

# Full-Electric Value Care Bed

## User Manual & Entrapment Guide



**For use with Item #s**

**5410VC**

**5410VCDECK**

**5410VCHFB**

This manual **MUST** be given to the user of the product.  
BEFORE using this product, this manual **MUST** be read and saved for future reference.



**Yes, you can.®**

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## WARNINGS

### PLEASE READ ALL WARNINGS/CAUTIONS BEFORE USE

- DO NOT use in oxygen-enriched environments or near flammable or explosive gases.
- Possible fire hazard when used with oxygen administering equipment other than nasal or masked type
- When using nasal or masked type administering equipment, oxygen or air tubing MUST be routed and secured properly to ensure that tubing does NOT become entangled and eventually severed during normal operation of Electric bed
- Liquids can cause electrical hazards. In the event of a spill in or around the bed, immediately unplug the bed and allow the area to dry thoroughly before plugging in the bed. If a spill occurs, UNPLUG the bed immediately. Clean up spill and allow bed or area to dry thoroughly before using the electric controls again
- This bed is designed for adults only. DO NOT use with or for children. Children must be closely supervised at all times when near the bed.
- Users who are unable to understand or follow these instructions and warnings or who have limited physical capabilities should be supervised or assisted while using the bed.
- NEVER PERMIT ANY ONE UNDER THE BED AT ANYTIME
- When operating or moving the bed, ALWAYS ensure that the individual utilizing the bed is positioned properly within the confines of the bed.
- ALWAYS keep clear of moving parts when adjusting the bed. Patient should be centered on the bed with extremities within the mattress area. DO NOT allow extremities to extend beyond the sides or between bed rails.
- DO NOT use this bed for patient transport. DO NOT move the bed while occupied, otherwise injury or damage may result.
- The maximum safe working load of this bed (patient, mattress, bedding, and accessories) is 450lbs/204kg. The maximum user weight is 350lbs/158kg. ALWAYS observe the weight limits.
- DO NOT stand or climb on bed.
- Bed is intended for a single occupant. NEVER allow more than one person to sit or lay on bed at the same time.
- To prevent patient injury due to falls, ALWAYS leave bed at lowest height when the patient is unattended.
- Inappropriate handling of the power cord can create an electrical hazard.
  - Regularly inspect cord and plug for damage such as kinking or fraying; DO NOT use if cord or plug is damaged, contact your dealer for repair or replacement.
  - DO NOT unplug by pulling on the cord, this may damage the plug connection. NEVER pull, jerk, twist, or severely bend the cord, especially near the plug connection.
  - DO NOT use this product with power strips or extension cords.
  - DO NOT overload wall outlets. ALWAYS connect this product to an appropriate voltage outlet; DO NOT use with a DC to AC converter.
- ALWAYS take care when routing power cords for accessories or other equipment through the space under the bed. Cords should be secured such that they cannot become pinched or damaged by moving parts of the bed. Damaged cords should NOT be used.
- It is the responsibility of the patient's physician and caregiver to assess the patient and determine which devices and accessories are needed to support and protect the patient, while limiting risk to the patient. Use of fall protection, pressure management, and transfer assistance mechanisms should be considered as appropriate
- DANGER! Entrapment may cause patient injury or death

