MIDMARK®

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Because we care.

Electra

User's Manual

Contents

INTRODUCTION

About this User Manual

This User Manual contains instructions for the proper and safe use of Electra Motorized Beds, and for, patient & user safety and comfort, which has to be strictly followed.

This User Manual has to be read and observed by every person using or handling these Beds. In case of any query, kindly contact MIDMARK (INDIA) Pvt. Ltd.

ABOUT THIS PRODUCT

- These Motorized Beds are non-invasive medical devices used for resting and treatment of the patients by medical / paramedical / hospital personnel to help and support the patient in diagnosis, prevention, monitoring, treatment or alleviation of the disease.
- These advanced Motorized Beds have patient support and patient rest facility which help medical personnel in carrying out their medical procedures comfortably, minimizing the risks while moving and handling the patient.
- These advanced Motorized Beds are manufactured and supplied in non-sterile condition for use in normal hospital environment.
- These advanced Motorized Beds are electrically operated for certain profiling movements to provide clinical positions with the help of patient and caregiver friendly embedded panels and digital Attendant control. These Beds are supported with a Battery Backup.
- These advanced Motorized Beds are not diagnostic, measuring, monitoring or a therapeutic device or we say that it can prevent or alleviate disease.
- These advanced Motorized Beds are also useful for intensive care, critical care in hospitals and nursing homes.

Electra Series Bed Features

Salient Features are:

- Simultaneous electromechanical adjustment of backrest, knee rest and height on embedded panel, handset and ACP based on variants.
- One touch key for ‘Emergency Trendelenburg position’ on the embedded panel and ACP based on variants.
- Manual pull lever on both sides of bed to quickly bring backrest to a flat position for CPR. Also by single press of button, CPR position for emergency on embedded panel and ACP based on variants.
- The bed has polymer molded head & foot panels detachable by hand without need of any tool.
- Bed has polymer molded Safety side railings on both sides. These shall be fitted to the mattress support sections and should be able to raise and lock through spring lock mechanism. Embedded panels will be integrated in side rails based on variants.
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- There are two locations on the bed to hold one stainless steel Saline rod 12mm dia with 31.7mm dia. 18 G stainless steel (SS 304 Grade) outer covering tube with a knob to mount syringe pump. Two provision for square shaped saline stand.
- Mattress with wave shape on the both sides with high quality evopore foam covered with fabric , flame retardant & antibacterial quality provided

Technical Data

Description	**Technical data**
Overall Size	Buffer to Buffer - 2150 mm L x 1070 mm W ± 10 mm tolerance
Height	480 mm to 810 mm (Without Mattress) ± 5 mm tolerance
Bed Platform frame size	2075mm L x 1010mm W ± 10 mm tolerance
Mattress Platform size	1890mm L x 860mm W ± 10 mm tolerance
Back rest adjustment	upto 70^0 ± 5^0 tolerance
Knee rest adjustment	upto 40^0 ± 5^0 tolerance
Lower leg section	adjustable by Ratchet Mechanism.
Trendelenburg tilt	upto 12^0 - ± 2^0 tolerance
Reverse Trendelenburg tilt	upto 12^0 - ± 2^0 tolerance
Patient Working Load	160 kg with standard accessories
Safe Working Load	200 kg
Electrical Specification	
Nominal Voltage	230 VAC
Switch Mode Power Supply:	Operating Range : 90 V to 300 V with battery 150Vac to 300Vac without battery 45/55 Hz, Max 2.A
Protection Voltage	300V to 450V

Accessories

a. Standard Accessories

Sr. No.	**Accessories**
1	Four Section Mattress with 4" thick PU foam of 40 Density covered with PVC rexine (for beds with PP top)
2	2 set polymer railing
3	Urine Bag Holder

b. Optional Accessories

Sr.No.	Accessories
1	Chart Holder Molded
2	S.S. Lifting pole
3	Traction pulley attachment for trauma cases
4	Oxygen cylinder cage (Epoxy coated)
5	ICD Bottle Holder
6	Single wheel diagonal locking casters
7	Twin wheel center locking casters
8	Single wheel center locking casters
9	Utility I.V. Pole with 2 Hooks above angle indicator
10	Heavy duty I.V.Pole (4 hooks)

Electra

In this Bed the Actuators are used to attain the clinical positions of retractable Backrest, Upper Leg, Height, Trendelenburg and Reverse Trendelenburg tilt which are operated through an embedded panel and Handset or Attendant Control Panel (ACP).

Electra bed Variants

Four variants are available for the Electra Motorized Beds. The variants are based on the following parameters.

Parameters	Variant 1	Variant 2
Bed	√	√
Railings	√	√
Single wheel diagonal locking	√	√
Twin wheel center locking	√	√
Single wheel center locking	√	√
With embedded panel	√	
Without embedded panel		√
Handset or ACP	√	√
Under bed light	√	

X-Ray Variants

Features	Model 1-XR	Model 2-XR
X-Ray permeable backrest with cassette holder	✓	✓

DEFINITIONS

Operator

Operator is the person appointed by the owner (i.e. clinic, hospital management, etc.) who will be responsible for the safe operation of this Bed.

User

User is a person who is capable of assessing clinical condition of patient e.g. specialist medical personnel, doctors, nursing staff, attendants etc. On the basis of their training experience or through the instructions, they are entitled to operate the Bed on their own responsibility or to carry out work on it and are able to recognize and control possible risks to the patient as well as the Bed.

Patient

The patient is a person who is ill, infirm, disabled or in need of care & occupying this Bed. Each time the Bed is allotted to a new patient it is recommended that the patient is instructed by the operator or the user about the functions important for his/her comfort and safety.

