

HealthCo
LTD



Specialist Beds User Manual

IMPORTANT:

Do not use HealthCo SPECIALIST BEDS without having first read this manual.

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1. INTRODUCTION

The bed in the picture is designed for long-term care patients in hospitals and nursing homes. The bed qualifies for EN-60601-2-38, EN-60601-1-2, EN 60601-1-4, and ISO 10993 standards. The standards cover 93142/EEC System certificate that is related to design, production, distribution of medical devices and accessories. The standards cover 89/336/EEC Systems certificate required by other electromagnetic electrical devices. Manufacturer produces according to EN ISO 9001:2000 and EN ISO 13485:2000 quality control standards.

Before starting up the bed, the details should be gone over. All functions and use of the bed should be done according to the manual. Use of the bed against the manual will create risk. The manufacturer is not responsible for improper use of the bed.



CAUTION!

- The manufacturer can't be held liable for damage because of careless, misuse, and wrong relocation.
- Manufacturer, vendor, or trained personnel should follow the instructions for transportation of the bed.
- Instructions for initial start-up of the bed must be closely followed for safety.

1.1 Parts Delivered

Beds castors are designed to be used on smooth surfaces and indoors. But, it would be dangerous to use on dirty and non smooth surfaces. Read the manual before using the bed, please. The bed shouldn't be used if any broken part is noticed that will be harmful to patients or hospital staff. The bed should be installed by an authorized personnel and a warranty should be provided for correct installation. Manufacturer's employee must know how the bed functions. **User must be sure about how to use the bed and the bed properly functioning. The bed should be used on hard floor as described.**

2. GENERAL EXPLANATIONS

The manual should definitely be read before use of the bed in order to avoid danger caused by user.

2.1 Safety Instructions

- Nurses and caregivers should have the minimum experience and knowledge about bed's functions. All of the functions of the bed should be done according to the manual.
- Do not use the bed if there is a problem with the bed. Do not use the bed in a condition that will cause damage to patient or personnel.
- Only should the trained personnel use the bed.
- Manufacturer's employee should inform the user about what functionalities the patient can use such as control panels as well as the safety instructions.
- All functions of the bed and whether the bed works should be checked before it's used.
- The bed should be used on clean and smooth floor.
- The thickness of the mattress shouldn't exceed 14 cm.
- Safe load capacity must not be gone over. In situations safety load capacity must be gone over, the bed must be in lowest position and functions must not be used.
- The castors must always be locked when there is a patient on the bed. If not, there will be danger for patient when he/she is trying to lie on the bed.
- A second person must not sit on the bed other than patient.
- **The bed must not be used by two patients at the same time.**
- All precautions must be taken while the bed is being adjusted to the desired position in order to avoid any harm to patients or others.
- It must be sure that the accessories added to the bed don't interfere with bed's functions.
- Disconnect the power cord for cleaning or changing any part of the bed.
- Patient or caregiver is always in danger in situations below.
- ❖ Power cord is damaged,
- ❖ While backrest is in motion, hand, foot, or head shouldn't be stick into gaps. Otherwise; very serious damages will occur.
- ❖ The gap between upper frame and lower frame must not be used as lying surface.
- ❖ While the bed is transported on a non smooth and unclean surface,
- ❖ Wrong maintenance is done, (For instance: to wash the bed with water or pressured water)
- ❖ When exceeding safe working load. (45% of safe working load to the backrest, 25% to the leg rest, and 30% footrest section of the bed.)
- ❖ In situations an untrained personnel or unauthorized personnel use the bed or its functions.
- ❖ In situations plastic parts on backrest and leg rest sections are placed carelessly.
- The bed must not be used around explosive or flammable materials.
- Headboard, footboard or side rails must not be used as seat.
- IV pole must not be used as support.
- Power cord must be connected in order to use some of the functions of the bed.

- Only should approved parts be used as spare parts. The manufacturer is not responsible for any damage or harm caused by using spare parts acquired from unauthorized vendors.
- All functions of the bed must be locked while the bed is cleaned or is repaired.

2.2 Environment Bed In Use

- Room temperature should be between 10-40 degrees.
- Humidity should be between 30-75%.
- Barometric pressure should be between 700 hpa- 1060 hpa.



WARNING!

Manufacturer's advice should be taken when the bed will be used for different purposes. The bed is designed to be used for medical purposes. Power output must be adjusted to the local.

The bed must not be used where there are explosive and flammable materials. The power supply should be cut under bad weather conditions.

