HUMAN CARE
Your Life. Your Way.

FloorLine-*i* Plus/FloorLine-*i*

User Manual – Part no. 90500-90504, 90300-90303

Product Description

Human Care beds are designed & manufactured to provide many years of safe operation and use, when operated in accordance with these instructions.

Human Care would like to thank you for the confidence that you have placed in us and our products, in deciding to purchase this FloorLine-i Plus bed. We are sure that your investment in this high quality and durable product will provide you with many years of excellent, cost-effective service.

- Each bed has been tested for safety and functionality, and has let the factory in perfect condition.
- This User Manual informs you, as the operator, and your users, about all product features, complete assembly and all operating functions necessary to ensure ease of operation, and safe handling of this bed in its normal and expected environment.
- You should therefore also regard this User Manual, as a practical reference book, to be kept near the bed and readily available at all times, for anyone involved in its use or operation.
- We wish you and those using the bed, every success in looking after your patients, residents or guests in a safe, comfortable and mulifuncional bed.

⚠ ***is a warning triangle used for situations which require extra care and attention.***

CAUTION!

Do not assemble or operate the bed, before reading this manual, as personal injury or damage to product may occur!

Please contact Human Care in the event of any uncertainties or questions.

Content

NOTE!

This instruction guide contains important information for the user of the product. All who use the product should review and completely understand and adhere to the contents of the instruction guide.Remember to keep the instruction guide in a place where it is always available to those using the product.

1. Symbols

ENG

Used in the User Manual, Bed Labels & Packaging

REF	Catalogue Number
	Caution - Consult Accompanying Documents
	Caution - Pinch Point - Take Care of Hand Placement/Position
	Class 2 Electrical Protection - Double Insulation
CE	Conformity with the essential health and safety requirements of the European Directives
	Consult - Instructions For Use
	Date of Manufacture
40 °C 0 °C	Heat Limitation
80 % 20 %	Humidity Limitation
	Manufacturer
	Maximum User Weight
	Not for General Waste

1. Symbols

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	Product should be kept dry
	Safe Working Load
SN	Serial Number
	Type B - Equipment Providing Protection against Electric Shock

2. Labels

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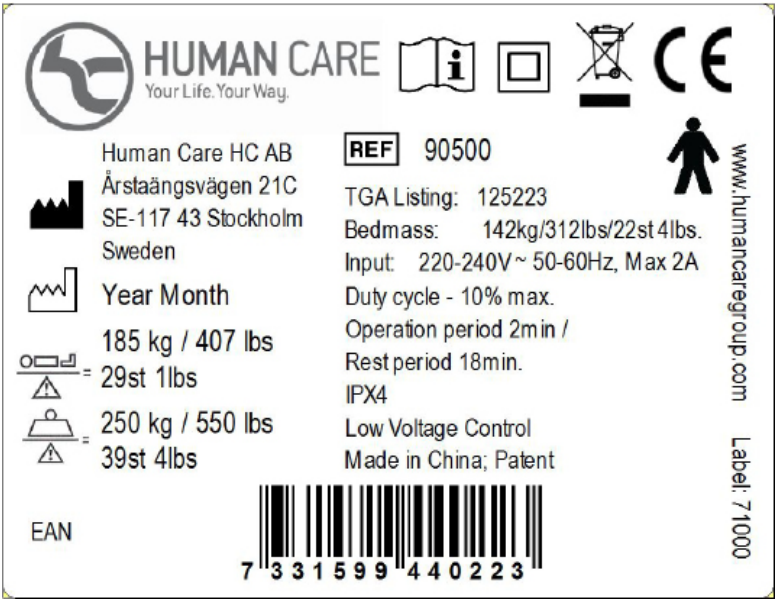

Label

(Only sample.)

The label is placed on the lower left head end of the bed pointing outwards.

