



Emerald Supply Inc.

# Long-Term Care Low Profile Bed

Model: 54000

## User Manual



**DEALERS:** This manual must be given to the user of the bed.

**USER:** Before using this bed, read this manual and save for future reference.

**Caution:** Do not attempt to adjust or operate the bed without carefully reading all instructions in this manual.

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# General Information

## Symbol definitions

Signal words with symbols are used in this manual to improve readability and increase understanding of its content. These symbols are also designed to highlight hazards or unsafe practices which could result in personal injury or property damage.

- ◆ Standard text - Normal character style used for “basic” information.
- ◆ Boldface text - Emphasize a word or phrase.
- ◆ Symbols - Represent different risks or hazards and information.



### **DANGER**

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or severe injury.



### **WARNING**

Warning indicates a potentially hazardous situation which, if not avoided could result in death or severe injury.



### **CAUTION**

Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.



### **IMPORTANT**

Indicates a hazardous situation that could result in damage to equipment or property if it is not avoided.



### **INFORMATION**

Gives useful tips, recommendations and information for ease of use.

## Intended Use

The Infinity Long-Term Care Low Profile Bed is intended for use within an institutional healthcare environment, i.e., nursing homes, rehabilitation care, assisted living.

The bed is not a transport device. The wheels on the bed are for positioning the bed only. These shall be locked at all times when in use.

The bed is intended for users who fully understood the content of this manual and should not be used or operated by children.

## Safety Precautions



Before using the bed, thoroughly read the instructions in this user manual. This manual provides instructions for routine use and maintenance.

### Unpacking the Bed



To avoid injury, do not attempt to remove the bed from the carton without assistance.

### Assembling the Bed



Make sure all attaching hardware is securely tightened.

Do not overtighten the mounting hardware as this will damage the mounting brackets.

Do not modify this equipment without authorization of the manufacturer. Doing so will void the warranty.

Do not use accessories that are not designed or approved for use with the bed.

## Operating the Bed



Do not operate your bed until it is fully assembled and checked.

Do not exceed maximum weight limitations of the bed.

Always make sure the power cable is clear of any moving parts of the bed before switching on the power.

Always keep hands and fingers away from moving parts to avoid injury.

Only use appropriate mattresses and always adjust the mattress retainer system accordingly to ensure the mattress is fixed in place.

The mattress must be properly sized to meet entrapment zone dimensional guidelines published by the FDA.

The mattress platform shall be kept in a flat position if the patient's condition could lead to patient entrapment.

Never permit anyone under the bed at any time.

Do not use side rails as handles to move the bed.

The side rails may not be used as a restraint.

When operating/moving the bed, ensure that the resident is positioned properly within the confines of the bed. Do not let any extremities protrude over the side or between the rails when performing these functions.

Keep all moving parts free from obstruction (i.e., blankets/sheets, pads, tubing, etc.) which may get tangled around the bed, side rails, or legs.

When using nasal or masked type administering equipment, oxygen or air tubing must be routed and secured properly to ensure tubing does not become entangled, kinked, or severed during normal operation of the bed.

The central lock provides the resident with a stable and secure bed, providing easy access in and out of the bed. Check that the central lock is engaged and the bed is solidly in place before leaving the bed unattended or before attempting resident transfers into or out of the bed.

The central lock is not intended to be used on a sloping floor or building access ramp. Failure to comply could result in injury or death.

The central lock should be locked at all times except when moving the bed.

For maximum resident safety, casters should be locked at all times in addition to the central locking system, except when moving the bed.

## Performing Maintenance



Only qualified personnel should carry out the bed maintenance.

Do not attempt to open the pre-sealed actuator or obtain local service. Doing such will void the warranty and might result in damage. Consult your dealer or manufacturer for further information.

Inspect the casters every six months to check for tightness and wear.

Regular maintenance of bed and accessories is necessary to ensure proper operation. Do not overtighten mounting hardware. This will damage mounting brackets.

Unplug the power cord when performing any maintenance on the bed.

## Electrical and Grounding



Do not, under any circumstances, cut or remove the grounding prong from any plug. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the regional and national regulations. If you must use an extension cable, use only a three-wire extension cable having the same or higher electrical rating as the device being connected.

Do not use if the power cable is cut, frayed or loosely connected to the device. Power supply cable may be damaged by inappropriate handling, e.g., by kinking, shearing or other mechanical damages. The power supply cable is only replaceable by service personnel.

## Radio Frequency and Interference



Most electronic equipment is influenced by Radio Frequency Interference (RFI). Caution should be exercised with regard to the use of portable communication equipment in the area around such equipment. If RFI causes erratic behavior, switch the power off immediately. Do not turn the power switch on while transmission is in progress.

## Disposal



### WARNING

This product has been supplied from an environmentally aware manufacturer.

This product may contain substances that could be harmful to the environment if disposed of in places that are not appropriate according to legislation.

Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

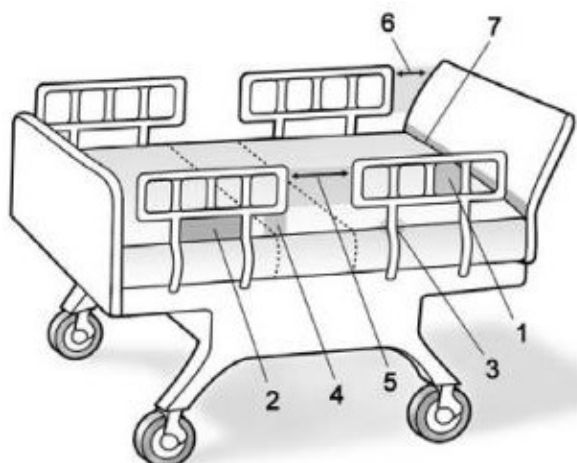
## Reducing the Risk of Entrapment



### WARNING

The Hospital Bed Safety Workgroup (HBSW) in partnership with the FDA has recognized potential entrapment zones in hospital bed systems and has developed dimensional guidance to reduce the risk of entrapment. They have identified seven zones in the bed system where there is a potential for patient entrapment. Entrapment may occur in flat or articulated bed positions, with the rails fully raised or in intermediate positions. Each facility is responsible for compliance with the entrapment guidelines. For more information about entrapment zones and guidelines please visit the FDA website.

### ENTRAPMENT ZONES:



Zone 1: Within the rail

Zone 2: Between the top of the mattress and the bottom of the rail, between the rail supports

Zone 3: Between the rail and the side of the mattress

Zone 4: Between the top of the mattress and the bottom of the rail, at the end of the rail

Zone 5: Between the split bed rails

Zone 6: Between the end of the rail and the side edge of the headboard or footboard

Zone 7: Between the headboard or footboard and the mattress end

## Steps to Prevent Bed Fires

- ◆ Inspect the bed's power cord for damage.
- ◆ Connect the power cord directly into a wall-mounted outlet that is in good working order, with no cracks or chips. The plug should fit tightly into the outlet. The ground pin should be intact and secure.
- ◆ Do not connect the bed's power cord to an extension cord or to a multiple-outlet strip.
- ◆ Do not cover any power cord with a rug. Heat may build up or the cord may be damaged.
- ◆ Inspect the floor beneath the bed for buildup of dust and lint. Ask housekeeping to clean if necessary.
- ◆ Inspect the resident's bed controls, looking for signs of damage where liquids could leak.
- ◆ Test the bed and its controls, including resident lockout features, to ensure that the bed can move freely in both directions without damaging any cords.
- ◆ Check monitors and other resident equipment for signs of overheating or physical damage.
- ◆ Keep linens and clothes away from power sources.
- ◆ Tell maintenance staff about any unusual sounds, burning odors, or unusual movement of a bed.
- ◆ If you suspect overheating, follow your facility's policy for fire safety and move resident to a safe area if necessary.

# Technical Specifications

These are average values, which may vary according to manufacturing tolerances.

Model: 54000		
Operating Range	Bed Height	7" – 30"
	Back Rest Angle	0° - 65°
	Knee Break Angle	0° - 35°
	Additional Manual Leg Lift	Yes
	Trendelenburg / Reverse Trendelenburg	Optional function, ±12°
Weight Limit	Safe Working Load (SWL)	650 LBS
	Max. Resident Weight	600 LBS
Weights & Dimensions	Sleeping Surface Dimension (Width x Length)	35"-42"-48" x 80"-84"-88"
	Caster Size	3"
	Weight in Carton	315 LBS
	Weight out of Carton	289 LBS
Electrics	Power Supply (V/PH/Hz)	100-240VAC / 50-60Hz
	Power Consumption (Max)	128 VA
	Number of Motors	4
	Protection Class	IP54
	Insulation Class	Class II
	Duty Cycle	10%, Max. 2 mins / 18 mins
	Backup Battery	Included
Environment	Operating Temperature	40°F ~ 110°F (5°C ~ 45°C)
	Storage Temperature	15°F ~ 120°F (-10°C ~ 50°C)
	Operation & Storage Humidity	20% - 80%
	Operation & Storage Atmospheric Pressure	700 ~ 1060 hpa
	Operation & Storage Altitude	≤ 3000 m
	Noise Level	≤ 54 dB(a)

## Equipment Assembly



Use only parts supplied by Emerald Supply, Inc. for assembly to ensure correct alignment of all parts for safe operation.

## Handling Procedures

Check for any obvious damage to the carton. If damage is evident, notify the carrier and the dealer.

Carefully unpack the components from the shipping cartons.

Inspect all components. Examine exterior of the bed and parts for nicks, dents, scratches or damages.

Unless the bed is to be used immediately, retain boxes, containers and packing material for use in storing until use of the bed is required.



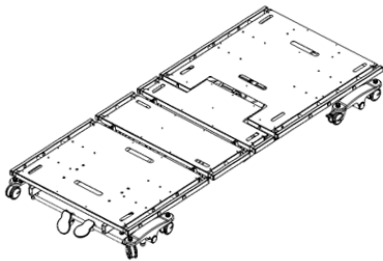
Do not place other objects on top of the packaged bed.



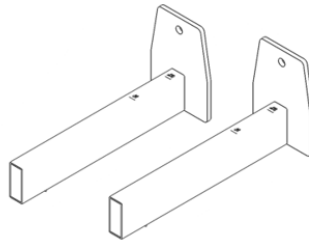
Store the packaged bed in a dry area.