2.3 Technical Features

FEATURES	Paloma	Leona	Melissa	Louisa	Helena
Total Length	2160 mm	2160 mm	223 mm	2160 mm	2160 mm
Total Width	1010 mm	1010 mm	1010 mm	1010 mm	1010 mm
Laminate Wood Backrest and X-Ray cassette socket	STD.	Optional	Optional	Optional	Optional
Height of bed (without mattress)	460-860 mm	460-860 mm	370 – 800 mm	370 – 800 mm	370 – 800 mm
Trendelenburg	0 – 16°	0 – 16°	0 – 16°	0 – 16°	0 – 16°
Backrest Height	70°	70°	70°	70°	70°
Footrest Height	40°	40°	40°	40°	40°
Under bed clearance	150 mm	150 mm	150 mm	150 mm	150 mm
Castor diameter	150 mm	150 mm	150 mm	150 mm	125 mm
Weight of bed (kg) (with accessories)	158 kg	145 kg	120 kg	120 kg	120 kg
Safe Working Load(kg)	230 kg	230 kg	230 kg	230 kg	230 kg
Battery	Yes	Yes	Yes	OPT	OPT
Nurse Control Unit	Yes	Yes	Yes	Yes	N/A
Manual CPR	Yes	Yes	Yes	Yes	OPT
Linen Holder	Optional	Optional	Optional	Optional	Optional
Side Rail Control Unit	Optional	Optional	Optional	Optional	Optional

3. ELECTRICAL FEATURES

The beds are manufactured according to the countries' electrical output.



WARNING!

The bed is manufactured according to 60601-1-2 EN standards in order to minimize unwanted magnetic electrical risk. To avoid these risks, the bed should be used according to instructions in the manual.

3.1 Control Panel Features

Manufacturer	LINAK
Reference	CB 6M
Input Voltage	230V
Frequency	50–60 Hz
Power	330 VA
Output Voltage	24 V Constant
Fuse	1.5 A max
Class	I
Type	B
Liquid Ingress Protection	IPX4

3.2 Battery Features

Battery	2 X 12 V	2 X 12 V
Manufacturer	LINAK	MUKA
Reference	BA1200	MUKA
Liquid Ingress Protection	IPX4	IPX4
Class	II	II
Charge Time	10 ≈ 12 hours	10 ≈ 12 hours
Safe Working Temperature	+5°C ≈ +40°C	+5°C ≈ +40°C



WARNING!

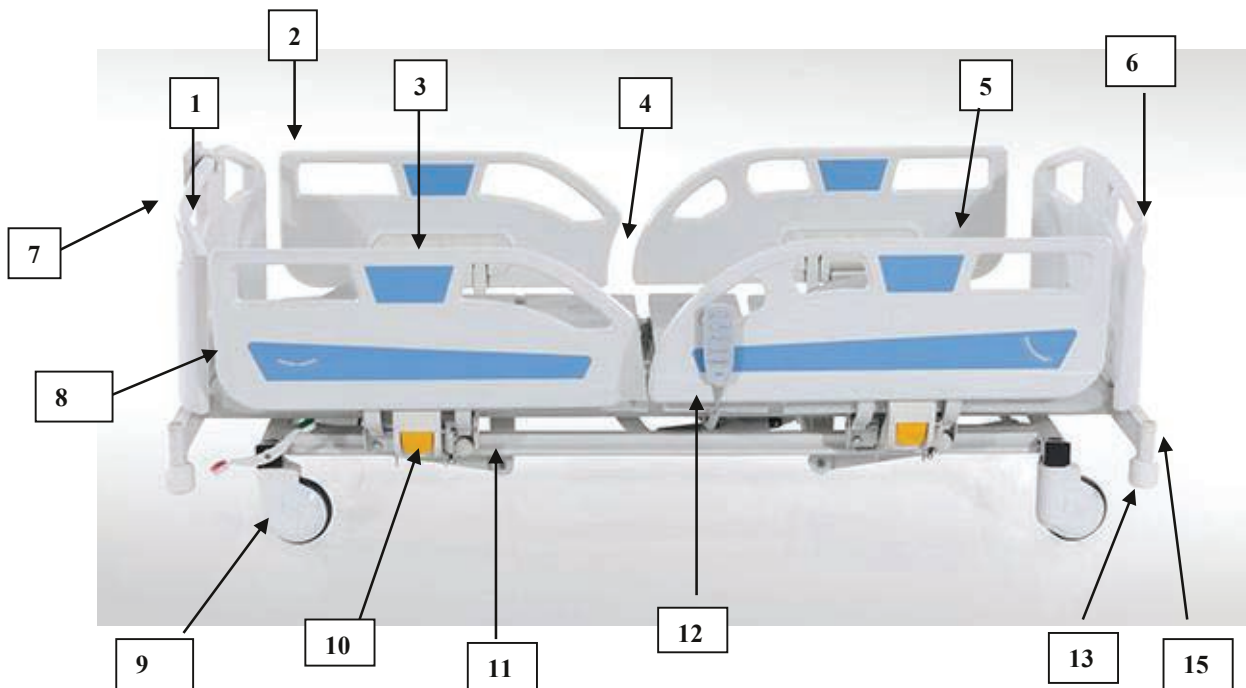
- Used battery should not be opened.
- Battery shouldn't be burnt.
- Battery shouldn't be in contact with water.
- Changing battery should be done by trained personnel.