SAFETY

In this User Manual the following safety symbols are used

Danger: This symbol will appear wherever safety instructions are designed to protect people from physical harm. The symbol stands for imminent danger of death or serious injury.

Caution: This symbol will appear where situations are described, which might be dangerous, and which might inflict slight injuries.

Electrical Hazard: This symbol will appear when a life threatening hazard or hazardous

condition is likely to occur.

Advice: This Symbol will appear in front of additional helpful pieces of advice.

- A dot in front of the text implies the action that is required to be taken.

Safety Instructions

- Always use Midmark (India) accessories that have been designed and approved for use with the Bed.
- Ensure that the Bed is assembled and installed in accordance with the instructions given in this User Manual.
- Restrict child visitors without proper attendants. Supervision is necessary to avoid any mishap due to unintended movement of the Bed.
- Persons with reduced physical or mental abilities & children must not be allowed to use & handle the Bed without proper supervision.
- Leave the bed in the lowest position when the patient is unattended. Leaving the bed in a raised position could increase the chance of patient falls and injury.
- Weighing scale function may get damaged due to potential interference between castors and base frame. When bed in lowest height, castors tending outwards and Reverse Trendelenburg position, side rails if lowered can interfere with base frame damaging the load cells placed in base.
- Do not allow any visitor to sit on the Bed, as it may cause overloading. (Refer Section-Operation)
- Accessories or any devices used along with the Bed should be as per its intended use specified and approved by Midmark (India).
- The Bed should always be kept and used in normal indoor hospital environment.
- The Bed is not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide. It may damage the Electro-Mechanical Control System.
- Always use a mattress of the correct size and type. Before operating the Bed, make sure that the patient is safely positioned to avoid entrapment or imbalance.
- Do not keep any articles on the Base Frame Cover of the Bed. It can damage the linkages and electrical components.
- Keep the User Manual handy with the Operator/User for ready reference.

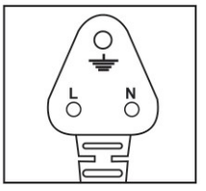
Keep some gap between walls and bed while in stationary position and also while moving from one place to another.

Use of water mattress is prohibited.

Electrical Safety Points

When the Bed is connected to 230 VAC / 15A (or as per country specific) main supply:
Connecting more than one plug to the three pin mains socket using spike guards can cause electrical overload and damage the control system of the Bed.

- AC power supply exceeding 230V or sudden spikes or lack of proper earthing can be hazardous to User / Patient, as well as can cause damage to the Bed and property.
- Ensure stabilized and properly earthed input power supply for the equipment. Also, ensure polarity of the mains socket is as per Standard and matches with the mains plug.



- Inspect all the wires and cables for any cuts, cracks, and damages at regular intervals.

ELECTRICAL SPECIFICATIONS

Mains power supply	Nominal 230 VAC (150 VAC to 300VAC without battery) (90 VAC to 300VAC with battery)
Frequency	50Hz + /- 5Hz
Protection Voltage	300 V to 450 V for 230 VAC system
Mode of operation	10% (2min. in use /18 min. not in use)
Power consumption idle mode without battery	5W
Power consumption idle mode with battery	10W
Power consumption at maximum load	300 Wmax.
Mains Fuse DC Bus Fuse	2A fast blow for mains (external) 10A fast blow fuse (internal)
Protection Class	Class I
Degree of Shock Protection	Type B

Inbuilt Battery Charger

Battery Charger (Inbuilt)

- Suitable to charge 1.3AhX 2 batteries
- Reverse polarity protection
- Spark free connection
- Short circuit protected output.
- Very minimal battery consumption at idle state, to enhance standby time.
- Battery overcharging protection.
- Battery low or dip discharge protection.

ENVIRONMENTAL SPECIFICATIONS

Operating	
Temperature	0°C to 50°C
Relative Humidity	0% to 95% noncondensing
Atmospheric	800 to 1060 hPa
Pressure Altitude	< 2000m

Storage /Transport

Temperature	-10°C to 50°C
Relative Humidity	0% to 95% noncondensing
Atmospheric Pressure	800 to 1060 hPa
Altitude	< 2000m
Protection degree	IP54

INSTALLATION

1. Unpack all the components carefully.
2. If the packing is drenched by rain, water or other liquids, inform this matter to the operator.
3. Each Bed is supplied with the following components as per packing list:-

Bed with embedded panel equipped side rails	-1 No.
Rubber Buffer with bush	- 4 Nos.
Polymer Molded Head and Foot Board	-1 Pair
Miscellaneous items	-1 Packet

4. Prior to connecting the bed to the mains, get the input voltage & earthing tested through a qualified electrician. It is necessary to ensure that all electrical connections are proper and tightened.
5. It is advisable to charge the battery for 24 hours to get the best performance when plugged in for first time
6. For using the Embedded panel and ACP (Product Specific) check all the functions by pressing the respective buttons.
7. Demonstrate the functions of the Bed to the User / Operator.
8. Notify if any damage has occurred during transportation either to the authorized agent or directly to Midmark (India) Pvt. Ltd.
9. Installation of the Bed should be done only by Midmark trained technicians.

ACCESSORIES:

STANDARD ACCESSORIES:

1. Head & Foot Boards :

- Fix Head and Foot Board by extending the equal forces with both the hands in the bracket.

2. Five Section Metal (MS) Top:

- Place the individual Polypropylene sections of Backrest (Upper), Backrest (Lower), Middle, Upper Leg rest and Lower Leg rest on their respective positions on the Bed top frame as shown in the figure above.

