitted parts" automatically transfers all safety responsibilities to the hospital. Only qualified personnel shall attempt repairs.

9.1 Annual checks

Check the following at least once a year:

- That cables and connectors free of defects.
- Test the foldable sides for cracks or damages.
- That the switch for pillar height control responds without delay, that the raising and lowering function is working correctly and that it makes no noise when operated.
- That the tilt function works correctly. It should not make any noises.
- That the wheels are tightened to the stand and not damaged in any way, that they roll without noise, and that the wheels locking function works properly.
- That all screws are properly tightened, especially the screws connecting the height adjusting pillar to the wheel base, the screws on top of the pillar, the screws holding the shelf and gas spring, the clips holding the bolt for the bed surface.

9.2 Adjusting the release of the gas spring

By manoeuvring the release arm you press down the release pin at the top of the gas spring. Adjust by releasing the gas spring from the pillar. Start by taking away the small safety spring. Make someone or something hold the bed. Pull out the gas spring from the pillar. Un-tighten the locking nut by turning the gas spring you adjust the contact with the release arm.

9.3 Changing side walls

The easiest way to replace a side wall is to place it in its hanging down position, insert one pin in the lower grove, bend the wall and insert the other pin.

9.4 Changing the side brackets

The side wall brackets are screwed from the inside of the bed with two (2) screws at each corner.

9.5 Changing the electrical control

Always unplug the power before doing repair on the Babybed.

- Remove the two (2) Torx screws under the power inlet and slide the power supply out of the box and detach the spiral cable from the connectors.
- Remove the two screws (Philips) under the remote control and slide the unit by pulling it gently out from the front of the bed.

9.6 Changing the pillar

Disconnect power. Remove the two (2) Torx screws under the power inlet and slide the power supply out of the box and detach the spiral cable and the pillar cable from the connectors. Loosen the gas spring as described in 9.2. Remove the pin that holds the bed to the pillar and take away the bed. Remove the bed holder from the top of the pillar. Loosen the 6 screws that hold the pillar to the wheel base. Mount the new pillar. Connect the cables and test run the new pillar. Rebuild the bed again. Make sure that all screws are properly tightened.

10 Spare parts/Accessories

Part no	Description	Remark
700-0723	Side wall left/right	19 cm height.
700-0721	Side wall front	19 cm height.
700-0722	Side wall rear	19 cm height, Grooves for tubing
700-0728	Side wall left/right	24 cm height.
700-0729	Side wall front	24 cm height.
700-0730	Side wall rear	24 cm height. Grooves for tubing
700-0727	Tent Pole	
700-0717	Silicon corner/handle	Ordered by the piece
BB-20	Foam mattress	For BB-1 and BB-3. Foam mattress, sealed, easy to clean 650 x 440 x 40 mm
BB-21	Tent for BB-1	Please check with your local supplier or on the KANMED homepage www.KANMED.se for colours available

NOTE: Other accessories may be available. Please check with your local supplier or on the KANMED homepage www.kanmed.se
Please contact your supplier for a price list.

11 EMC guidelines

Guidance and manufacturer's declaration – electromagnetic emissions		
The Babybed is intended for use in the electromagnetic environment specified below. The customer or the user of the Babybed should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	The Babybed 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	Class B	The Babybed is suitable for use in all establishments including domestic establishments and those directly connected to the public low-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	

Guidance and manufacturer's declaration – electromagnetic immunity			
The Babybed is intended for use in the electromagnetic environment specified below. The customer or the user of the Babybed 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 %.
Electrical fast transient / Burst IEC 61000-4-4	+/- 2 kV for power supply lines +/- 1 kV for input/output lines	+/- 2 kV for power supply lines n/a. 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 n/a. for common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T)) for 5 sec	<5 % 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 [Equipment or System] requires continued operation during power mains interruptions, it is recommended that the [Equipment or System] be powered from an uninterruptible power supply or 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.			

Guidance and manufacturer's declaration – electromagnetic immunity

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

Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
			Portable and mobile RF communications equipment should be used no closer to any part of the Babybed, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	**Recommended separation distance** $d = 1{,}2\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,5GHz	3 V/m	$d = 1{,}2\sqrt{P}$ 80 MHz to 800 MHz $d = 2{,}3\sqrt{P}$ 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 meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with the following symbol. 

NOTE 1 At 80MHz and 800MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflected

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 Babybed is used exceeds the applicable RF compliance level above, the Babybed should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Babybed.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the Babybed

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

Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter** m		
	150 kHz to 80 MHz $d = 1{,}2\sqrt{P}$	**80 MHz to 800 MHz** $d = 1{,}2\sqrt{P}$	**800 MHz to 2.5 GHz** $d = 2{,}3\sqrt{P}$
0.01	**0.12**	**0.12**	**0.24**
0.1	**0.38**	**0.38**	**0.73**
1	**1,2**	**1.2**	**2.3**
10	**3,8**	**3.8**	**7.3**
100	**12**	**12**	**23**

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (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.

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