## Components

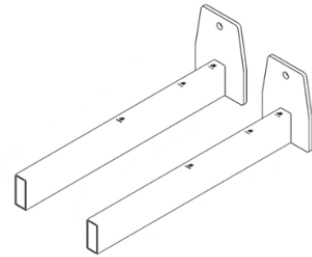
Components Description	Piece
Bed Deck	1
Headboard Frame	2
Footboard Frame	2
Bed-top Mattress Retainer	1
Bed-end Mattress Retainer	1
Side Mattress Retainer	4
Wall Bumper Bar	1



Bed deck



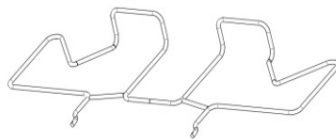
Headboard frame



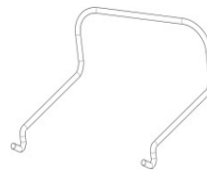
Footboard frame



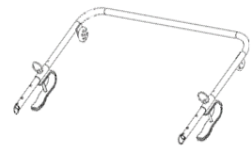
Bed-top  
mattress retainer



Bed-end  
mattress retainer



Side  
mattress retainer

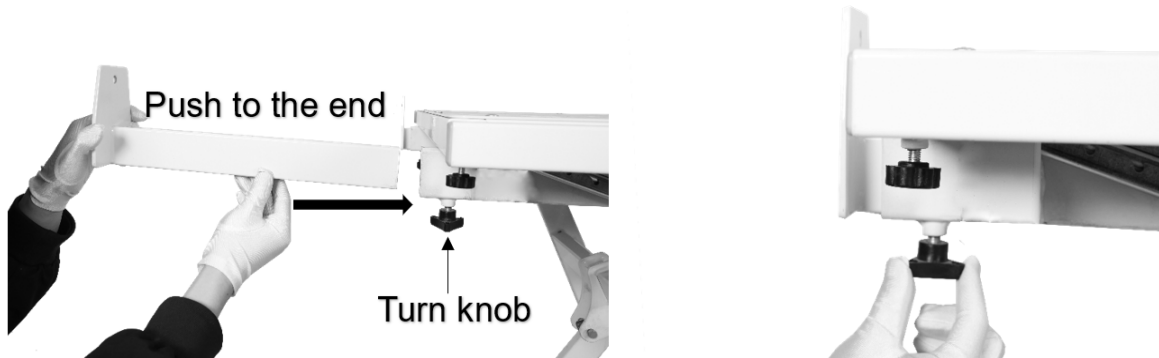


Wall  
bumper bar

## Assembling the Bed

### Assembling the Head/Footboard Frames

1. With the bed raised to its highest position, step on the red locking foot pedal to lock the casters at the foot end of the bed.
2. Loosen the two turn knobs at the insertion slots underneath the bed deck.
3. Slide the headboard frames into the insertion slots. Tighten the turn knobs to secure the headboard frames in place.



4. Repeat the same procedure for the footboard frames installation. Please ensure that they are set to the same length as the mattress to avoid any potential injury.

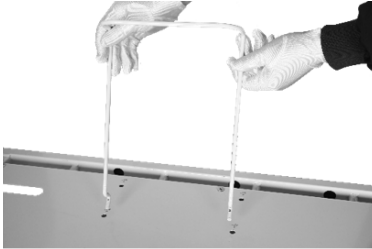
### Assembling the Head/Footboards

1. With the mounting plates on the headboard facing the bed, slide the mounting plate groove onto the headboard mounting bracket's vertical support.
2. Insert the lock pin through the mounting plate into the headboard to secure the headboard in place. Repeat on the other mounting plate.
3. Repeat the same procedure for the footboard installation.

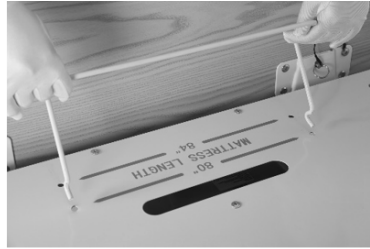


## Installing the Mattress Retainers

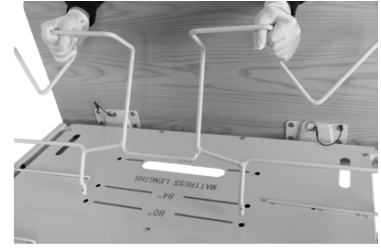
1. Locate the pre-drilled holes for the side mattress retainers on the bed deck. Insert the mattress retainers into the pre-drilled holes.
2. Repeat the same procedure for the other three side mattress retainers.
3. Insert the bed-top mattress retainer on the top of the bed deck into the pre-drilled holes.
4. Repeat the same procedure for the bed-end mattress retainer.



Side  
mattress retainer



Bed-top  
mattress retainer



Bed-end  
mattress retainer



Ensure all mattress retainers are flat against the bed deck.

Adjust the mounting position accordingly for different sized mattresses. The mounting holes are labeled with the corresponding size. Ensure the mattress fits snugly within the mattress retainers or severe injury/entrapment could occur.

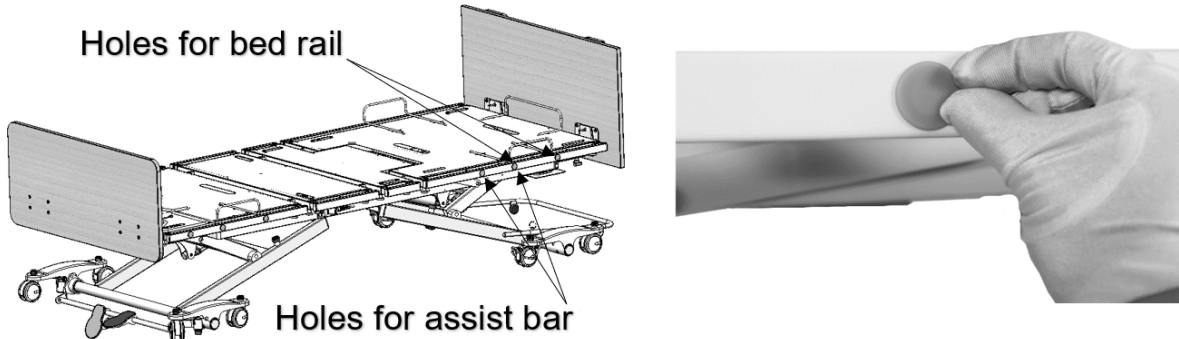
## Installing the Wall Bumper Bar

1. Clip the wall bumper bar on to the caster support shaft at the head end of the bed. Ensure that the wheel of the bumper bar is facing the floor.
2. Slide the bar to adjust the length. Insert the pin into the holes on the bar to secure the length and lock the assembly.