3. Technical Specifications

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Nominal Specifications (mm/inch - kg/lbs/st)	
Mattress Platform Length (Standard) *	2000 mm / 78¾”
Mattress Platform Length (with Extension Kit) *	2175 mm / 85½”
Overall Bed Length (Standard-Extended) *	2325 mm - 2500 mm / 91½” - 98½”
Mattress Platform Width	900 mm / 35½”
Overall Bed Width	925 mm / 36½”
Mattress Platform Height Adjustment Range	99 mm / 4” - 799 mm / 31½”
Bed Base Weight	FloorLine-i Plus: 85 kg / 187¼ lbs / 1337 st 7 lbs FloorLine-i: 84 kg / 185 ¼ lbs / 1323 st 3 lbs
Mattress Platform Weight	FloorLine-i Plus: 55 kg / 121¼ lbs / 866 st 1 lbs FloorLine-i: 54 kg / 119 lbs / 8 st 7 lbs
Overall Weight of Bed **	FloorLine-i Plus: 150 kg / 330 lbs / 23 st 8 lbs FloorLine-i: 150 kg / 330 lbs / 23 st 8 lbs
Bed Operating Output Voltage	Max. 24 volts DC
Power Input Voltage / Frequency	- 90500-90503, 90504, 90300-90301,90303: 220-204 V, 50Hz - 90503, 90302: 110-120 V, 60 Hz
Audible Acoustic Energy	< 65dB
Duty Cycle—Operating Time	10% max. 2 min operation / 18 min rest.
Electrical Protection Classification	- 90500, 90502, 90504, 90300, 90301 90303: Class 2 - Double Insulation - 90501, 90503, 90302: Class 1 - Earthed
IP Rating	IPX4
Mains Power Amps	- 90500-90503, 90504, 90300-90301, 90303: Max 2 Amps - 90503, 90302: Max 4 Amps
Mattress Platform Panel Angles: Backrest Thigh Knee Calf Trendelenburg / Reverse Trendelenburg	 70° 45° 110° 25° 18°
Safe Working load (SWL): Mattess Base & Bed	250 kg / 550 lbs / 39 st 4 lbs
Maximum User Weight (MUW)	185 kg / 407 lbs / 29 st 1 lbs

* Beds are shipped normally in standard length (sleeping space of 2000 mm/78¾” x 900mm/35½”), But can be extended to 2175 mm / 85½”) with the addition of an Optional Extension Kit and Bolster.

** Not including accessory weight.

All measurements are subject to commercial manufacturing tolerances. (E & OE)

The bed serial number is located on a silver label, on the side of the top beam, under the backrest panel at the head end of the bed, on the same side as the green castor. This number is required when requesting service, spare parts or ordering additional accessories. Record this number in the space provided, on the Front Cover and Check List.

4. Product description

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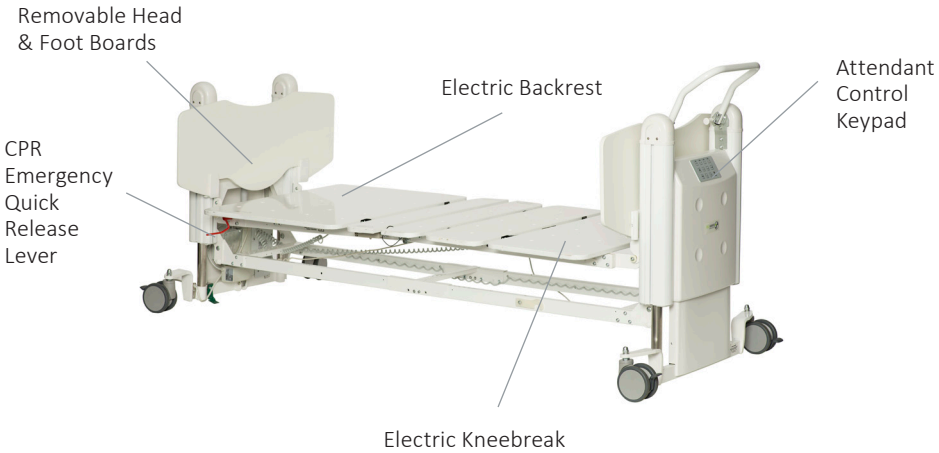
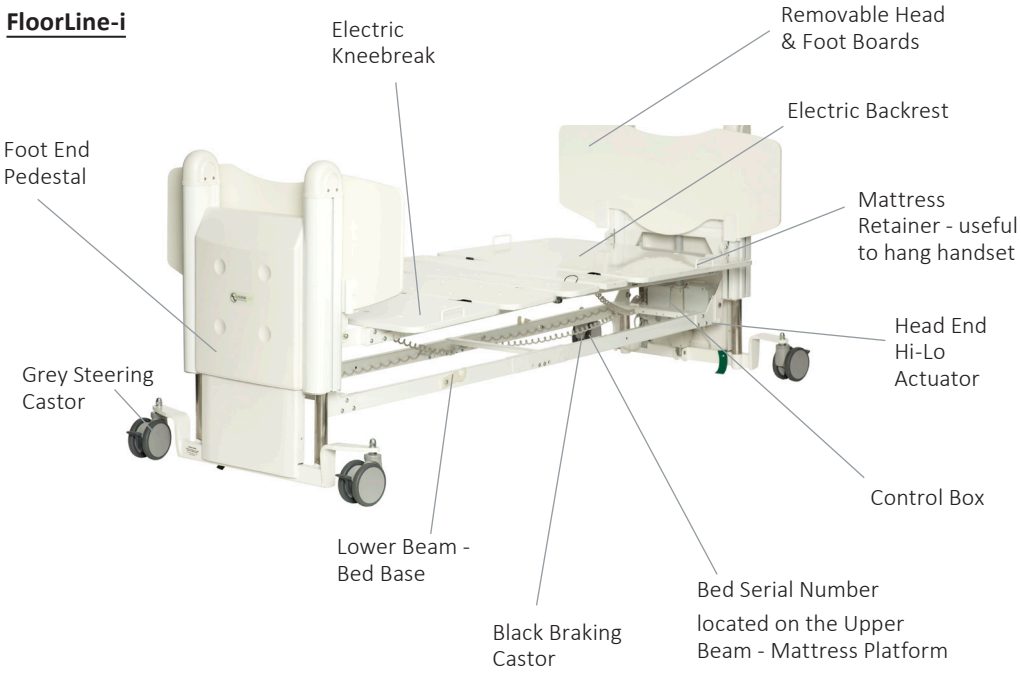
FloorLine-i Plus