warnings continued on next page

## ⚠ WARNINGS

- DO NOT use this bed with incompatible mattresses or bed rails. Refer to page 17 of this manual or contact your Invacare dealer for assistance with purchasing compatible models.
- After bed assembly or maintenance, test to ensure all sections are securely in place and all electrical components operate as intended BEFORE use.
- ALWAYS lock casters to prevent the bed from moving while occupied. Even with casters locked, some floor surfaces may allow the bed to move slightly; use of the bed on such floor surfaces must be evaluated by the care provider.
- DO NOT attempt to operate the bed controls if the bed is not fully assembled, as this may cause damage to the bed components.
- After the bed has been fully assembled, ALWAYS test to make sure that all sections of the bed are properly and securely in place before using.
- ALWAYS use caster locks except when moving the bed.
- Body weight should be evenly distributed over the surface of the bed. DO NOT lay, sit or lean in such a way that your entire body weight is placed only on raised head or foot sections of the bed. This includes when assisting the user in repositioning or transferring in or out of bed.
- DO NOT permit more than one person on/in the bed at any time.
- DO NOT use outdoors.
- If the unit is not working properly, discontinue use and call a qualified technician to examine the unit and repair it
- Keep all moving parts, including the main bed frame, mattress deck (head and foot springs/sections) and all drive shafts free of obstruction (i.e. blankets/sheets, heating blankets/pads, tubing, wiring, etc. and other types of products using electric cords which may get tangled around the bed, side rails or legs) during operation of the bed.
- Keep the product a minimum of 12" away from any direct heat source. Make sure head and foot springs/sections are connected securely to the bed ends before use.
- DO NOT use the bed to transport a person in or on the bed. Otherwise, injury or damage may result
- When transferring into or out of the bed, ALWAYS use lock the locking caster(s). Inspect for correct locking action on caster locks before using bed. Even with casters correctly locked, some floor surfaces, such as tile or wood, may allow the bed to move under some conditions. Use on floor surfaces such as these MUST be evaluated by the care provider.
- The initial set up of this bed must be performed by a qualified technician.
- The total weight limit of the full-electric bed (including accessories, mattress, occupant and any other person/object positioned on the bed) is 450 pounds (204 kg.); 350 pounds (158 kg) patient weight.
- A safety feature of this bed model includes protection against overheating caused by excessive or extended periods of operation. Depending on the duration, this will include multiple/repeated adjustments or the use of multiple functions at the same time To ensure trouble-free operation, ALWAYS allow a slight pause between multiple adjustments and AVOID pressing multiple function buttons at a time If thermal protection is activated, the bed will not respond to pendant commands To resolve this, release the pendant button and let the bed sit for several minutes. This will reset the protection function time to and restore bed function. Depending on the degree of the overheating, this may take up to 30 minutes
- ALWAYS remove manual crank(s) before performing electronic functions or using the bed. If not removed, the crank(s) will turn when the motor is on and this could cause personal injury or damage to the bed. ALWAYS unplug the bed from the electrical outlet before cleaning
- DO NOT open assemblies such as the motors, pendant, junction boxes or gear boxes. There are no user serviceable parts. Only qualified

## ⚠ WARNINGS

technicians are permitted to repair these parts. If unqualified individuals perform any work on these beds, the warranty is void.

- After use, some permanent deformation of the bed under load may occur. This is normal and expected unless it affects the function of the bed. Slight sagging or bending at the center of the bed after use does not indicate a safety risk/defect
- DO NOT place pendant under or between objects. This may cause the unintentional activation of the bed features and may cause injury or damage.
- If a button on the pendant does not release or sticks, the bed spring will not stop moving. Inspect the covering of the bed's control panel and the patient control panel to assure that the covering is not cracked or damaged.
- ALWAYS keep all electrical cords away from heated or hot surfaces.
- NEVER operate if the unit has a damaged cord or plug. If the bed is not working properly, discontinue use and call a qualified technician for examination and repair
- Refer all servicing to qualified personnel ONLY. Grounding reliability depends upon a properly grounded wall outlet. ALWAYS unplug the bed from the outlet before servicing or performing any maintenance on the electric bed.
- DO NOT unplug the power cord from the junction box. Damage to cord will result.
- Use caution when disconnecting the pendant, DO NOT press pendant buttons
- When bed is not to be used for an extended period, unplug electric bed from the wall outlet.

SAVE THESE INSTRUCTIONS

## SPECIAL NOTES

### NOTICE:

- The information contained in this document is subject to change without notice.
- WARNINGS/CAUTION notices used in this manual apply to hazards or unsafe practices which could result in personal injury and/or property damage.
- Check all parts for shipping damage and test before using. In case of damage, do NOT use.
- Contact the dealer for further instruction
- Your Electric bed has been engineered to provide you with reliable operation.
- The bed has been thoroughly tested and inspected prior to shipment.