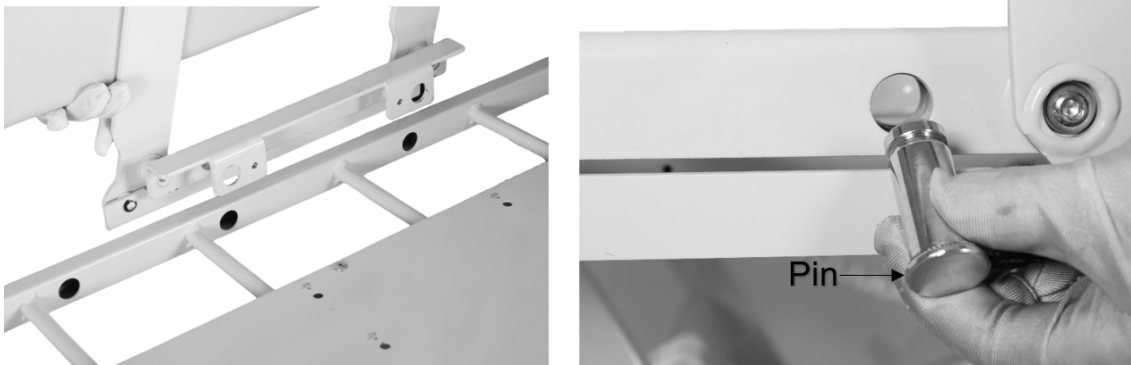


## Installing the Rails or Assist Bars (Optional Accessory)

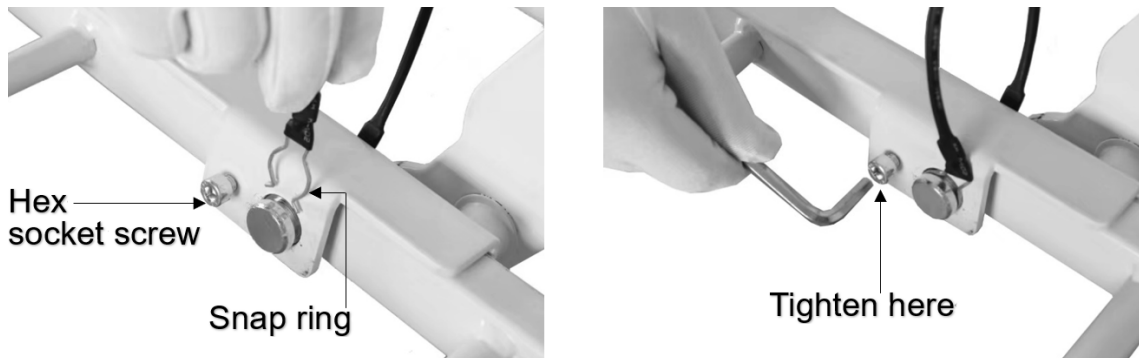
1. Ensure that the bed is in a flat position before installing the bed rails or assist bars.
2. Remove the rubber cover for the appropriate holes.



3. Unclip the snap ring and remove the pin from the mounting brackets.
4. Place the rail bracket onto the edge of the bed decking. Align the rail bracket mounting holes with the bed deck mounting holes.
5. Re-insert the pin and secure it with the snap ring.



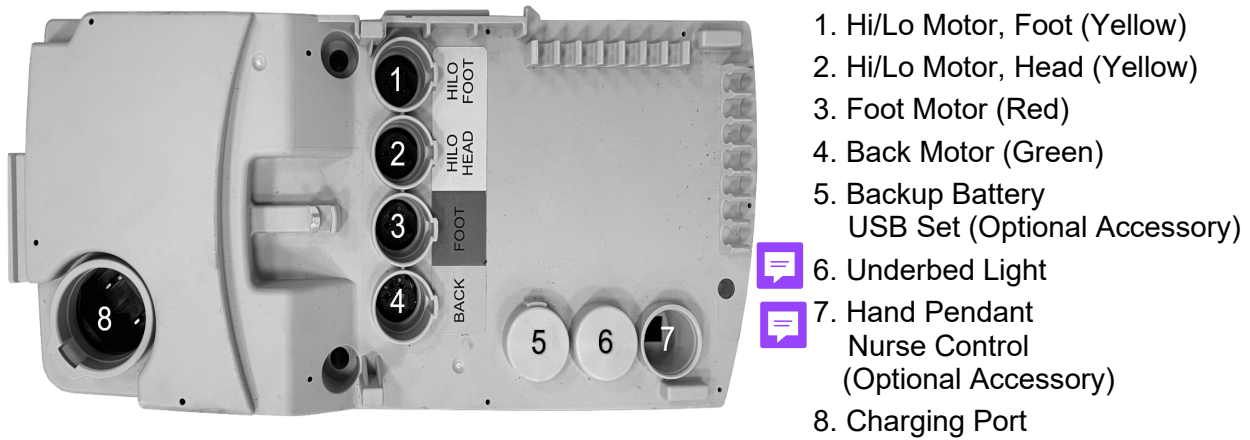
6. Ensure that the snap ring is positioned in the groove of the pin.
7. If the bed rail or assist bar has an additional hex socket screw next to the pin, tighten it to secure the bed rail or assist bar in place.