FloorLine-i



4. Product description

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The product contains of:

- bed base
- mattress platform
- head and foot board
- hand control
- mattress retainers
- plastic bag with User manual and allen key

4.1 Instructions for the operator:

Please pay attention to your obligations, as the operator, in order to ensure the permanently safe operation of this medical product, minimising risks to the patient, user and/or third parties.

Any piece of technical equipment, electrical or otherwise, can prove hazardous, if not properly operated and maintained in accordance with its User Manual. It is recommended that you are informed of all operations and perform regular maintenance on equipment.

Definitions:

Operator (e.g.: clinic, hospital, hospital management, nursing home), is every natural or legal person with property rights over the bed (including when subject to hiring, rental or lease arrangements).

Responsibility for the safe operation of this bed lies with the operator.

User

(specialist medical staff, nurses, doctors, attendants and care staff) are persons who, on the basis of their training, experience or thorough instruction, are entitled to operate the bed on their own responsibility, or to carry out work on it, or who have received instruction in the handling of this bed. Furthermore, they are able to recognize and avoid possible hazards as well as assess the clinical condition of the patients.

Patient, Resident or Guest

In this manual, a patient is described as any person being ill, infirm, disabled, in need of care, or otherwise occupying this bed.

Each time the bed is allocated, it is recommended that the patient is instructed in all the functions that are important for him/her, by the operator or user.

4.2 Structural Design

Mattress Platform: The mattress platform is a four panel design, divided into a back rest, a seat section and a double panel kneebreak. The mattress base can be horizontally adjusted in height. The bed can be adjusted to head-low (Trendelenburg) or feet-low (Reverse Trendelenburg) positions.

Chassis:

The chassis is constructed of welded steel. It features four individually locking castors that include: 3 grey Brake Castors and 1 black Directional Lock Castor.

Electrical Adjustment System:

The electric adjustment system comprises:

1. The Backlit Handset for patient control of the bed's positions. It is a 'remote-control' attached via a curly cord, to the bed's control box; consisting of a robust, easy-care, wash-down plastic casing with a backlit membrane keypad.
2. The Attendant Control Keypad (only for the FloorLine-i Plus bed) (ACK) is located at the foot end of the bed. It is used to lock out and replace the handset, for nurse convenience. It comprises a wash-down membrane keypad, with indictor lights.
3. Actuators & Junction Boxes for adjusting and controlling the backrest, kneebreak and the bed heights.
4. The Linak Open-Bus Central (only for the FloorLine-i Plus bed) Control Box Unit and Battery Backup are located underneath the

Head End Cover. They contain a low-voltage, safe 24V transformer. The electric motors/ actuators, the battery backup, the ACK and handsets (24V) are connected to the Control Box and Junction Boxes via dust and moisture proof plugs and cords/cables.

5. Battery Backup allows for off-mains emergency operation for up to 15 minutes under a normal load. To ensure long battery life, the bed should be connected to mains power, at all possible times. Do not exceed the duty cycle.
6. Electrical protection of wiring and cords will differ between Class 1 (Earthed) and Class 2 (Double Insulation) Beds.

4.3 Standard features

The backrest is a large mattress panel that raises from a supine position to an upright position, convenient for sitting, which allows a patient to enjoy the flexibility of changing to multiple positions for comfort and health.

Kneebreak

The kneebreak is a double mattress panel that splits as it electronically lifts or bends the patient's thigh and calf at the knee, thus combining functionality and comfort for both the patient and carer.