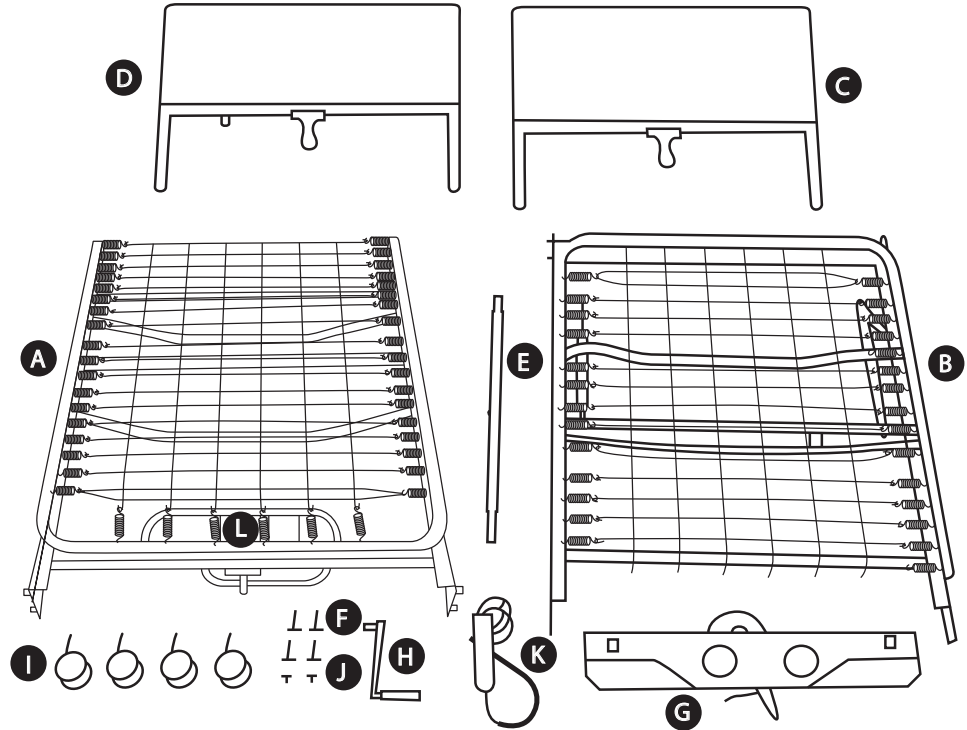
### INDICATIONS & CONTRAINDICATIONS FOR USE

- This bed is intended for use in Homecare settings, for use with adults (persons weighing at least 88 lbs/40kg, at least 57 in/146cm tall, with a BMI of at least 17).
- This bed is NOT intended for use in a hospital or long-term care facilities. This bed is NOT intended for use with children.
- This bed is NOT intended for patient transport – the bed should NOT be moved while occupied.
- This bed is intended for use in Application Environment 4, as defined in IEC 60601-2-52-2015

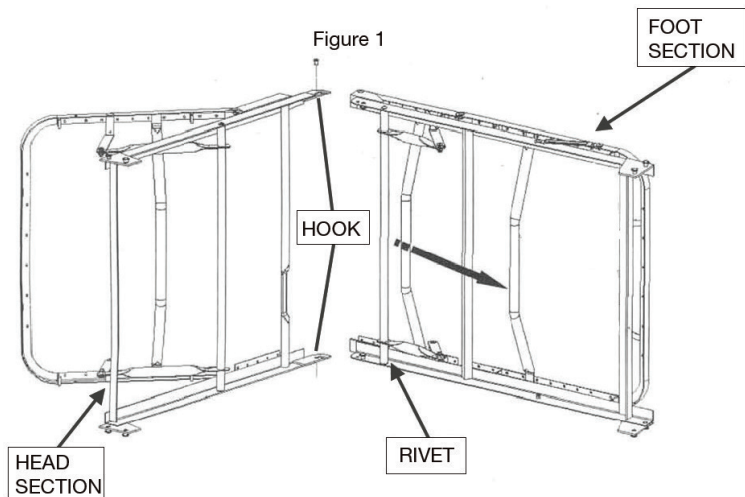
## BED COMPONENTS.

Confirm that all parts are present.

- A. Foot Spring
- B. Head Spring
- C. Head Board
- D. Foot Board
- E. Hi/Low Shaft
- F. Locking Pins (4)
- G. Motor
- H. Hand Crank (attached to foot board for shipping)
- I. Casters (4) - 2 locking, 2 non-locking
- J. Spring Clips (2)
- K. Hand Pendant
- L. Full Electric Motor

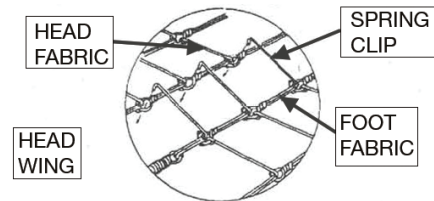
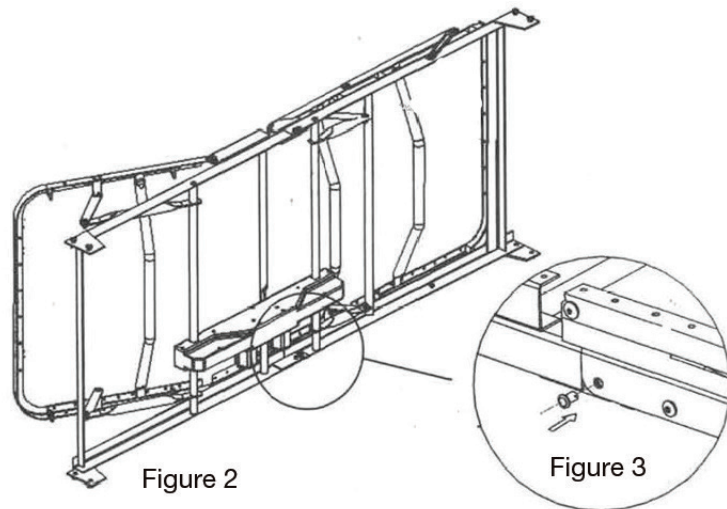