3. Urine Bag Holder

Provision to hold the urine bag on the bed for immovable/critical patients

OPTIONAL ACCESSORIES:

a. Heavy Duty I.V. Pole (2 Hook) / (4 Hook)

Used to hang IV bags for infusion of liquid substances directly into the vein.

The provision is on head end only.

Do not overload the I.V. Pole with more than 20 kgs. equally distributed on all hooks.

Eg: 10 kg on each hook if 2 hook IV pole is used, and 5 kg on each hook if 4 hook IV pole is used.

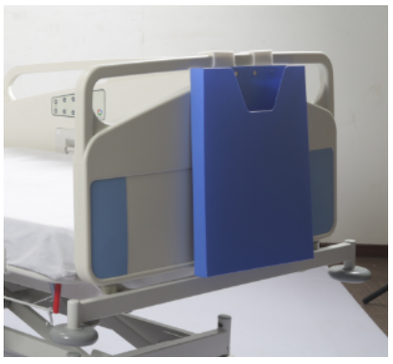
b. Utility IV Pole

c. S.S. Lifting Pole

Helps the patient lying on the Bed to lift themselves up on their own, by holding the hand grip.

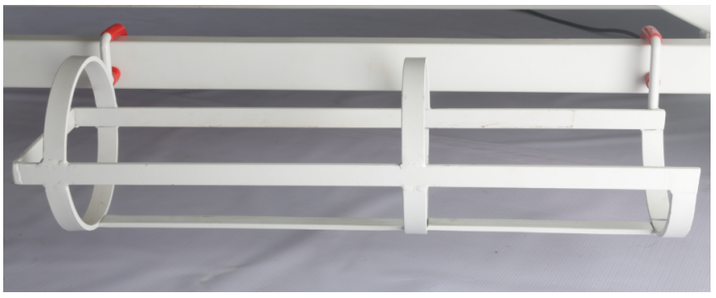
d. Moulded Chart Holder

Used for keeping medical reports and charts.



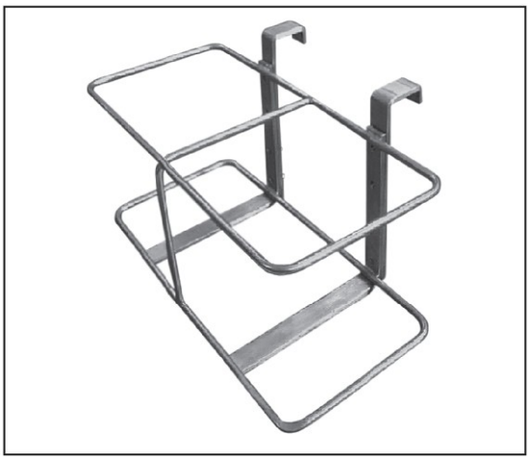
e. Traction pulley attachment for trauma cases.-

f. Oxygen Cylinder Cage



Used to hold the oxygen cylinder when transferring the critical patient.

g. ICD Bottle Holder



Used to store ICD bottles.

Ensure that the accessories are properly secured and not overloaded to avoid any personal injury or equipment damage.

Use the Bed accessories in accordance with the manufacturer's instructions for patient safety and comfort. Use recommended spares and accessories of suitable design manufactured by "Midmark (India)" to eliminate hazards.

h. X-Ray Permeable Backrest With Cassette Holder

a. The Backrest Support Top in this option is made of high pressure laminated sheet which is X-Ray permeable.

b. This facility is provided specially for patients who are seriously ill or too weak to stand unsupported, and need the X-Ray imaging without being moved out of the bed.

c. Beds having with X-Ray Permeable Backrest come factory fitted to the bed, and do not need any special installation.

Procedure to use X-Ray Backrest

- Raise the Backrest to a convenient position as shown in Fig.
- Unscrew both the knobs provided at sides of the Cassette holder as shown in Fig.
- Slide the Cassette holder upwards and outwards from its guides as shown in Fig.
- Place the X-Ray plate on the Cassette holder to its desired position for X-Ray imaging.
- Lock the plate in position by adjusting the lever as shown in Fig.
- Insert back the Cassette holder with Plate in its guides.
- Tighten both the knobs provided at sides.
- Adjust the Backrest to facilitate X-Ray imaging.

Only authorized and qualified persons designated by the Operator and having proper training should be allowed to prepare the bed with patient for X-Ray imaging.

ELECTRICAL CONTROL SYSTEM

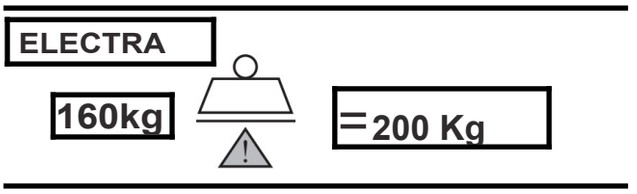
The electrical control System of this Bed consists of:

- Four Actuators to facilitate the movement of Back Section, Upper Leg Section, Height, Trendelenburg / Reverse Trendelenburg Tilt.
- User Friendly embedded panel is provided on the side railing for achieving various clinical positions.
- An Attendant Control Panel (ACP)/Handset (Product Specific) is provided to aid nursing staff for achieving various clinical positions and locking any function in the embedded panel to avoid any unintentional misuse of the Bed by patient.
- A controller unit is located below the main frame of the Bed to which all the other electrical components such as embedded panels, ACP and Night lamp are connected through Junction Box. A battery box containing two batteries (optional) (for power back up in an emergency and during the power failures) is provided below the main frame of the Bed and is directly connected to the controller.

OPERATION

- Before putting the Bed into use for the first time ensure that all the transport securing devices and packing film are removed.
- Clean and disinfect the Bed prior to the first time use.
- The Bed should be used on a flat floor.
- The force required to move the Bed from one place to another with / without patient, may vary depending on the flooring conditions.
- Check if all the operations are functioning properly.
- This Bed should be operated only by an authorized and trained person who has knowledge of its operation.