Auto-Contour

A Handset feature that uses one button to adjust both Backrest & Kneebreak simultaneously, into a cardiac chair position, even when the bed is in it's lowest height position.

Battery Backup

The Battery Backup allows for operation of the bed, should mains power fail, or if the bed is being operated temporarily away from mains power. The battery can operate for a total time of up to 15 minutes under a normal load. Make sure not to exceed the duty cycle (2 min operation, 18 minutes rest).

To ensure long battery life, the bed should be connected to mains power, at all possible times. If the backup battery becomes flat, raising lowering functions will slow down or cease. A replacement should be ordered and fitted.

Batteries in good condition will normally recharge in 12 hours or overnight when the bed is plugged back into the mains power supply. Extended periods without mains power will make the batteries unable to be recharged or operate at all. A replacement unit will need to be ordered and fitted.

Backlit Handset

The Backlit Handset permits patients to control and adjust their own bed, to different positions, to suit their changing comfort levels throughout their stay in bed. The soft lighting feature allows a patient the convenience of night-time use, without other lights.

Cardiopulmonary Resuscitation (CPR) Quick Release System (only for the FloorLine-i Plus bed)

The CPR emergency procedure (combined rescue breathing and chest compressions) is used on a patient in cardiac arrest. Firstly, using either one of the CPR Quick Release Levers, located under either side of the backrest, the backrest can be quickly flattened, mechanically. Secondly, the CPR button on the ACK, will also electrically flatten the bed into the defined (country specific) CPR position. The bed ordered will be country-appropriate!

4. Product description

Attendant Control Keypad (ACK)
(only for the FloorLine-i Plus bed)

The Attendant Control Keypad can be used in addition to the Backlit Handset to adjust the bed movements. It allows a nurse/carer to control the bed's positioning operations and can limit the patient's control of the bed, improving comfort and safety with it's handset lock out function.

Push Handle

(only for the FloorLine-i Plus bed)



A multi position push handle is fitted to the foot end of the bed to assist carers with easy bed manoeuvrability. For the FloorLine-i the push handle is an optional accessory.

Patient Egress Light

(only for the FloorLine-i Plus bed)

The bed is fitted with two under bed lights located on the under side of the Junction Boxes either side of the bed. Soft illumination around the bed provides extra safety and comfort. Controlled using the backlit handset, the lights do not interfere with other patients and eliminate the need for wall-mounted night lights.

4.4 Application Environments

The FloorLine-i bed is applicable to:
Environment 2, 3 and 4.

The FloorLine-i Plus bed is applicaple to:
Environment 1, 2 and 3.

Explenation of environments:

Environment 1:

Intensive/critical care provided in a hospital where 24 hour medical supervision and constant monitoring is required and provision of life support system/equipment used in medical procedures is essential to maintain or improve the vital functions of the patient.

Environment 2:

Acute care provided in a hospital or other medical facility where medical supervision and monitoring is required and ME EQUIPMENT used in medical procedures is often provided to help maintain or improve the condition of the PATIENT.

Environment 3:

Long-term care in a medical area where medical supervision is required and monitoring is provided if necessary and ME EQUIPMENT used in medical procedures may be provided to help maintain or improve the condition of the patient.

Note: This includes use in nursing homes, rehabilitation and geriatric facilities.

Environment 4:

Domestic Care: Ergonomic requirements are normative Care provided in a domestic area and ME EQUIPMENT is used to alleviate or compensate for an injury, disability or disease.

NOTE :This excludes use in all other application environments (e.g. nursing homes, rehabilitation and geriatric facilities) when a medical bed is purely designed for application environment 4.

Any other use shall be regarded as noncompliant with safe, legal and correct usage and may invalidate warranty.

5. Intended Use

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These beds are designed for use in hospital care and long -term care facilities, for the purpose of providing comfort and quality care for any person being ill, frail, disabled, or in need of special care.

These beds may only be operated by persons who have received instruction in its safe operation. These beds may only be operated under the conditions of duty described in this manual.

ANY OTHER USE SHALL BE REGARDED AS NONCOMPLIANT WITH SAFE, LEGAL AND CORRECT USAGE AND MAY INVALIDATE WARRANTY.

The head and foot end pedestal covers of the beds are ABS plastic. The bed also comprises electrical componentry and cables. All the surfaces are non-harmful, upon coming into contact with the skin.

6. Optional Accessories

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It is important that only Human Care accessories are fitted to Human Care beds, as any incompatible accessories can create hazards.

Mattresses

The medical bed is designed for use with specific mattress types and dimensions measuring 1980mm (78”) long by 900mm (35”) wide and 125mm (5”) deep. It is imperative to use this size mattress to reduce the risk of entrapment and falls.