# ASSEMBLY INSTRUCTIONS.



**NOTE:** Spring fabric not shown for clarity

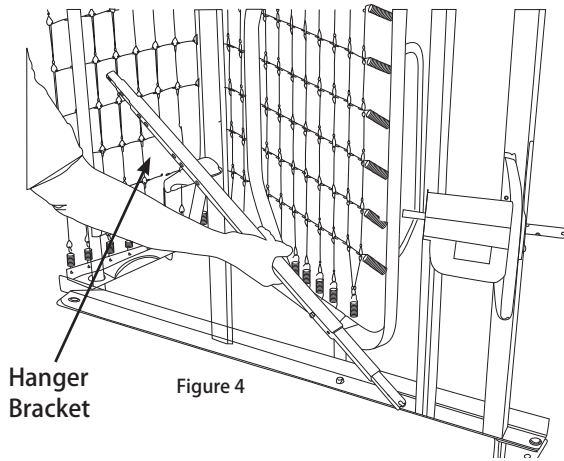
- Lay the head and foot section on their sides approximately 90° to each other (See Figure 1).
- Slide the sections together until the hook on the head section catches the rivet on the foot section.
- Straighten sections and position as shown in figure 2.
- Position head wing as shown.
- With the two sections level, install a frame lock pin into each side of the frame as shown in figure 3.
- Be sure to properly install frame lock pins before use



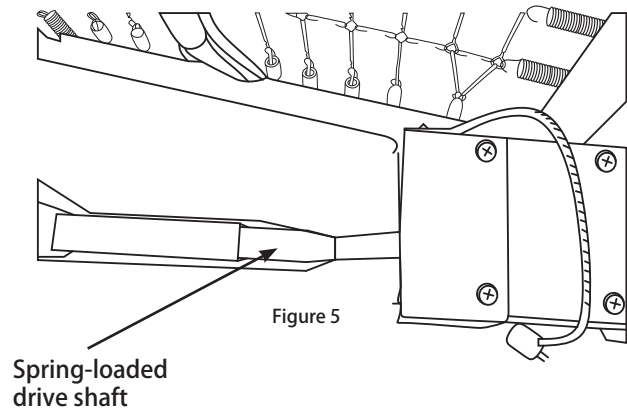
**WARNINGS:** Lock pins must be installed to ensure safe operation/use

- Attach fabric halves together using spring clips, which are attached to the foot fabric.

## ASSEMBLY INSTRUCTIONS .



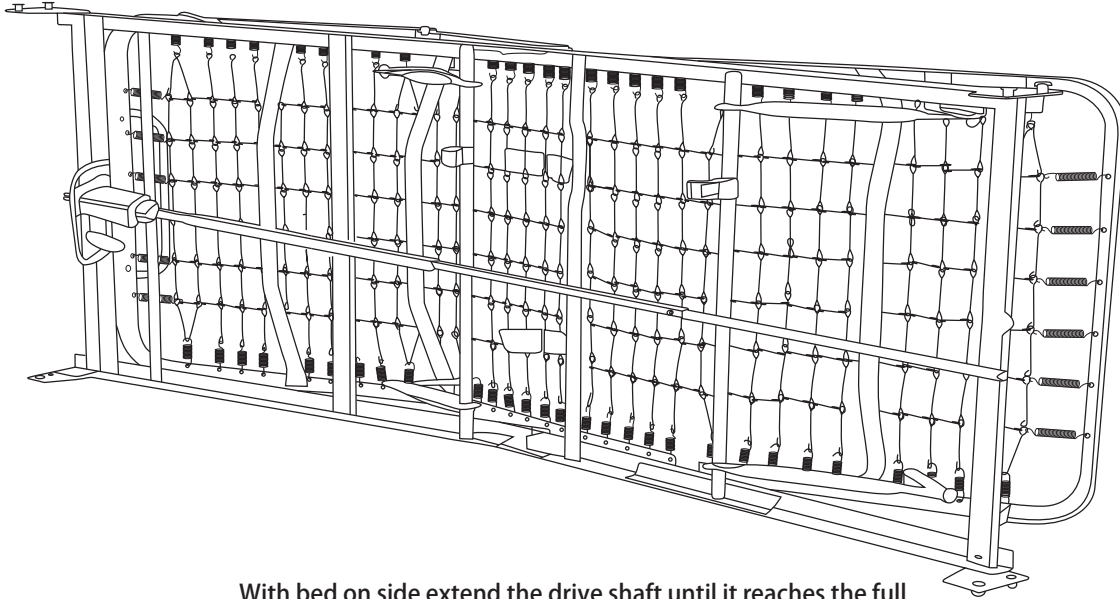
- Position the foot spring standing upright on its side  
Slide Hi/Low drive shaft through hanger bracket.