8. Repeat the same procedure to install the other rails.


## Connecting the Control Box

Upon opening the control box, each motor connection port is color coded for ease of identification.



### INFORMATION

 The USB (optional accessory) and battery backup share the same port. A Y-splitter cable comes pre-installed, allowing both devices to be connected to the control box at the same time.

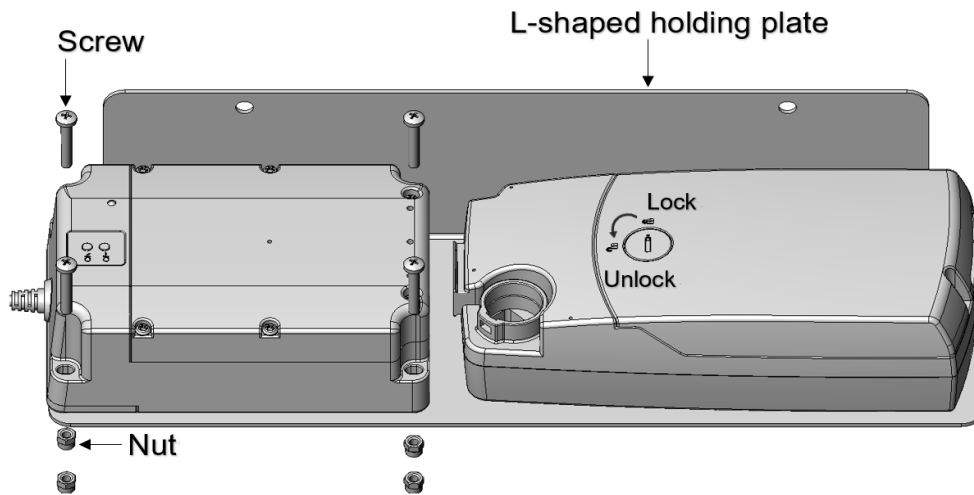
 The hand pendant and nurse control (optional accessory) share the same port. A Y-splitter cable comes pre-installed, allowing both devices to be connected to the control box at the same time.

## Replacing the Backup Battery if Required

A pre-installed backup battery is a standard accessory for the Infinity Long-Term Care Low Profile Bed.

When the pre-installed backup battery fails or can no longer be recharged from aging, please follow the steps below to replace it with a new backup battery.

1. Switch the power off when replacing a new backup battery.
2. Disconnect the backup battery from the Y-splitter cable.
3. Loosen the screws, remove the failed battery and replace it with a new one.
4. Reconnect the new backup battery to the Y-splitter cable.



## Positioning the USB/USB-C Charger (Optional Accessory)

### INFORMATION

There are pre-drilled holes on both sides of the bed frames for installing a USB/USB-C charger, allowing users to choose the installation side based on their needs.

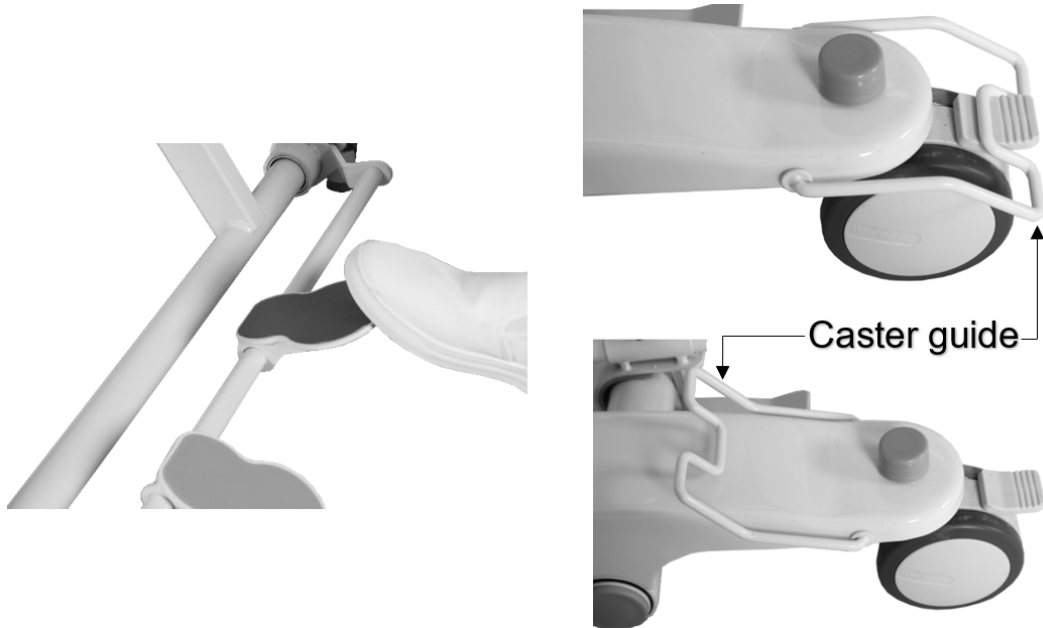
1. Simply secure the charger to the desired side of the bed frame using screws.
2. Connect the USB/USB-C charger cord to the Y-splitter cable.