⚠ ***Incompatible mattresses can create hazards.***

Self Help (SH) Pole and how to fit a Self Help Pole

The Self Help Pole is intended to assist a patient moving within the confines of the bed. It is not to be used for any other purpose. The Self Help Pole has a safe working load of 75kg (165lb).

The fittings for the Self Help Pole are fitted into the head end leg extrusion above the green directional castor.

1. The fittings are designed to slide up into the extrusion slot.
2. Pic 1 Identify top fitting as this is placed first.
3. Install using bolt and nut assembly provided. Fit top tab of bracket into the aluminium extrusion slot. Push the bracket up inside the slot until there is no further movement. Slide the nut assembly into the extrusion slot from the bottom of the extrusion; push nut assembly to meet the top bracket and firmly tighten with bolt provided.
4. Pic 2. The lower bracket can then be fitted into the slot from the bottom.
5. Slide Self Help Pole Nut plate Bracket up into accessory slot in pedestal extrusion.
6. Pic 3 Tighten the hex head bolts. Only Human Care self help poles will fit the beds Pic 4 shows final position for lower bracket.

Picture 1

Picture 2

Picture 3

Picture 4

Intravenous (IV) Pole and Fitting an IV Pole

Adjustable IV Poles can be fitted to both ends of the bed.

It is important to only use Human Care IV Poles, as any incompatible IV poles could cause damage and/or injury. The safe working load of the IV Pole is 7kg (15lb).

The bed is fitted with four brackets for IV Poles. They are located at each corner of the bed, behind the head and footboards.

Note: Only Human Care IV Poles will fit the beds.

Care Assist Rails

Designed to assist patients safely in and out of bed, it is ergonomically designed and low profile to avoid feeling restricted or restrained.

Side Rails and how to fit side rails

Human Care recommends against the use of side rails however Human Care is aware that in some cases, side rails can be expected for care.

Only authentic Human Care side rails should be fitted to a Human Care true floor-level bed, as any incompatible side rails may cause damage and/or injury.

1. Raise the bed to full height. Install 4 x bed brackets using existing bolts on mattress platform rails.
2. Loosen hand wheel on side rail brackets and fit to bed.
3. Ensure side rail brackets are seated correctly in bed brackets.
4. Tighten side rail hand wheels and test the side rails for correct function.
5. Reverse above steps to remove side rails

Be aware of pinching risk while folding down the side rail.

Wall Bumper Bar:

The Wall Bumper Bar protects the head end of the bed. This bumper bar is fitted to the lower cross beam between the castors.

Oxygen Bottle Holder

A bracket holds a ‘C-size’ Oxygen Bottle conveniently to the FloorLine-i Plus and FloorLine-i Bed.

Push handle and how to fit Push Handle

1. Remove footboard, both end caps and the 'snap latch' lug
2. Remove the small plastic strips on the inside of both pedestal legs.
3. Position the push handle using the bottom two screw holes and secure with 3 x 15mm button head screws and washers
4. Secure 1x25mm screw through the 'snap latch' lug back into its original position. Replace end caps and footboard.'

6.1 Extension Kit- extending the bed

The standard length of the FloorLine-i Plus and FloorLine-i bed's mattress platform is 2000mm (783/4 ") measured internally between the head and footboards.

An optional Bed Extension Kit may be purchased separately, that will lengthen the bed, by 175mm (7 ") to 2175mm (851/2 ") to accommodate taller people.

Requirements:

1. Two qualified assembly persons
2. A mains power outlet/power-point

Tools required:

1. Work bench
2. 3mm, 4mm & 5mm Allen Keys
3. 10mm & 13mm Spanner/Socket Wrench
4. Needlenose Pliers
5. Small flat screwdriver

Extension kit contents CONTENTS

- 2 x Extension Brackets
- An Extension Mattress Platform Panel (F8)
- 4 x Extension Panel Platform Bolts/Nuts
- Full instructions to fit the extension.

Bed extension stages

1) Preparation
2) Disconnect Cables
3) Remove Mattress Platform from Bed Base
4) Install Mattress Platform Extension Brackets
5) Add Extension Panel to Mattress Platform
6) Extend Bed Base
7) Re-Attach Extended Mattress Platform
8) Re-Connecting Cables
9) Conclude Assembly & Test all Functions.

Preparation

1. Confirm all the kit contents.
2. Remove all bedding and accessories.
3. Test bed functions & complete a visual inspection. Report any faults/damage.
4. Clean the bed thoroughly
5. Ensure sufficient protected floor space for installation.
6. Remove the Head/Footboards, and safely set aside.
7. Connect mains power cable to power outlet.