3.3 Actuator Features

	Manufacturer	P / N	CLASS	Max. Power (Push)	Voltage
Backrest Actuator	LINAK	LA 27 / LA 31	II	3500 N / 6000 N	24 V

Legrest Actuator	LINAK	LA 27	II	6000 N	24 V
Hi/Lo Actuator	LINAK	LA 31	II	6000 N	24 V
Hi/Lo Actuator	LINAK	BL 1	II	2000 N	24 V

4. PRODUCT DESCRIPTION



1	Footboard	10	Side Rail release mechanism
2	Footrest	11	Frame Mechanism
3	Legrest	12	Hand control unit

4	Fowler	13	Crash Bumper
5	Backrest	14	Backrest and Angle Gauge
6	Headboard	15	Accessory Sockets
7	Nurse Control Unit	16	
8	Side Rail Mechanism	17	
9	150 mm Central Lock Castors	18	

5. START-UP OF THE BED

Rules below must be followed during the initial startup of the bed.

- Open the bed's box very carefully,
- Check if there is any damage during transportation,
- Check if there is any missing part in the box. If so, call the service,
- Read the manual very carefully before doing anything with the bed,
- Assemble the accessories as it's described in the manual,
- Make sure power cord is plugged before using any control unit on the bed,
- Make sure all functions of the bed (backrest, legrest, auto-contour, hi/lo, trend positions) and buttons properly work,
- Make sure mechanical parts of the bed (manual CPR, footrest section, side rail mechanism, castor lock mechanism) properly work.



WARNING!

- Pay attention that control units are in your way and don't get stuck while using bed's functions,
- Don't place anything on the lower frame cover plastic.

5.1 Connecting The Bed to Network

Power cord is connected to the bed and can't be detached. Power-out may vary according to countries. Before power cable is plugged it should be make sure that there is no crack, crush, or broken part in the cable.

5.2 Charging The Bed and Battery Lifetime

Battery should be charged if the bed comes with a battery before the bed is used. Battery will enable the use of the bed when there is power outage.



WARNING!

If there is power outage the bed should be used with battery when transferring a patient. If the power cable is always connected it will decrease the lifetime of the battery. The battery should be replaced when it's completely dead. The lifetime of the battery is 2 years.

Re-charge the battery in ach 30 days to prevent any damage may occur related with battery life span !!



WARNING!

The power cable should immediately unplugged when a damage on battery, control box or cable is observed.

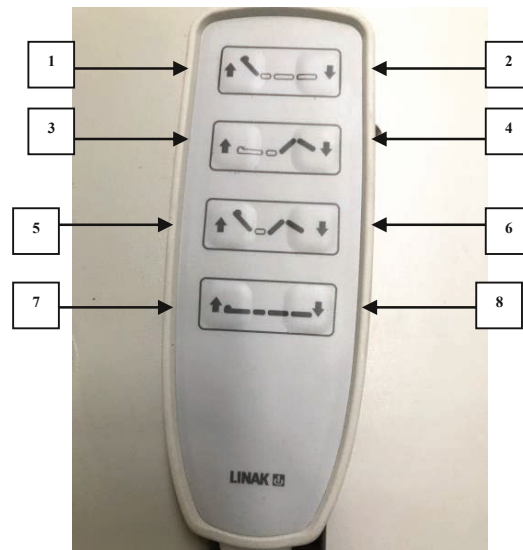


WARNING!

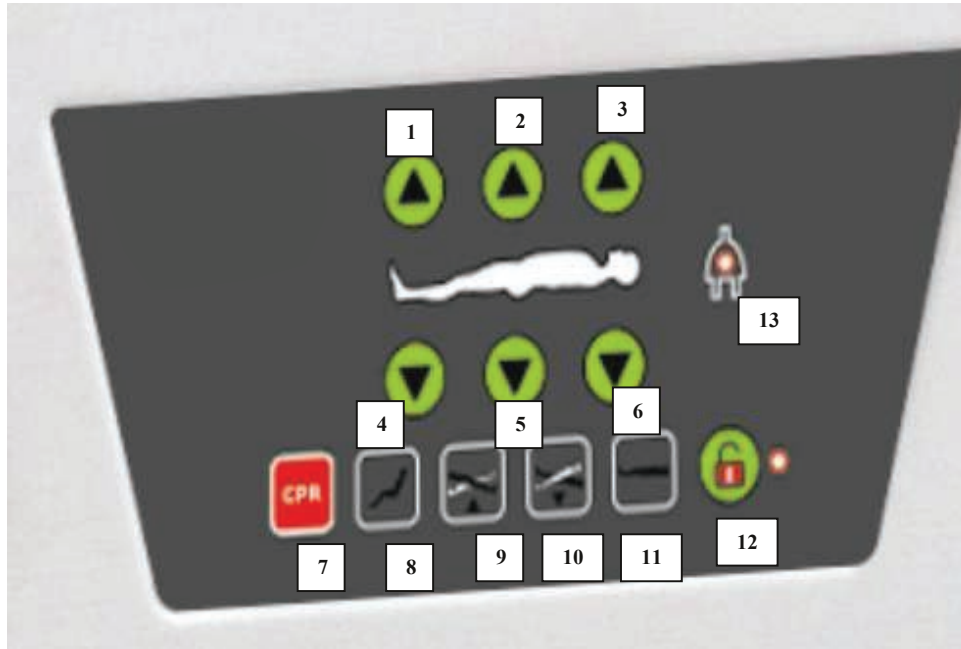
Battery warranty by the manufacturer is for 1 (one) year.