- Install Hi/Low drive shaft to the Hi/Low motor located on the foot section.
- Insert the spring-loaded side of the drive shaft into the lower receptacle as shown.

# ASSEMBLY INSTRUCTIONS.

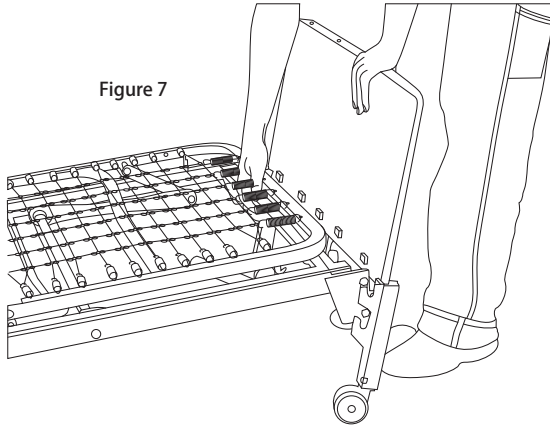
Figure 6



With bed on side extend the drive shaft until it reaches the full length of bed. The drive shaft adjustment holes are marked for either semi or full beds. Choose the full bed hole.

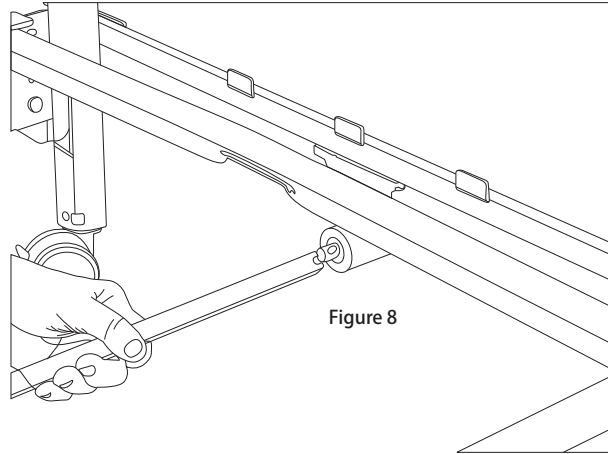
## ASSEMBLY INSTRUCTIONS.

Figure 7



- Install the casters by inserting the caster stem into the leg receptacle. **ALWAYS** install 1 locking and 1 non-locking caster on each bed end. **ALWAYS** install locking casters diagonally from each other.
- Attach the head board and foot boards.
- **ALWAYS** ensure that the 2 hooks on each side of the head and foot boards are fully engaged and seated securely with the 2 locking rivets on each side of the bed frame.

Figure 8



- Install the head end of the drive shaft as shown.

## ASSEMBLY INSTRUCTIONS.

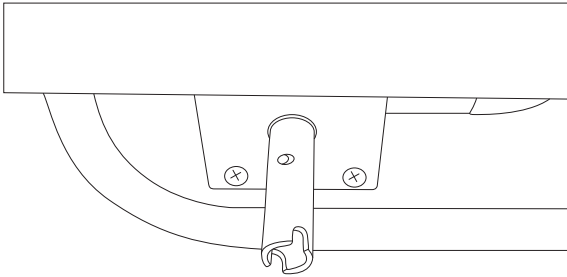


Figure 9

- Release the spring-loaded drive shaft on the hi/low motor and insert the drive shaft into the gear box located on the footboard.

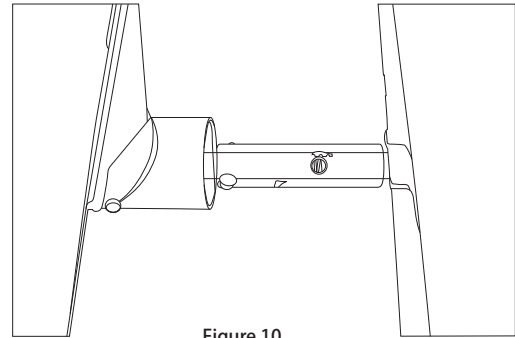


Figure 10

- Make sure the slot on the spring-loaded drive shaft fully engages the roll pin on the motor gear box.