- Do not stretch / extend the power supply cord from its plug.



SAFE WORKING LOAD = 200 kgs

PATIENT WEIGHT BEARING CAPACITY = 160 kgs

When bed is configured with standard accessories.

Do not load the Bed more than the Safe Working Load as mentioned above.

MECHANICAL ADJUSTMENTS

1. **Operation of the Central Locking**

The Central Locking Castors are provided with a lever which has got three positions.

Image

When pushing the foot rod downwards, all Castors completely get locked and the Bed does not move at all.

Image

When pushing the foot rod to its middle position, all the Castors are free and can be moved to any position.

Image

When pushing the foot rod to its upper most position, the steering Castors gets locked to swivel which help the Bed to move in a straight direction.

2. Lower Leg Section:

Ratchet mechanism to move the lower leg section manually to attain DVT and knee break position with the help of S.S ratchet handle.

Procedure to Raise Leg Section Manually:

- Firmly hold and lift the Leg Section (Lower part) with one hand.
- With the other hand hold the Ratchet Handle to the required inclination.
- Place the ratchet Handle in the desired ratchet Notch to lock the position.
- Make the patient comfortable by readjusting his position on the Bed.

Procedure to Lower Leg Section Manually:

- Firmly hold the Leg Section (Lower part) with one hand.
- Pull the ratchet handle from the ratchet notch to unlock the position.
- Carefully place the Leg Section (Lower Part) on the Main frame.
- Ensure the bed is flat after lowering the leg section.

Always observe the correct adjustment sequence.

Care should be taken to avoid fingers and hand getting entrapped between the Ratchet and the top frame.

4. CPR Release Handle

Emergency lowering of the Back Section using CPR Release Handle

The CPR Release Handle is to be used to bring the Back Rest to its flat position in case of emergency or power failure.

Procedure for Operating CPR lever manually:

- Hold the Back Section with one hand while operating CPR release Handle.
- With one hand pull the operating lever (CPR Release Handle) so that the Back Section can be lowered.
- Once the flat position is achieved, release the CPR Release Handle.
- CPR can also be achieved by long pressing CPR button on ACP, till bed becomes flat and height lowers down.
- For effective use of back section, press the back section down button [⇓]on ACP for 2 secs, till the digital display of ACP does not show 0° once manual CPR is operated.

⚠ Since the Back Section is designed for motorized adjustment, manual CPR should be used only in case of emergency.

⚠ Continuous manual adjustment may damage the Actuator as the Backrest can fall quickly, keep hands clear to avoid trapping.

5. Head & Foot Boards:

- The Head and Foot Board are located at the head and foot end of the Bed frame.
- The Head and Foot Board can be removed or attached in a single step by extending equal force with both the hands in the bracket by ensuring the proper matching of the brackets with board holder fitted in the main frame.
- The Head and Foot Boards can be removed for ease of access to the patient from head and foot side.

⚠ Do not hang any heavy items on the Head and Foot Boards.

To use the Safety Side Railings

- Immobilize the Bed.
- To raise the Railing, pull it to the top position until it gets locked.
- To release / lower the Safety Side Railing , ensure that there are no obstacles in the path of the railing.
- Lift the lever and push the Safety Side Railing down to its end position.
- Always keep the Safety Side Railing in raised condition when moving the patient with the Bed. Do not use the Safety Side Railing to lift or move the Bed.
- Safety Side Railings must only be used with a mattress of the correct size and which is approved for used with the Bed.
- To prevent the patient from falling, ensure that the Safety Side Railings are in raised position.
- The clinically qualified person responsible should consider the age, size and condition of the patient before allowing the use of the Safety Side Railings.
- Other manufacturer's Safety Side Railings are not compatible with these Beds.
- Please take care of fingers and hands while operating the Safety Side Railings.