6. USE OF THE BED

6.1 Handset

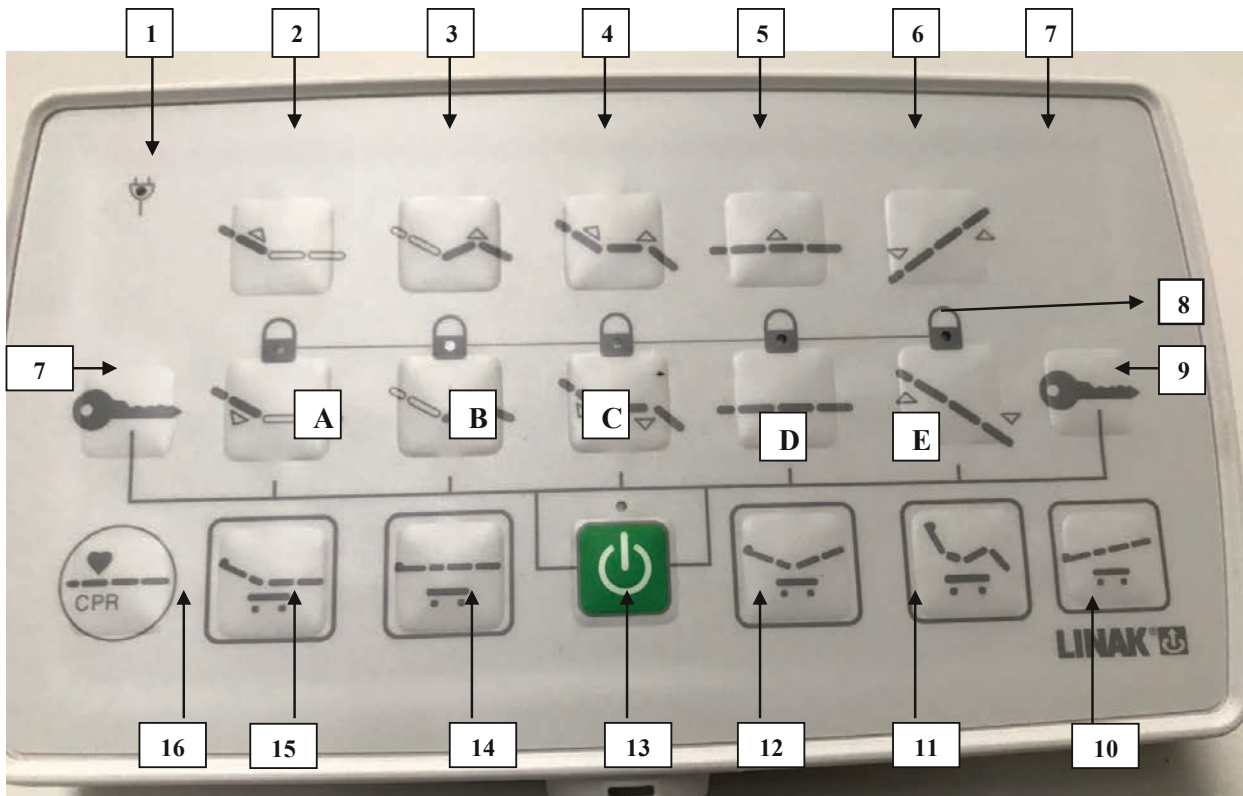


6.2 Side Rail Control Unit



1	Lifting Legrest	8	Chardiac Chair Position
2	Lifting the Bed	9	Trendelenburg
3	Lifting Backrest	10	Reverse Trendelenburg
4	Lowering Legrest	11	Examination position
5	Lowering the Bed	12	Function Locking indicator
6	Lowering the Backrest	13	Electric connection indicator
7	Auto CPR	14	

6.3 Nurse Control Unit



1	Electric connection indicator	2	Auto contour up
3	Lifting Legrest	4	Lifting the Bed
5	Lifting the bed	6	Tendelenburg
7	Locking button	8	Locked functions Indicator
9	Locking button	10	Trendelenburg
11	Chardiac Chair	12	Semi Fowler Position
13	On/off	14	Examination position
15	Bed Exit Position	16	Auto CPR position
A	Backrest Locking	B	Legrest Locing
C	Auto Contourlocking	D	Hi/Lo Lock
E	Trendelenburg Locking		

7. MANUAL CONTROLLED SYSTEMS

7.1 Manual CPR (Manual)



The can be brought the flat position very fast comparing to electrical CPR in emergency by pulling the two manual CPR handle on each side of the backrest of the bed as shown in the picture.