## ASSEMBLY INSTRUCTIONS.

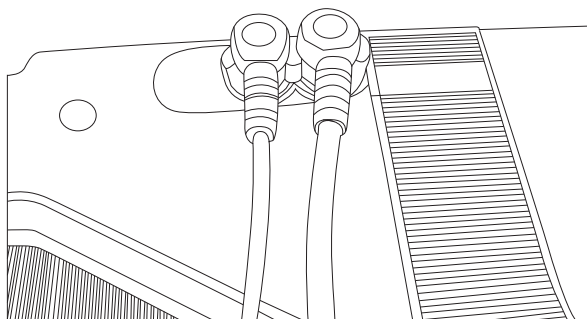


Figure 11

- For easier set-up, prior to installing the motor, plug both the hand pendant and Hi/Low motor cables into motor as shown.

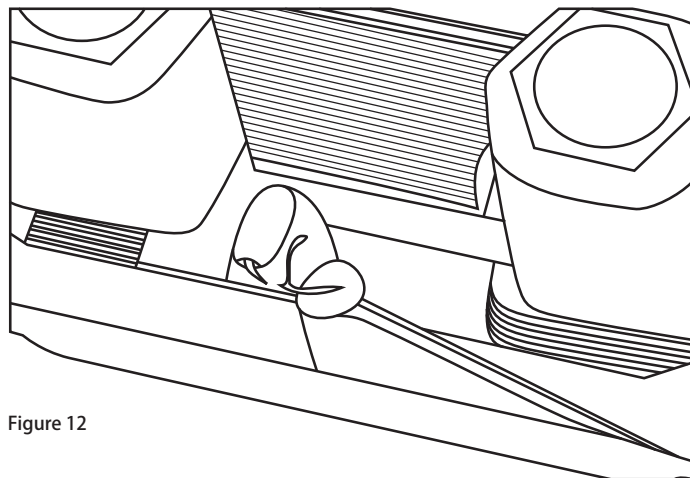
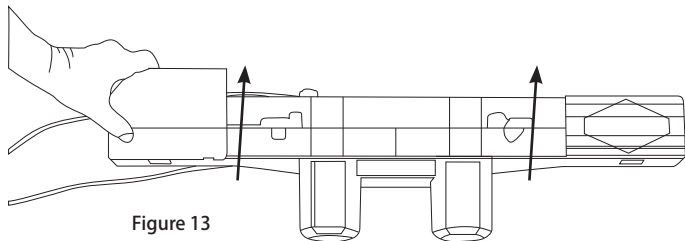
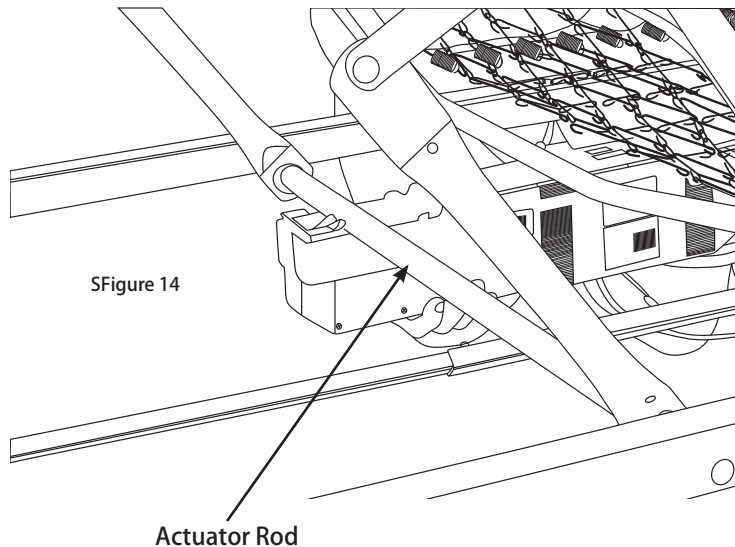


Figure 12

- Connect a 9V battery (not included) to the battery clip located on the motor. The battery clip is located in a recess under the motor cover. With a charged battery installed, the motor can be operated in the event of a power outage.



- To install motor, remove both locking caps on top of the motor.



- Align the motor with the actuator rod and raise the head spring to the highest position. The motor will be pulled towards the bed and lock on the actuator rod. Repeat for foot section.
- After the motor is fully installed, slide both locking covers back onto the motor.
- Once fully assembled and checked, plug the unit in to test operation and ensure the bed is working properly.
- Before placing a mattress on the assembled bed frame, flip up the mattress guard at the foot of the bed frame to reduce mattress movement when in use.