# Equipment Operation

## Positioning the Bed

1. To lock the bed, step on the red pedal at the rear of the bed.
2. The caster guides on both sides of the head end casters should be lowered to prevent sideways movements. When lowered, the caster guide should hug around the caster.
3. To unlock the bed and casters, step on the green pedal at the rear of the bed. Lift up the caster guides on the head end casters to allow free movement.



### CAUTION

Head end caster must be unlocked when raising and lowering the bed.

Head end caster guide should be lowered onto the caster when bed is in use.

## Extending the Length of the Bed from 80" to 84" or 88"

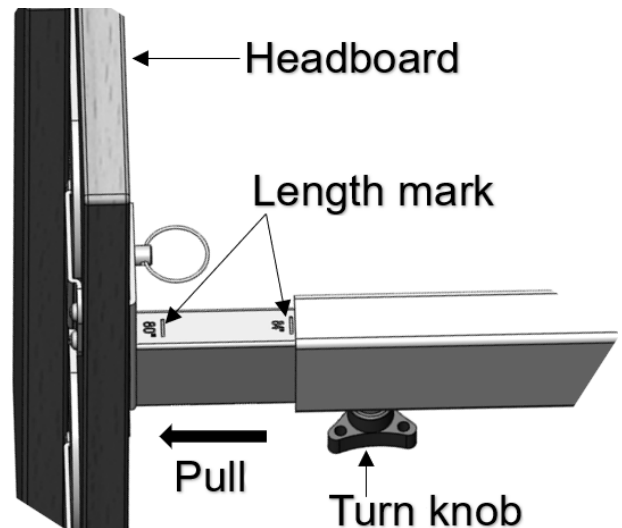


### INFORMATION

The bed length can be extended from 80" to two sizes.

### To extend the bed length to 84”:

1. Loosen the two turn knobs located on the underside of the bed deck that secure the headboard and footboard frames. (Refer to Page 10)
2. Pull the headboard and footboard frames away from the bed evenly with both hands until they latch onto the bed frame. The correct extension distance is marked on the frames. Tighten the turn knobs once the frames are extended.
3. Adjust the mattress retainers accordingly. The extension length is marked on the bed deck.

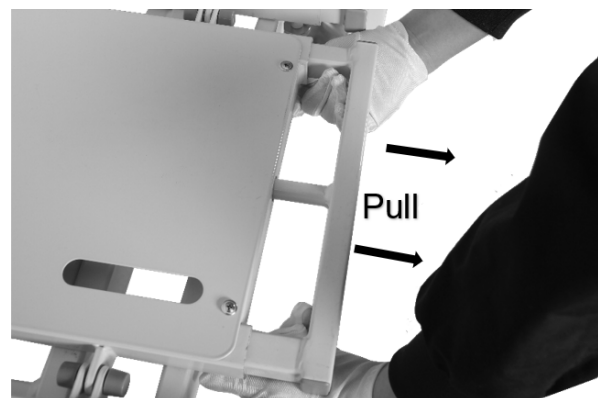
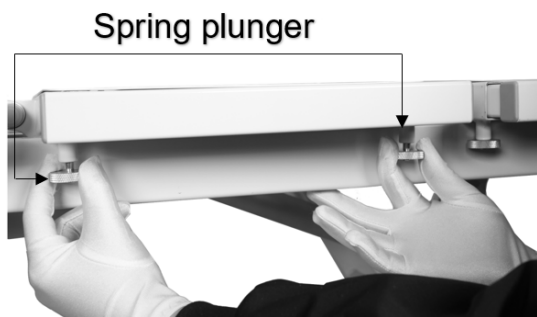


### To extend the bed length to 88”:

1. Loosen the two turn knobs located on the underside of the bed deck that secure the headboard frames. (Refer to Page 10)
2. Pull the headboard frames outward until the 84” length mark is reached. Tighten the turn knobs once the headboard frames are extended.
3. Repeat steps 1 and 2 for the footboard frames, pulling them until the 88” length mark is reached.
4. Adjust the mattress retainers accordingly. The extension length is marked on the bed deck.

## **Extending the Width of the Bed from 35” to 42” or 48”**

1. Under each deck section there are two spring plungers. Pulled down the spring plungers and at the same time slide out the extension piece to the required length. There should be an audible click indicating that the extension piece is locked in place.



2. Repeat the same procedure on all bed sections and on both sides of the bed.
3. Adjust the mattress retainers accordingly.

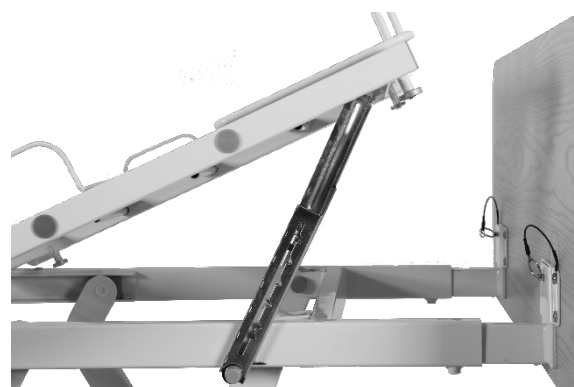
## Extending the Headboard

1. To extend the headboard, lift up and flip the extension piece on the back of the headboard. Reinsert the steel plates into the mounting brackets on the main headboard.