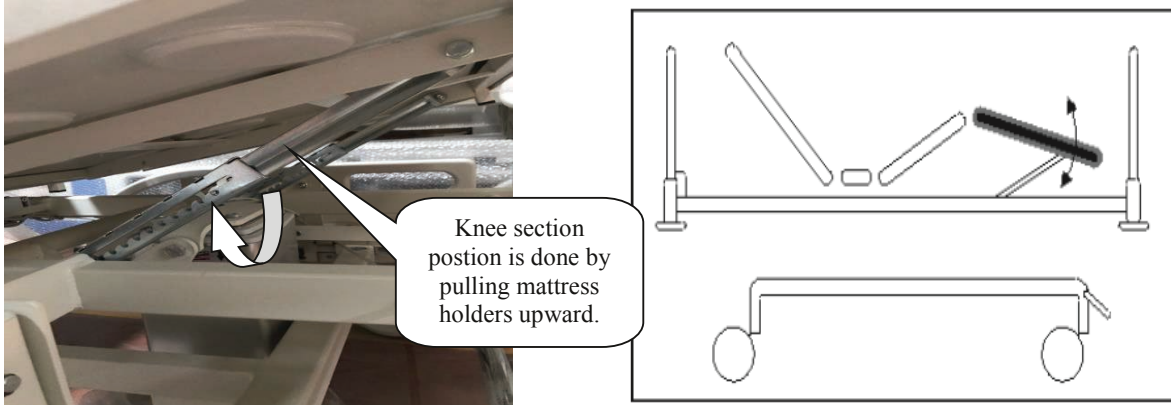


WARNING!

Manual CPR should only be used in emergency. It should be noted that there is nothing that will hold the backrest from dropping down once the manual CPR handle is pulled.

7.2 Knee Section (Manual)

Footrest movement is done by a special mechanism. Footrest takes a V-shape by pulling the mattress holders on each side of the foot side of the bed towards upward position and mechanism opens. In order to put it down, it's lifted a bit more up and it will go down by itself.



7.3 Side Rail

There are four side rails on the bed for safety of the patient. They prevent the patient from falling out of the bed and protects from outer damage. The side rails can be opened/closed when a patient needs to get in/get out of the bed as described below.

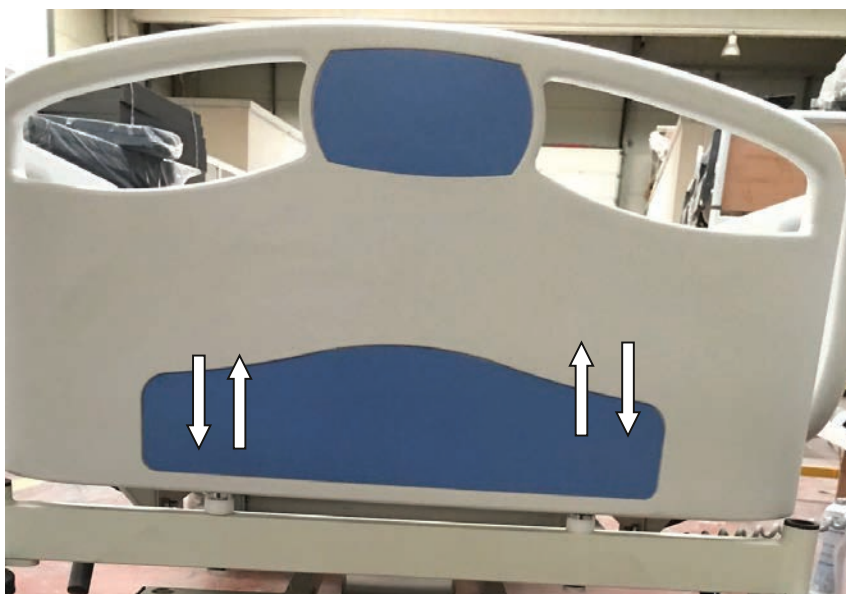


To open a closed side rail; First, side rails red handle should be pulled in the direction of arrow. And, gently pull the side rail towards out and it will open. Red handle doesn't have to be pulled and held at all times. When it's unlocked it will slowly drop down with the help of gas spring.