# Hand Pendant Operation

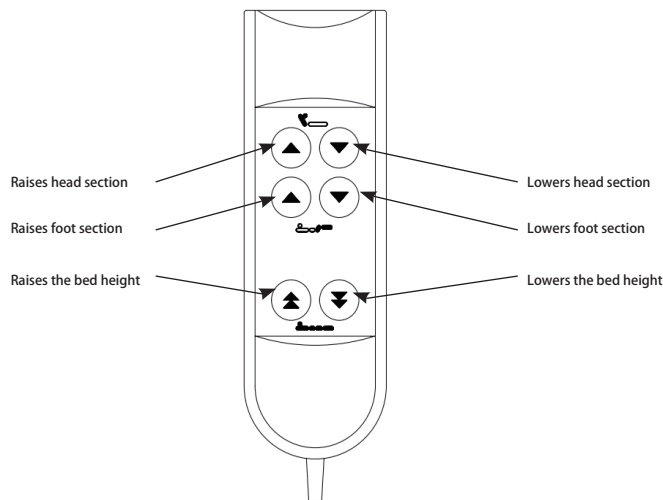


Figure 15

## Battery Operation

The full electric bed can be lowered in an emergency when equipped with an installed 9V battery (not included). Battery-powered operation can only be used once and only be used to lower the head and foot sections of the bed. Replace the 9V battery annually or after battery operation has been used to lower the bed.

## Hand Crank

The full-electric bed is equipped with a removeable manual hand-crank that may be used when either electric or battery power is unavailable

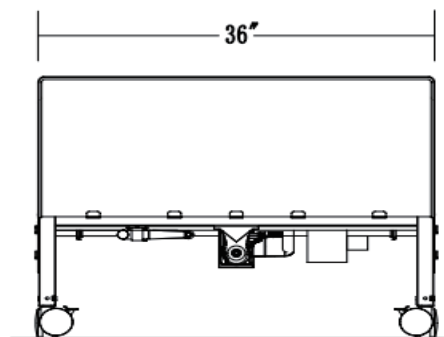
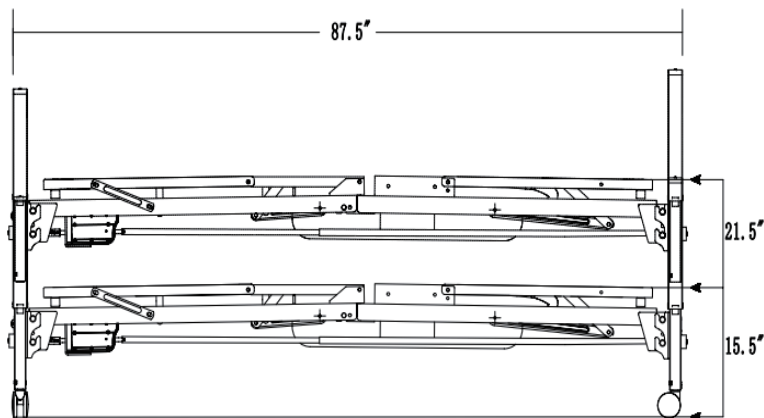
## WARNING

**ALWAYS** remove the manual hand-crank **BEFORE** performing electric operation. **DO NOT** operate the electric functions with the manual hand-crank installed on the bed or product damage and personal injury may occur

## Bed Transfers

When transferring in or out of the bed, **ALWAYS** ensure the locking casters are in the locked position. The bed height may be adjusted either up or down, as required, to make transfer safer and easier for the bed user.

## HEAD/FOOT BOARD OPTIONAL HEIGHT ADJUSTMENT



## MAINTENANCE AND SAFETY CHECKS

To be performed once per year or between placements by a qualified technician

### Electronics

Check all controls to make sure all functions work properly.

- Power cord
- Pendant cord
- Check to make sure all wires are routed and attached properly so they do not interfere with any moving parts.
- Check to make sure all plugs are fully inserted or attached.
- Replace 9V battery annually or after each use.

### Bed Frame and Sleeping Surface

Visually check all welds

- Head section
- Knee section
- Main Frame
- Check joints between sleeping surface sections for loose fasteners.