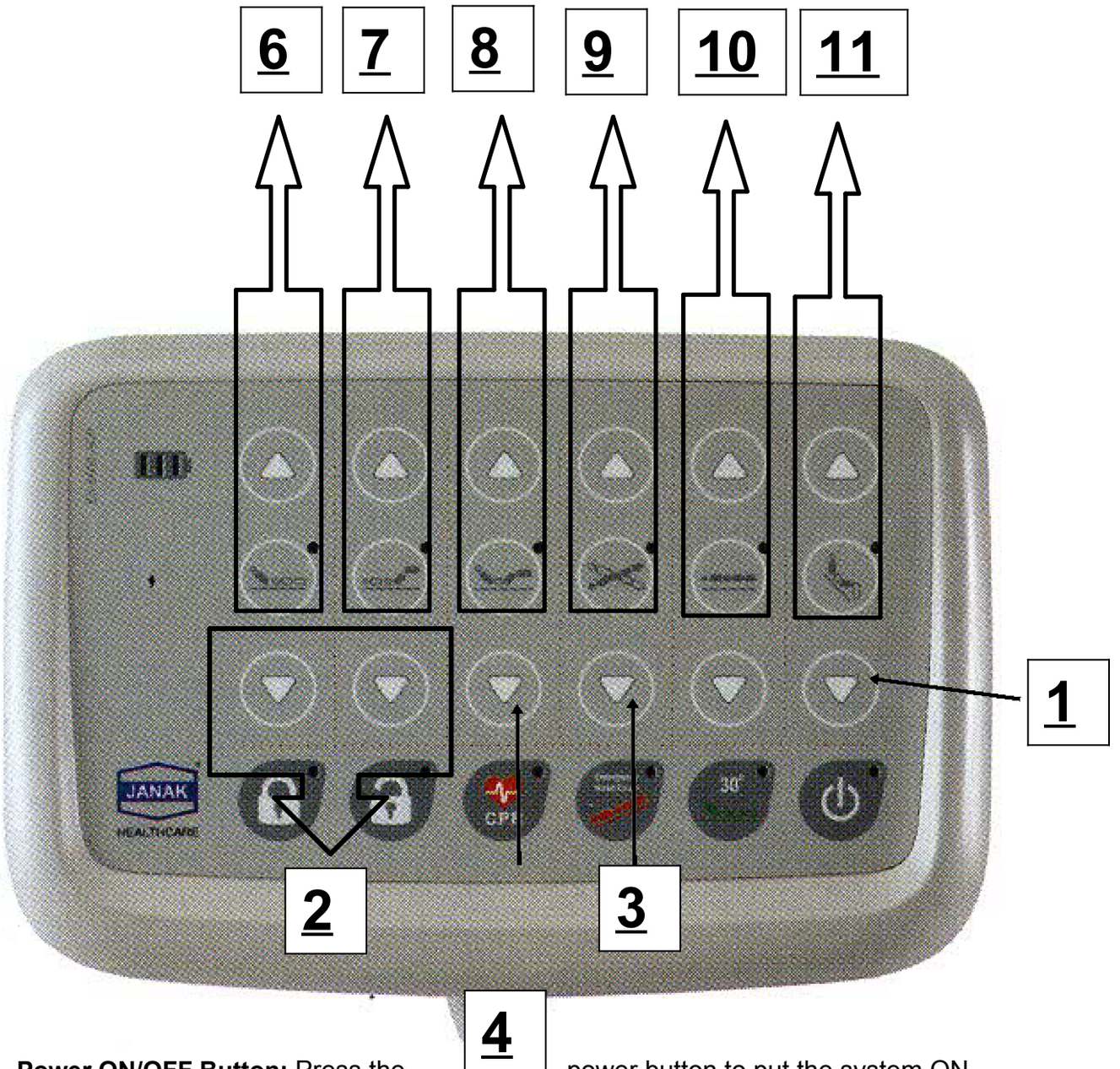
Although the Safety Side Railings have been designed to reduce the risk of patient injury, the potential exists for patient entrapment, particularly in agitated or disoriented patients, patients who have cognitive disability or have uncontrolled body movement as well as patients who lack the physical strength to extract themselves, if they get entrapped.

Users should carefully evaluate the need for Safety Side Railings and periodically check patients in accordance with facility protocols for safe positioning.

The Safety Side Railings should always be in raised position when attaining lowest height position or when attaining Trendelenburg / Reverse Trendelenburg Tilt positions.

If these safety measures are not observed, injuries can be caused to hands, knees, fingers, feet, legs or other body parts of patient due to unintended and unintentional entrapment. In children or weak patients who are less than 146 cms tall, non observance of these guidelines may even lead to death.

ELECTRICAL ADJUSTMENTS
Using the ACP:



1. **Power ON/OFF Button:** Press the power button to put the system ON. With this button the system is alive. Press again the power button to put the system OFF. Once you OFF the system, side rail Embedded system will also turn OFF.

2. **Feature Lock Button:** Press the feature lock button to lock the required clinical positions at any given time. Once you lock any clinical positions and if you try to change it, LED light placed at top right of the lock feature button will blink indicating that feature is locked by user. Once feature is locked, same feature cannot be accessed from embedded system in side rails. Press again the feature lock button to unlock the feature.

3. **Emergency Head down button:** Single continuous press the button to lower the head section of the bed for emergency cases.

4. **CPR:** Single continuous press the button will enable the bed to become flat and height of

the bed goes to its lowest for nursing staff to perform emergency activities.

5. **Back Section Buttons:** Press  button to raise the backrest section.  Press button to lower the backrest section.

6. **Upper Leg Section Buttons:** Press  button to raise the upper leg section. Press  button to lower the upper leg section.

7. **Auto-Contour Buttons:** Press  button to raise back section and upper leg section Simultaneously. Press  button to lower back section and upper leg section

8. **Bed Height Buttons:** Press  button to raise the height of bed.  Press button to lower the height of bed.

9. **Trendelenberg/Reverse rendelenberg Buttons:** Press  button to lower the leg section (Reverse Trendelenberg).  Press button to lower the head section.

10. **Lateral Tilt Buttons:** Press  button to tilt the bed in clockwise direction. Press  button to tilt the bed in anti-clockwise direction. During the tilting movement, ACP will make a beep sound whenever the bed will attain flat position**.**

11. **Sequential Chair Buttons:** Press  button to attain the chair position in sequential mode. Press  button to attain the flat position of bed sequential

Using Embedded panels:

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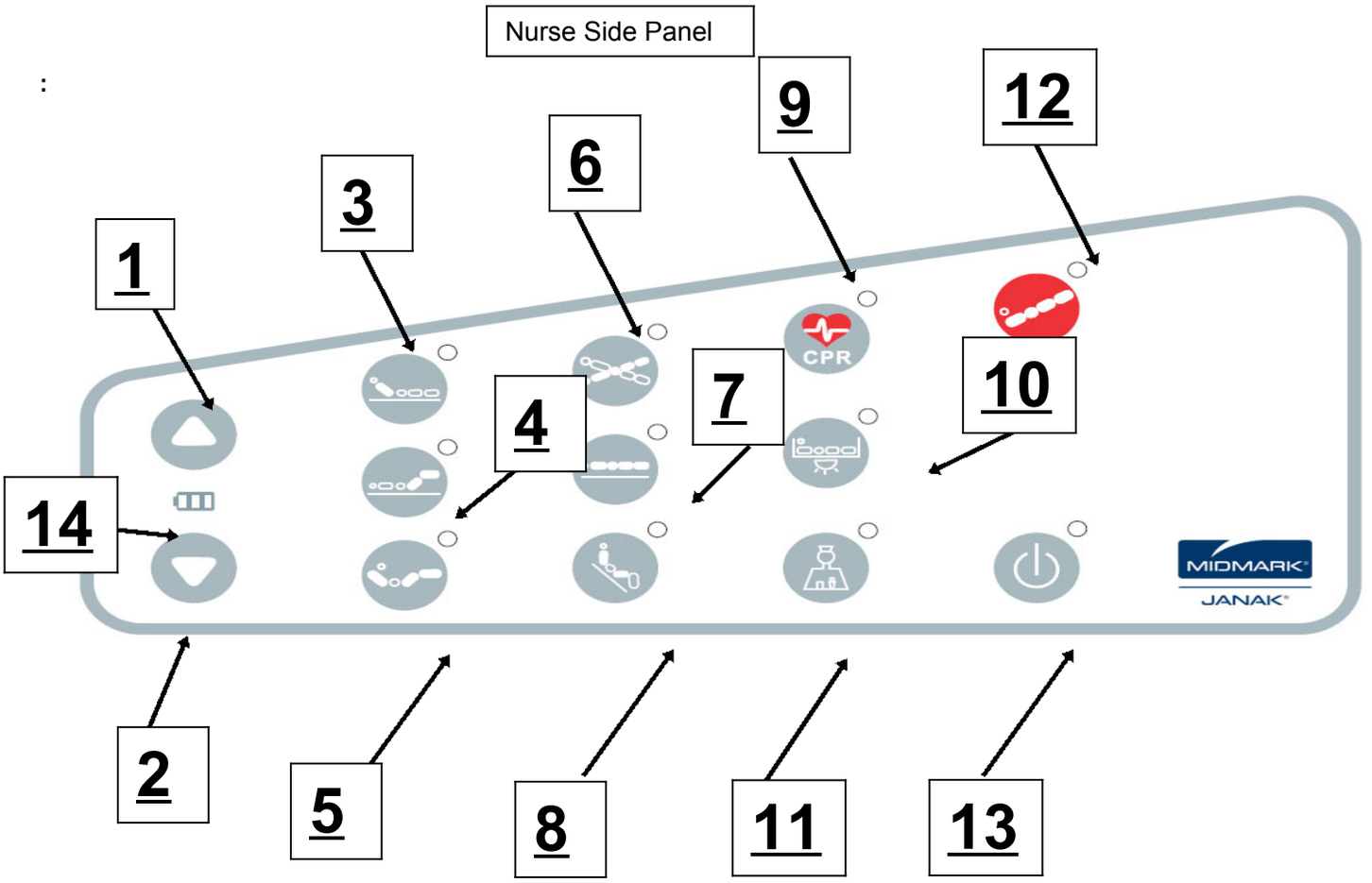