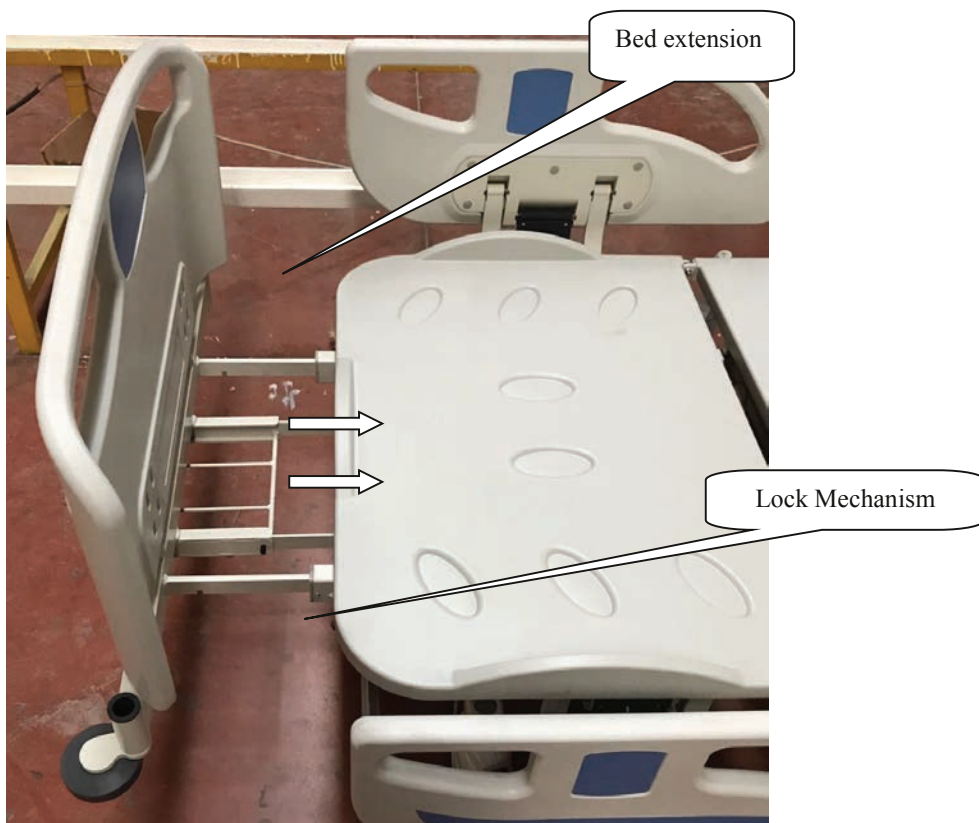
To close an open side rail; It will be enough to lift the side rail upward.

7.4 Headboard/Footboard

It is designed to protect the patient from external threat and improve his/her comfort. It can easily be installed/removed. It should be pulled upward to detach it as shown in the picture. It should be placed in to sockets on each side of the bed and gently pushed to install the headboard/footboard.



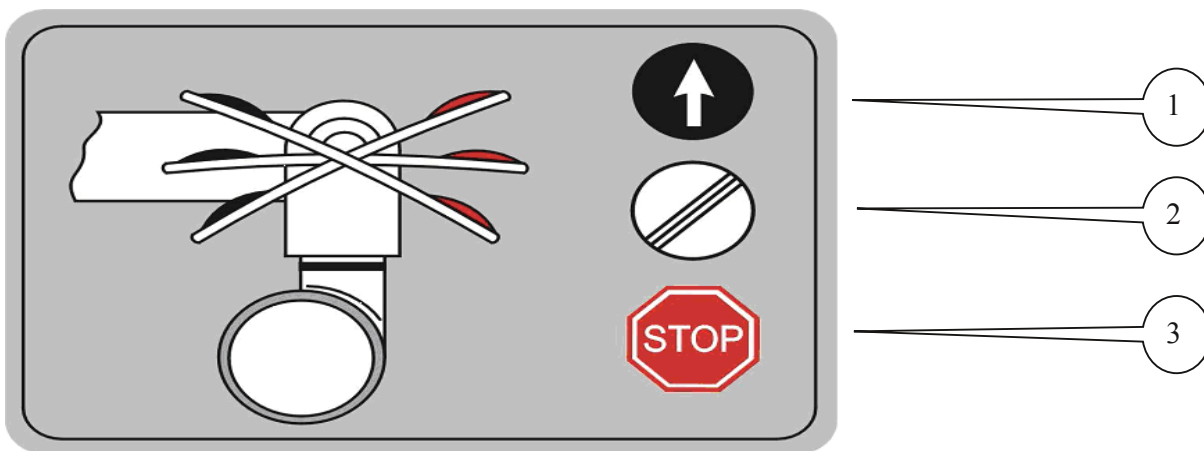
7.5 Bed Extension (Optional)



- The bed can be extended 18 cm. for tall patients.
- The lock mechanism should be unlocked under the upper frame foot side of the bed.
- The extension can be adjusted by two level on the extension kit.
- Lock the mechanism when the extension is fully open and do the following.