### Cleaning

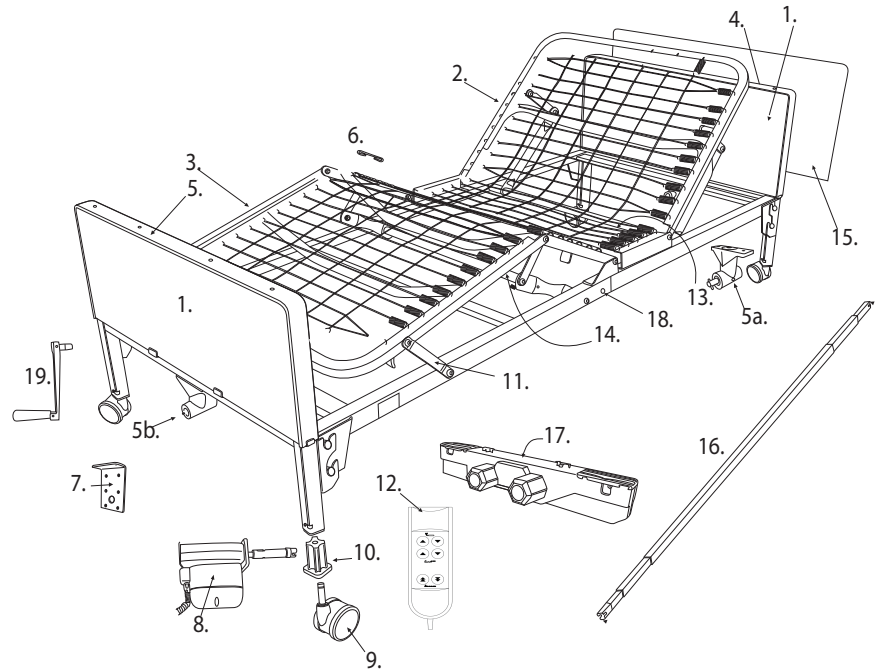
The metal parts of the bed are covered with a baked epoxy coating. Clean all coated parts with mild detergent and warm water. Periodically raise head and feet sections of the bed and remove dust from frame. Also, periodically remove the mattress and clean mattress deck. Perform cleaning as needed or between placements.

### Lubrication and Mechanical

- Lightly grease all actuator screw threads with white lithium grease.
- Lubricate all caster roller and swivel bearings with light machine oil.
- Check all bolts and tighten as needed.

# Bed Schematic

1. Headboard  
Footboard
2. Head spring
3. Foot spring
4. Headboard panel frame
5. Footboard panel frame
  - a. Headboard gear assembly
  - b. Footboard gear assembly
6. Sleep surface hook
7. Motor brackets
8. Hi/Low motor gearbox
9. Caster set (2 locking/2 non-locking)
10. Caster receptacle
11. Frame linkage
12. Hand control
13. Head actuator bar
14. Foot actuator bar
15. Footboard panel  
Headboard panel
16. Hi/Low shaft
17. Motor
18. Bed locking pin
19. Hand crank



## SPECIFICATIONS

Electrical	Motors are ETL Approved
Weight Capacity	Distributed Total - up to 450 lbs. / Patient up to 350lbs.
Construction	Frame: 11ga (.120) hot rolled steel. Sleeping surface: Zinc plated steel wire and coils
Finish	Durable Powder Coating
Overall Bed Dimensions	87.5" long X 36" wide
Mattress Deck Height (with no mattress)	Minimum – 15.5" Maximum – 21.5"
Bed Frame Weight (assembled)	169 lbs.
Maximum angles of the mattress platform	Head: 68° ±3° Foot: 34° ±3°
Mattress Requirements	Size – 80" long X 36" wide X 6" deep Homecare bed.
Side Rails Requirements	Homecare bed compatible, half or full manufactured for direct bed frame attachment
Battery	Lowest head and foot one time, will not lift the head or foot sections (9V not included)

## SERVICE LIFE

### WARNING!

#### Risk of Injury or Damage

Use of the product beyond this time period may cause product damage and injury.

- This product has an expected lifetime of seven (7) years when used in accordance with safety instructions, maintenance intervals and correct use stated in this manual.
- Perform all maintenance according to the recommended schedule in this manual.

The effective bed lifetime can vary according to the frequency and intensity of use.

## LIMITED WARRANTY

- Your brand product is warranted as follows:  
Frame – 3 years  
Motor – 1 years  
All other parts - 3 year
- This device was built to exacting standards and carefully inspected prior to shipment. This Limited Warranty is an expression of our confidence in the materials and workmanship of our products and our assurance to the end user of years of dependable service.
- This warranty does not cover device failure due to misuse or negligence, or normal wear and tear. The warranty does not extend to non-durable components, such as rubber accessories, casters, and grips, which are subject to normal wear and need periodic replacement.
- If you have questions about your device or this warrant please contact an authorized dealer or Invacare.

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DL18-300UM-A 2020-04-13



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***Yes, you can.®***