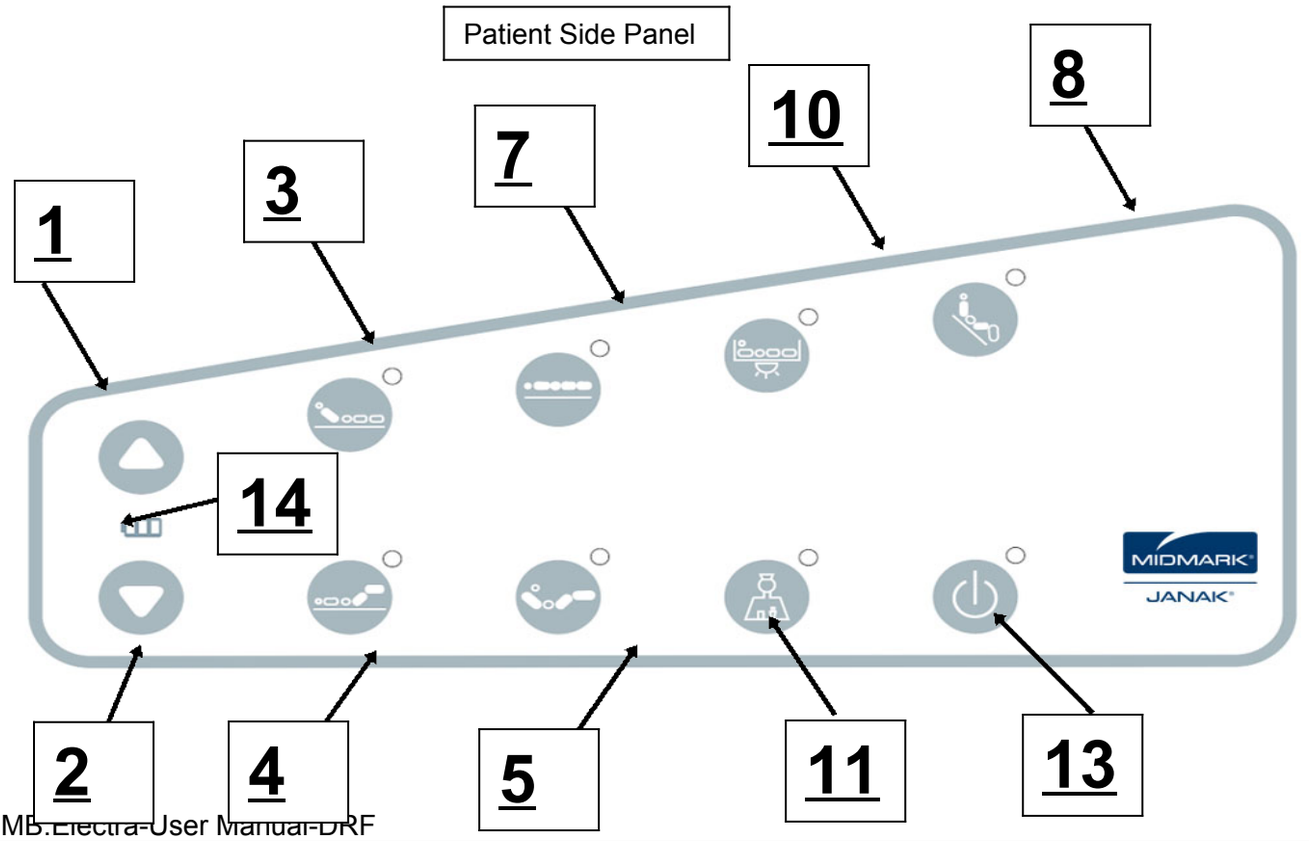

1. Press the button to raise back section, upper leg section, bed height, clockwise lateral tilt and sequential chair. First select the clinical position through embedded panels, then press 1 button.

2. Press the button to lower back section, upper leg section, bed height, anti-clockwise lateral tilt and sequential flat bed. First select the clinical position through embedded panels, then press 2 button.

3. Press to select the back section. Press 1 to raise and 2 to lower the back section.

4. Press to select the upper leg section. Press 1 to raise and 2 to lower the upper leg section.

5. Press to select auto contour position. Press 1 to raise back section and upper leg section simultaneously. Press 2 to lower the back section and upper leg section simultaneously.

6. Press to select TR/RTR position. Press 1 to lower the leg side (Reverse Trendelenberg). Press 2 to lower the back section (Trendelenberg).

7. Press to select Bed height function. Press 1 to raise the bed height. Press 2 to lower the bed height.

8. Press to select sequential chair function. Press 1 to attain a sequential chair position. Press 2 to flatten the bed sequentially.

9. Single continuous press the button will enable the bed to become flat and height of the bed goes to its lowest for nursing staff to perform emergency activities

10. Press to switch ON the under bed light. Press again to switch OFF the under bed light.

11. Press to activate nurse call. For nurse assistance call, the hospital should be equipped with nurse assistance facility compatible with bed.

12. Single continuous press the button to lower the head section of the bed for emergency cases.

13. Press the power button to put the system ON. With this button the system is alive. Press again the power button to put the system OFF. Once you OFF the system from side rail embedded system, ACP will also turn OFF.

14. It is battery level indicator. It shows the battery level remaining in the battery. Green colour indicates that battery is full. Red colour indicates that battery is drained.

Battery

The Bed is equipped with battery to allow emergency operation of the electric drive system. This ensures that all the power requirements can still be supplied in the event of power failure. The battery also has inbuilt fuse protection for the safety of battery as well as users.

Battery Indicators on Embedded Panels-

- Green indicator of power 'ON' button on embedded panels shows that the control elements are running on the main supply.
- Green indicator of battery symbol on embedded panels shows that the control elements are running on battery and battery is at full charge condition.
- Orange indicator of battery symbol indicates that control elements are running on the battery and battery is at medium charge condition.

- Red indicator indicates that the battery is fully discharged and no further function is possible on battery.

It is necessary to fully charge the battery at least once a month, especially when the Bed has not been in use for a long time. Otherwise the battery could get permanently discharged and/or damaged.

Always keep the Bed in charging condition for any emergency use.

Always keep the Bed connected to the main supply to get a fully charged battery.

Operations of the Bed on battery should be only as per its duty cycle (refer Electrical Specifications given above)

Batteries in the Bed may emit hydrogen gas. So do not bring fire or a heated object close to the Product.

With due consideration to environmental limitations, materials used to make the device are not affected by contact with any bio chemicals or bio waste. When used as per its intended purpose, all materials used in the product and accessories do not facilitate any breeding or growth of bio contaminants on their own.

MAINTENANCE & CLEANING

Maintenance

Each time before putting the Bed into service the user must check that

- All the functions are in satisfactory working condition before the Bed is allotted to the next patient.
- Unplug the mains supply before carrying out any maintenance activity.
- Lubrication of all the mechanical joints / pins / moving parts /gas springs should be done, tightening of the bolts should be carried out at least once in three months, to avoid unnecessary sound and wear & tear of the Bed.
- At regular intervals carry out a visual inspection and check for any mechanical damage (e.g. loose /missing rivets, screws, etc.)
- If any damage or malfunction is observed, immediately report this matter to the operator.
- If the Bed is not in use, it should be stored in a dry and flat indoor environment which is rodent free with gradient not more than 5 degrees.
- If the Bed is not in use for long term, it is necessary to conduct a test to check for functioning and any electrical or mechanical damage that may have been caused.
- Depending on the usage, certain moving parts may require replacement due to wear & tear. We recommend timely replacement with genuine 'Midmark (India)' spares for safety and trouble free operation.

- Calibrate the control unit and actuators before the bed is allotted to next patient.
- Tare the weighing scale system to zero before bed is allotted to next patient.