8. Ensure all castors are locked for safety.
9. Using the handset, flatten/neutralize all the bed positions (backrest, kneebreak, Trendelenburg/reverse).

Disconnect cables

1. To allow better access to cables and bolts:

- Raise the bed to its maximum height and
- Lift backrest and foot-end panels.

2. Release the backrest and kneebreak cables from the plastic retaining clips (1 backrest cable clip/3 kneebreak cable clips) that secure them to inside of the mattress platform frame.
3. Disconnect the kneebreak (long) cable from its mini-fit actuator plug, by first removing the plastic retaining clip with a small flat screwdriver.
4. Set aside the plastic retaining clips and keep the cable safe.
5. Repeat above step for backrest (short) cable.

6.2 Fitting the Extension Kit

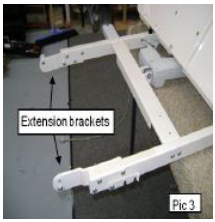
The lower beam has a built in adjustment, to allow the Extension Kit to be fitted to the top beam of the mattress platform.

1. Confirm all the kit contents.
2. Remove the Head & Foot Boards.
3. Release the Backrest & Kneebreak cables from the actuators, by removing the plastic circlip in the connector.
4. Loosen the mattress platform locking bolts with an electric drill (Pic 1).
5. Swing the link brackets away at the head end, then lower the mattress platform onto the lower beams at head end (Pic 2).
6. Using two people, remove the mattress platform and carefully place it on a work bench or table (Pic 3).
7. Remove the 2 circlips at the foot end of the lower beam saddle, of the bed base, then remove all 4 pins (Pic 4).
8. Extend the lower beams and replace the 4 pins in the outermost holes, then replace the circlips (Pic 5).
9. Remove the 2 circlips on the head end of the lower beam saddle and then remove all 4 pins (The lower beams are now extended) (Pic 6).
10. Remove the mattress platform locking bolts and fit them to the extension brackets (Pic 7).
11. Remove the mattress platform standard brackets, at the foot end and replace them with the extension brackets. Note that the support tab sits under platform (Pic 8).
12. Fit the extension panel with the button head screws and Nyloc nuts (Pic 9).
13. Using 2 people, replace the extended mattress platform, foot end first, ensuring that the nylon bushes are in the hooks - Do not over tighten locking bolts (Pic 10).
14. Replace the backrest and kneebreak cables into the actuator connectors.
15. The Mattress and Bolster can now be placed on bed (Pic 11).
16. Check all bed functions.

NOTE: The standard length beam brackets should be kept, so that the bed can be returned to it's standard length.

Pic 1


Pic 2



Pic 3


Pic 4

6. Optional Accessories

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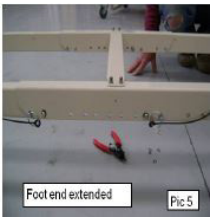

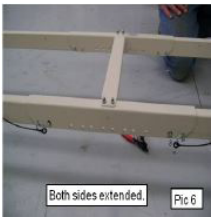

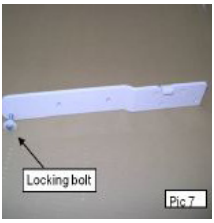

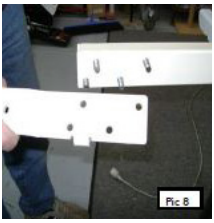

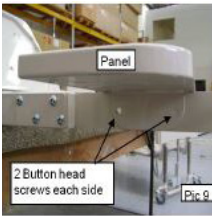

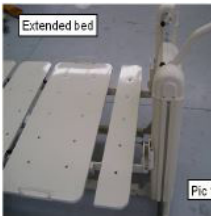

6.3 Removing the extension kit

To remove an Extension Kit from a bed, follow the above instructions in reverse.

Remember to keep all the parts, labelling them with the bed serial number, so that it may be fitted again in the future.

At the time of leaving the factory, this bed represents state of the art technology and innovation. The most important objective of this safety advice is to prevent injury.

7. Safety Advice

ENG

7.1 Safety Symbol

In this manual the adjacent safety warning symbol is shown as:

⚠

This safety symbol does not replace all the written safety advice. You are instructed to read the safety advice and follow it precisely.

7.2 Safety advice for the operator

With the aid of this manual, which must be handed over together with the bed, you must ensure that every user is instructed in the safe operation of the bed before it is put into service for the first time.

Draw every user's attention to the possible hazards that can arise if the bed is not used properly.

This applies in particular to using the electrical drives and side rails (if fitted). Human Care strongly advises against the use of side rails.

⚠ ***Incompatible side rails can create hazards***

Pay attention to your obligations in order to ensure the permanently safe operation of this medical product to minimise all risks to the patient, user and/or third parties.