7.6 Castor Lock Mechanism

Castor system in the figure belongs to a central lock castor mechanism. It does brake, release, and directional lock functions. Central lock feature makes the bed easy to use. It is very convenient to transport the bed with central lock and directional lock feature of castors.



In the figure above, 1 indicates the directional lock. Head side right castor when lying on your back is the directional lock. When one person transports the bed from foot side head side right castor will directionally lock in number 1 position and it will be safely transported. If the bed has a 5th castor and if it's activated 5th castor will also directionally lock when the directional lock is activated in number 1 position.

In figure above, 2 indicates that all castors are unlocked.

In figure above, 3 indicates that all castors are locked.

1. Directional Lock
2. Unlocked
3. Locked



WARNING!

The power cord must be unplugged while the bed is being transported.

8. ACCESSORIES

Only is it possible to use manufacturer-designed accessories on the bed. Accessories not acquired by manufacturer may harm the patient and create possible danger. In those cases, the manufacturer can't be held liable.

8.1 TK 001, 002 Lifting Pole & TK 003 IV Pole



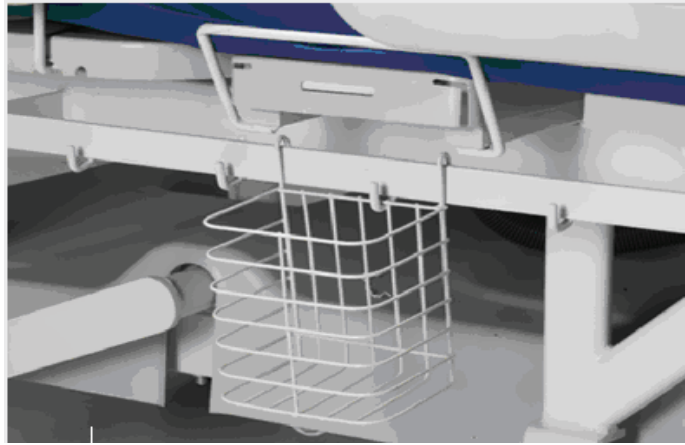
There are four sockets on each side of the bed for lifting pole and IV pole. IV poles have 4 hooks with 2 kg. capacity in total 8 kg. capacity. It is designed to hang infusion and such materials on it. And, they are extendable.



WARNING!

While positioning the bed, staff should be very careful that IV pole doesn't interfere with the patient, oxygen holder or other external materials.

8.2 TK 011 Urine Bag Basket



It is designed as a cage to protect the urine bag from external impacts and is strong enough to carry the bag. It adjusts itself when the bed's positions are changed.

8.3 TK 007 X-Ray Cassette Socket

X-ray translucent laminate is used for backrest. X-ray can be taken without removing the patient by placing the cassette into the socket under the backrest.



9. CLEANING THE BED

9.1 Things To Do Before Cleaning

- Use only approved detergent and cleaning supply for cleaning the bed
- Avoid using cleaning supplies that will damage the coating or bed
- Avoid using sponges for cleaning
- Don't use cleaning supply including acid
- Don't use gas, petroleum, acetone etc... that will harm plastic parts
- Clean with light wet cloth
- Beds are not designed for automated-wash
- Beds are not designed for steam-wash or pressured-water wash



WARNING!

The manufacturer is not responsible if a nonconforming cleaning supply is used for cleaning the bed.

9.2 Cleaning Procedure

- Lock the castors.
- Unplug the power cord.
- Lift the bed fully to clean under the bed.
- Lift the backrest and legrest to be able to reach to every point.
- All functions on nurse control unit must be locked in order to avoid any undesired accident.
- The bed can be cleaned after all these steps are taken.

9.3 Scope of Cleaning

CLEANING PROCESS	PARTS AND DETAILS OF THE BED
1. DAILY CLEANING	<ul style="list-style-type: none"> • Daily cleaning the surface of the bed. • Cleaning the functions of the bed. • Cleaning for every staff. • Cleaning the back of backrest and legrest • Cleaning the side rails • Cleaning the accessories
2. CLEANING THE BED FOR A NEW PATIENT	<ul style="list-style-type: none"> • Daily cleaning • All plastic parts and cleaning the mattress • Lower frame plastic cover • Side, front, and back surface of bed • Easily accessible parts • Cables • IV pole and lifting pole • Bumpers • Castors and pedals
3. FULL DETAIL CLEANING	<ul style="list-style-type: none"> • 1st and 2nd should be done. • After upper frame plastics are removed all accessible parts should be cleaned. • Cleaning the actuators, gas springs. • Side rails

9.4 Cleaning Side Rail

Side rails are made out of PP plastic and aluminum metal sheet. Daily cleaning of side rails are okay. They should be cleaned after they are lifted. Side rail labels should be very carefully cleaned. Clean the handset with a very light wet cloth, otherwise, electronic parts will be damaged.