Cleaning & Disinfecting

- The Bed is not suitable for machine wash or steam cleaning.
- Do not use water jet for cleaning.
- Always disconnect the mains power cord from the electrical power supply before cleaning.
- Wipe the electrical components with dry cloth only. No traces of water or disinfectant should be present on any electrical component.
- The Bed cannot tolerate the influence of strong solvent, basic or alkaline liquids & caustic agents. Also, do not use concentrated insecticides on electrical parts.
- The cleaning agents must not contain any substances which bring about any change in the structure or adhesive property of the plastic.
- The Bed should be properly cleaned and disinfected to avoid infection and stains before allotment to a new patient.
- Immobilize the Bed & remove all the detachable accessories and components before cleaning. Any prolonged contact of urine or acid on mild steel can corrode the surface. Keep the surface dry at all times.
- Wearing suitable protective clothing, clean the surface with a disposable cloth soaked in a neutral detergent and hot water. We recommend use of approved disinfectant and cleaning agents to clean the Bed. E.g. Bacillocid or other similar agents.
- Start by cleaning the upper sections of the Bed & work along all horizontal surfaces. Work methodically towards the lower sections of the Bed. Take extra care to clean areas that may trap dust or dirt. All detachable accessories and its component can be cleaned separately.

Do not expose the Bed to excessive moisture as corrosion may cause personal injury or equipment damage.

Disposal:

Product and its defective parts especially elements made of plastic, steel, rubber and electrical / electronics (including battery) material should be disposed off in accordance with the statutory rules and regulations prevailing for such disposal. The user is advised to contact 'Midmark (India) for further assistance.

Routine Inspection Check List: Inspection By The User :
(Recommended Frequency: Every new allotment but not later than one month)

Checks	Observations	OK	Not OK	Description of faults
Visual check of the electrical components				
ACP, embedded panel cables	Damage, loose, hanging			
Mains cable	Damage, loose, hanging			
Control elements, Attendant control	Damage, loose, hanging			
Embedded Panels in Side rails	Damage, loose			
Visual check of the mechanical components				
Main frame, base frame	Damage deformation			
Patient lifting pole, locating sleeves	Damage, bend			
Mattress	Damage			
Metal top	Damage deformation			
Side railing	Damage, position			
Railing dampeners (Gas springs)	Damage			
Counter balance springs for backrest	Loose			
Screws and rivets	Missing, loose			
Performance check of the electrical components				
Embedded Panel	Function test			
Attendant control panel	Function test			
Control unit	Function test			
Motors	Function test			
Night lamps	Function test			
Performance check of all mechanical components				
Detachable head and foot boards	Secure retention			
Castors	Locking & release			
Emergency lowering of the backrest (CPR handle)	Function test			
Side railing	Engagement, release, secure fastening			
Lower leg section	Function test			
Accessories	Fastening, damage, missing			
Sign	Result of inspection		Date	

Troubleshooting Guide:

PROBLEM	POSSIBLE CAUSES	REMEDY
Embedded panels system not functioning	• Main cables not plugged in • No main voltage at main supply/ no current supply • Embedded panels cable not fixed properly to the control unit • Error in embedded panels unit	• Plug in the main cable • Check in the supply current • Fix in the embedded panels • Replace the embedded panels unit
Certain function not working	• Actuators not functioning • Control unit not functioning • ACP or embedded control panel not working • Cables of the actuators are loosened	• Replace the actuators • Replace or repair the control unit • Replace or repair the ACP/embedded panels. • Fix the cables firmly
Emergency operation not possible	• Battery rundown • Battery fuse blown off • Battery wire loosened	• Recharge the battery as recommended • Replace the fuse • Fix the battery wire firmly
Beeping sound from the control unit	•. Overload on the bed • Internal or external fuse blown off • Battery rundown	• Reduce the load on the battery • Replace the fuse • Recharge the battery
No functions are operating	• Main cable loosened • Error in control unit	• Tighten the main cable firmly • Replace or repair the control unit
No function via embedded panels	• Embedded panels is defective	• Replace or repair the embedded panels
Manual emergency operation not functioning	• Bowden cables are set with too much slack or have become unhooked • Breaking in the Bowden cable • Squeaking in Bowden cable	• Readjust on release lever or adjust the wire by loosening the wire • Replace the Bowden cable • Lubricate the Bowden cable by oiling

WARRANTY & SERVICE

Midmark (India) Pvt. Ltd. warrants, solely to the end users of this Ex-Series Bed that for a period specified in the warranty certificate, such Ex-Series Bed shall perform as per its intended use. The foregoing warranties shall not apply if the Product has been subjected to: (a) physical abuse, misuse, abnormal use, or use not consistent with Midmark (India) Pvt.Ltd.'s published directions, (b) any modification by any one other than Midmark (India) Pvt.Ltd. or third parties designated by Midmark (India) Pvt. Ltd; or (c) fraud, tampering, negligence or accidents, depending upon the nature of the products.

Limitation Of Liability : In no event shall Midmark (India) Pvt.Ltd. be liable or obligated to the end user in any manner for any special, non-compensatory, consequential, indirect, incidental, statutory or punitive damages of any kind, including, without limitation, for injury or loss of life, lost profits, lost sales, lost revenue, loss of any software or data, or loss of use of any hardware, software or data, regardless of the form of action, whether in contract, tort, negligence, strict product liability, or otherwise, even if Midmark (India) Pvt. Ltd. has been informed of or is aware of the possibility of any such damages in advance. Midmark (India) Pvt. Ltd.'s total aggregate liability under this agreement and in relation to anything which Midmark (India) Pvt. Ltd. has done or not done in connection with this agreement shall be limited to the price of the products purchased and paid for by the end user during the period in which such liability arises. The limitations set forth above shall be deemed to apply to the maximum extend permitted by applicable law and not with standing the failure of the essential purpose of any limited remedies.

In order to maintain functional safety and right to claim under the warranty only original 'MIDMARK' replacements parts may be used for ordering replacement parts, customer service request and further question, please contact our technical support department.

MANUFACTURER'SADDRESS

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Tel: + 91 22 24120171/2413

Toll Free No.: 1800 228020, Email: technicalsupport@Midmark.com

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