## Adjusting the Extended Heel Lift

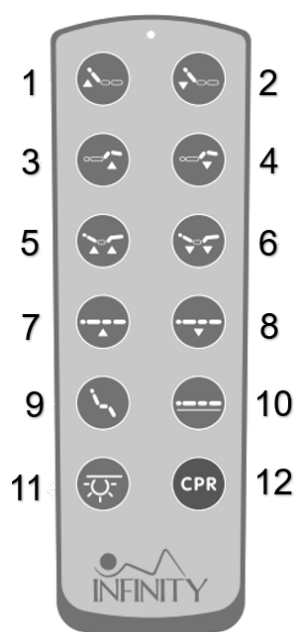
1. Grip the end section of the bed platform. Lift up slowly to the preferred height. Ensure there is an audible click indicating that the deck is locked in place within the Ratcheting Bracket.
2. To lower the end deck to its original position, lift it up to the highest position and slowly lay the bed section back down.



## Using the Hand Pendant

The up arrow (▲) indicates raising the corresponding parts of the bed.

The down arrow (▼) indicates lowering the corresponding parts of the bed.



1. Use button 1 and 2 to adjust the backrest up or down.
2. Use button 3 and 4 to adjust the knee-break up or down.
3. Use button 5 and 6 to adjust the backrest and knee-break up or down.
4. Use button 7 and 8 to raise or lower the bed platform.
5. Use button 9 to put the bed into chair position.
6. Use button 10 to return the bed to its flat position.
7. Use button 11 to turn on/off the underbed lighting.
8. Use button 12 to engage in electronic CPR lowering.

## Resetting the Bed

Where a connection fault is identified and rectified, the control system will require a reset in order to operate again.

1. Press and hold button 1 and button 2 on the hand pendant simultaneously for three seconds. All actuators will fully retract to their lowest positions. Once the reset is complete, the buzzer will emit three beeps, and the LED on the hand pendant will flash three times to confirm a successful reset.



## Using the Nurse Control Panel (Optional Accessory)

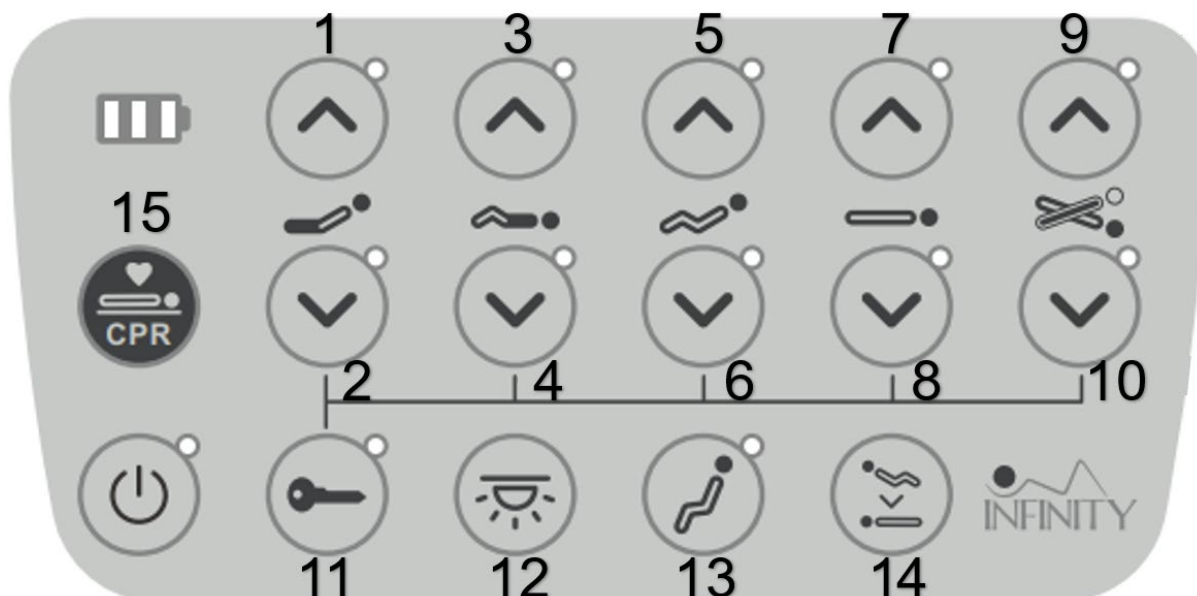
Connect the nurse control panel before use.



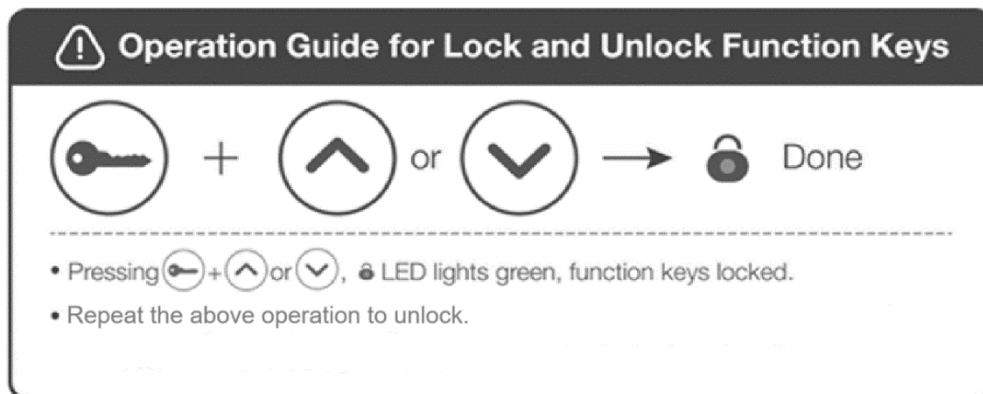
1. Switch off the power supply before connecting the nurse control panel.
2. Plug the nurse control panel cord to the Y-splitter cable.
3. Make sure the connection is secure, then switch the power supply back on.