10. STORING

Instructions below should be followed in order to store the bed for long time.

- Reset all functions of the bed.
- Make sure castors are on flat surface.

- Any other heavy object shouldn't be placed on the bed.
- Re-charge the battery in each 30 days to prevent any damage may occur related with battery life span !!

11. MAINTENANCE

Actuators and moving parts of the bed should be periodically checked every three months. Read the following very carefully for this.

- Check side rails and mechanisms.
- Check backrest, legrest, and hi/lo actuators.
- Check the nuts of moving parts.

It's recommended that maintenance and technical service are done by the manufacturer staff.



WARNING!

Don't use the bed if you notice any unexpected problem during maintenance.

12. ENVIRONMENTAL PROTECTION

Muka Metal provides a healthy lifestyle to future generations by securing the future. Environment friendly materials are used in production. Dangerous materials, threat to human life and environment, such as mercury, cadmium, pcb, cfc are not used in production. All electronic equipment used in bed are noise and vibration free. Recyclable materials (plastic electronics and steel and metal parts) are returned recycle facilities for reuse.



WARNING!

Dead batteries may contain plumbic material (AKB). Return these dead batteries to authorized dealers or battery collect facilities. Do not put dead batteries in trash.

13. WARRANTY AND SERVICE

Warrant period is 2 years and starts from the invoice date.

The product is under warranty for 2 years for any technical failure or production flaw. Repair and troubleshooting will be done without any charge for parts and labor if the instructions in manual are followed in use of bed.

13.1 Conditions That Puts The Product Out Of Warranty

- If break or failure caused by user,
- If serial number of bed is removed damaged, or scratched,
- If any accident happened during loading, unloading, or delivery,
- If the product is used against the instructions in the manual,
- If short/high voltage, ungrounded plug, or wrong electrical installation is used.

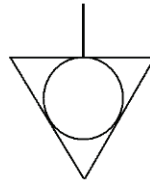
14. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
If the bed is not functioning;	<ol style="list-style-type: none"> 1. Power cord may not be plugged. 2. Power cord may be damaged. 3. Activation key on nurse control unit may be off. 4. Nurse control unit or handset is locked. 5. Control box may not work. 	<ol style="list-style-type: none"> 1. Plug the power cord. 2. Power cord may be broken inside. It should be replaced. 3. Check the nurse control unit and make sure that activation key is on. 4. Make sure nurse control unit and handset are not locked. 5. Control box must be replaced. Call technical service.
If a click sound comes from control box and one of the actuator does not work when the bed is functioning;	<ol style="list-style-type: none"> 1. Actuator cable may be disconnected. 2. Actuator cable is broken. 3. Actuator is broken. 4. CPR wire is jammed. 5. Control box is broken. 	<ol style="list-style-type: none"> 1. Check the wire connection to control box. 2. Actuator cable needs to be replaced. Call technical service. 3. Actuator needs to be replaced. Call technical service. 4. Check CPR wire and its nuts. 5. Control box needs to be replaced. Call technical service.
If there is no click sound and if one of the actuator doesn't work when the bed is functioning;	<ol style="list-style-type: none"> 1. Nurse control unit or handset may be partially locked, 2. Side rail control unit may be broken, 3. Control box is broken, 	<ol style="list-style-type: none"> 1. Make sure nurse control unit and handset are not locked. 2. Unplug the side rail control panel's cable. Try nurse control unit. After being certain side rail control panel is broken, call technical service. 3. Control box needs to be replaced. Call technical service.
If there is no click sound and battery is dead;	<ol style="list-style-type: none"> 1. Battery is completely dead, 2. Battery is broken, 	<ol style="list-style-type: none"> 1. Charge the battery, 2. Battery needs to be replaced. Call technical service.
The bed functions but actuators works slowly;	There is no electrical power. The bed is working on battery.	<ol style="list-style-type: none"> 1. Power cord may be unplugged from control box. Check it. 2. Power cord may be unplugged from the wall. 3. Check the fuse in the room 4. Charge the battery and call technical service.

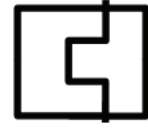
15. SIGNS AND LABELS



Type B



Grounded



Locks itself when heated



Elektromagnetic compatibility



grounding



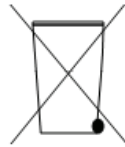
purpose of product



recyclable materials



Recyclable



Do not put in trash



Conformité Européenne



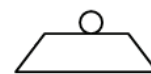
Don't throw it away.



Warning



Read the manual



250 KG

safe working load