If the bed is in long-term use, it is important after a reasonable period of time, to test all of the functions, and to check for functional and visual damage.

Regular preventative maintenance is the Operator's responsibility.

Only allow this bed to be used by persons who have been instructed in its safe operation.

Make sure that stand-in or temporary staff are sufficiently well instructed in the safe operation of the bed.

7.3 Safety advice for the user

Make sure that the operator instructs you in the safe operation of this bed.

When a patient's condition could lead to patient entrapment, the mattress platform must be left in the flat position.

Each time, before using the bed, check that it is in perfect working order.

If any damage or a malfunction is suspected, immediately unplug the bed from the mains supply, mark the bed clearly as being "OUT OF ORDER" and take it out of service.

Make sure that there are no obstacles (eg: bedside lockers, chairs, hoists, wall mounted fixtures, or equipment etc.) which could impede any adjusting or movement of the bed.

⚠ ***THIS BED GOES DOWN TO THE FLOOR! DO NOT PUT ANYTHING UNDERNEATH IT,AT ANY TIME!***

7.4 Cables and cord safety

To maintain safe function of the bed and any external components, attention to cord and cable placement is extremely important.

- Route the mains cable in such a way that when operating the bed it cannot get pulled, be cut, or be driven over, or be damaged by any moving parts.
- When using external electrical equipment, such as patient hoists/lifts, reading lamps etc., make sure that the electrical cables cannot get caught in, or get damaged by, parts of the bed.
- When not is use, stow the handset in such a way that it cannot inadvertently fall onto the floor; and make sure that the cable cannot get damaged by moving parts of the bed.
- Before moving the bed, it is important to raise the mattress platform to at least 200mm (8") above floor level, then unplug it from the mains power supply. Stow the mains cable safely on a suitable handset holder on the head end pedestal, to ensure that it cannot trail on the floor.

7.5 To safeguard the patient and particularly children

Always inform the patient about safe operation of the bed's controls. If the patient is unable to operate the bed safely or free themselves from potentially dangerous positions, they could be placed at risk through inadvertent adjustment of the electrical functions.

- It is recommended that children are never left unsupervised in a room with the bed.
- Place the handset beyond reach of children or 'at risk' patients, to prevent inadvertently initiating power adjustments of the bed. Any adjustments may then only be carried out by or in the presence of a person instructed in the proper operation of the bed.
- Always ensure that the mattress platform has travelled to its lowest position before leaving an 'at risk' patient in the bed

7. Safety Advice

ENG

unattended. In this way, you greatly reduce the risk of patient injury as a result of falling out of bed.

- If a patients' condition contains a risk of entrapment, then the mattress platform should always be left in a flat position.
- Take care with the use of side rails. If the side rails are raised, there is a risk of limbs gettng trapped or crushed on adjusting the backrest or kneebreak. Human Care strongly recommends against the use of side rails.

7.6 Checks and inspections

Make sure to follow mainteance instructions to ensure safe use ot the bed..

8. Assembly/Disassembly

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8.1 General information

Requirements

1. Two qualified assembly persons who are very familiar with this User Manual and all facets of bed assembly and operation.
2. A mains power outlet/power-point since the Backup Battery may not be fully charged at time of delivery.

Tools Required

1. 3mm & 5mm Allen Keys
2. 13mm & 17mm spanner/socket wrench

Delivery

The bed is delivered, packed in two cartons:

1. Folded Bed Base, Attached Handset, Head/Foot Boards
2. Folded Mattress Platform

Bed assembly stages

1) Pre Assembly
2) Bed Base Assembly
3) Raise The Bed Base
4) Mattress Platform Assembly
5) Attach Mattress Platform to the Bed Base
6) Connecting Cables & Mattress Retainers
7) Conclude Assembly & Test all Functions.

Pre-assembly

1. Confirm power source is compatible.
2. Ensure there is floor space for assembly.
3. Assemble on a covered surface, to protect both floor and bed surfaces. The packing cardboard is a useful protector.
4. Remove all packaging materials and transport-securing devices from Bed Base box only. (Leave Mattress Platform box until later).
5. The unpacked folded bed base will be resting upright on all four wheel castors.

8.3 Assembly instruction

Bed base assembly

Starting position before assembly:

Resting upright, the lower saddle is positioned on top. The two bed base lower beams are hinged in half at the saddle and are positioned perpendicular to the floor.

Position after assembly:

The lower beams must be flattened and pedestal ends vertical and secured with bolts.