The up arrow (▲) indicates raising the corresponding parts of the bed.

The down arrow (▼) indicates lowering the corresponding parts of the bed.



1. Use button 1 and 2 to adjust the backrest up or down.
2. Use button 3 and 4 to adjust the knee-break up or down.
3. Use button 5 and 6 to adjust the backrest and knee-break up or down.
4. Use button 7 and 8 to raise or lower the bed platform.
5. Use button 9 and 10 to put the bed into Trendelenburg or reverse Trendelenburg position.
6. Use button 11 to lock functions.
7. Use button 12 to turn on or turn off the light.
8. Use button 13 to set the bed to the chair position.
9. Use button 14 to return the bed to its flat position.
10. Use button 15 for CPR position.



## Operating the Bed Rails (Optional Accessory)

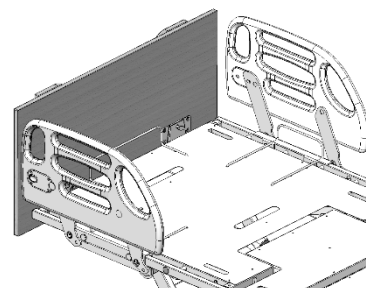
### INFORMATION

Installation refers to page 12.

#### Composite Swing Rail

Raise bed rail: Pull the bed rail upwards until the rail is securely locked in place.

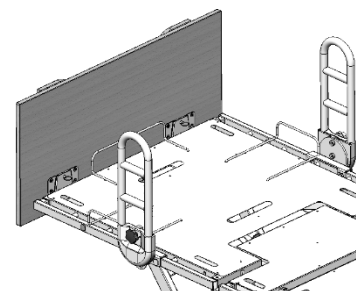
Lower bed rail: Press the release button; slowly lower the rail to its lowest position.



#### Assist Bar

Raise assist bar: Pull the bar upwards until it is securely locked in place. Ensure the release button is engaged.

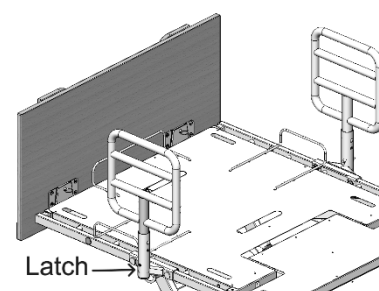
Lower assist bar: Pull the release knob and slowly lower the bar to its lowest position.



#### Q Bar

Parallel rail alignment: With one hand, press and hold the latch. With the other hand, grasp the top of the bed rail and lift it upward, then rotate the rail until it is parallel to the bed. Lower the rail and release the latch to lock it in place.

Perpendicular rail alignment: With one hand, press and hold the latch. With the other hand, grasp the top of the bed rail and lift it upward, then rotate the rail until it is perpendicular to the bed. Lower the rail and release the latch to lock it in place.



## Troubleshooting Guide

Symptoms	Possible Faults	Possible Solutions
Bed idle when hand pendant buttons are pressed.	<p>Adjustment may be at the maximum or minimum position.</p> <p>Power cord not connected or damaged.</p> <p>Hand pendant or actuator connectors are loose.</p> <p>Control box, hand pendant or actuator are damaged or broken.</p> <p>Load is too heavy.</p> <p>Control system requires a reset.</p>	<p>Check if other buttons are working.</p> <p>Ensure the power cord is properly connected to the electrical socket and the bed.</p> <p>Ensure tight connection of all connectors to control box.</p> <p>Replace the control box, hand pendant or actuator. Contact your supplier.</p> <p>Ensure the load weight is within the designated capacity. Reduce the load.</p> <p>Refer to page 18.</p>
Casters/Brakes noisy or stiff.	Debris or fluff in bearings.	Replace casters.
Noisy or dry sound from pivots.	Need lubrication.	Lubricate your bed.
Unusual noise from actuator.	Actuator is worn or damaged or spindle is bent.	Replace the actuator. Contact your supplier.
Head/footboard unstable.	Head/footboard frame not tightly secured.	Refer to Equipment Assembly.

If problems persist following the above remedial procedures, please contact your dealer or the manufacturer.

## Limited Warranty

The Manufacturer warrants to the original user (Customer) all products manufactured by the Manufacturer to be free from defects in material and workmanship under normal use and service for a period as specified below. If such a defect appears and Customer has given immediate written notification of same, the Manufacturer shall replace or repair such part at the Manufacturers option. The Manufacturer will require the return of the defective part to establish the claim. The Manufacturer's obligation under this warranty shall be limited to said replacement and/or repair. Installation and freight costs for replaced or repaired items remain the responsibility of the Customer. This warranty does not cover failure due to negligence, accident, deliberate abuse, nor improper installation and/or maintenance. Modifications made to products (including modifications without the expressed written consent of the Manufacturer) shall void this warranty in its entirety. NO FURTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOT SPECIFIED HEREIN, ARE MADE BY THE MANUFACTURER, AND THIS WARRANTY SETS FORTH THE FULL EXTENT OF THE LIABILITY ARISING FROM THE MANUFACTURE, USE OR SALE OF THE PRODUCTS AND MATERIALS SOLD HEREUNDER. No allowances will be made for delays or loss of profit, nor for any other special, indirect or consequential damages or injuries, whether based on tort or contract.

Applicable warranty periods commencing from date of shipment from ES are as follows:

Welds .....	15 years
Electrical & Mechanical components .....	5 years
All other components .....	1 year

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Brooklyn, NY

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# Emerald

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