1. Ensure all castors are locked for safety.

2. Separate out the cables (3 including Handset) and gently fold them, out of the way, over the head pedestal end.

3. Make sure the four Nyloc Nuts, at the lower beam brackets near the pedestal ends, are loosen. This is of importance for the procedure of securing the pedestal ends in vertical position.

4. Using the 5mm Allen Key, remove the 4 Centre Saddle Locking Bolts (early models may have lanyard pins). Two each are located on either side of the saddle.

5. Release the lock on the grey castor at the head end of the bed, leaving the black directional castor locked.

5. Unlatch only the plastic transport latch that holds the beams against the foot pedestal end. Swing away the latch, parallel against the beam.

6. Carefully pull the unlocked pedestal end vertical away from the other pedestal, with one person on each side of the bed to help as the pedestal end moves away from the other end.

7. Standing at the side of the pedestal ends, hold the plastic end cap at the top of the pedestal with one hand, with the other hand reach down and firmly lift the cross bar joining the two lower beams to engage it into its locked position with the pedestal brackets, so that the pedestal remains locked upright.

8. Using the 17 mm spanner, tighten the 8 Nyloc bolts (2 Lower Beam Hinging Bolts and 2 Locking Latch Bolts at each end). Avoid bolts slipping out of place, as tightening is done!

Note: Adjusting the pedestal end or lifting the cross bar assists to lock the pedestal end in an perfectly upright position.

Note: ENSURE that all Nyloc bolts are TIGHTENED VERY TIGHTLY, in the upper most position to avoid the latch bolts slipping out of the slots, as the bed in used.

9. Using the 5mm Allen Key, replace and tighten the 4 locking bolts into the same holes on the saddle, locking the lower beams in place. (The outside holes are used with a bed extension kit).

NOTE: The bolts may be a tight fit. Gently lifting the saddle aids fitting each bolt in.

10. Confirm that all bolts are tightened at both ends of the bed:

- The 4 Saddle Locking Bolts
- The 4 Lower Beam Hinging Bolts
- The 4 Pedestal Latch Locking Bolts.

11. Whilst unattended, safely lock all castors.

Using the junction box (FloorLine-i Plus)

1. Plug the cable with the least amount of coils and the modular plug with coloured wires that comes out of the HB port of the control box into any port of the spare Junction Box.
2. Remove the handset from the mattress platform. (Take note of which port that you removed it from so that you can replace it afterwards) or use an spare handset.
3. Plug the handset into any port of the Junction Box.
4. The bed can now be raised, using the handset, now connected to the Control Box via the Junction Box.

Do not lower the bed with the handset control at this stage, or damage may occur!

Raise the bed

1. Plug the mains power cord into the wall outlet/socket/power point.
2. Using the Handset, (already secured to the bed base and attached to the control box), raise the bed base 300mm (12”), to aid Mattress Platform attachment to Bed Base.

DO NOT LOWER THE BED AT THIS STAGE! DAMAGE TO CHAINS MAY OCCUR!

Mattress platform assembly

1. Lay mattress platform box flat on the floor.
2. Open the 3 taped sides and fold out the cardboard box to cover the floor for assembly. As the mattress platform is assembled, remove all packaging materials and transport-securing devices.
3. Remove the two locking lanyard pins from either side of the centre hinge section/upper beam saddle.

Folded Mattress Platform

Upper Beam Saddle Locking Lanyard Pin

4. Unlatch the metal transport latch.
5. Unfold the mattress platform until the beams are straight. The flat mattress side will be facing down on the cardboard.
6. Re-insert the 2 locking lanyard pins, to lock the mattress platform into a flat position.

NOTE: The pins may be a tight fit. Gently lifting one side aids fitting each pin in.

NOTE: The mattress platform has a small centred positive camber; deliberately designed to support the integral strength of the bed. After initial loading and use the camber will decrease slightly.

Attach the mattress platform to the bed base

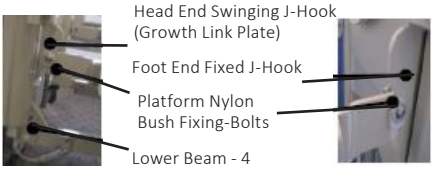
1. With both persons on one side, vertically raise the mattress platform to its side with the beams facing away from the body.
2. One person then brings the bed base (unlocking the castors, first), to the platform. Ensure that the base head end aligns with the platform head end and the platform beams are facing the base. Relock the castors.
3. Both persons should carefully lift the mattress platform to lie flat on the base.

ENSURE:

1) The backrest panel (largest panel) is positioned at the head end of the bed base (near the green wheel castor).
2) Beams face down, and panels are up.
3) Both platform upper beams sit over and outside the base lower beams.

Note: Keep the cables and actuators safe that are located inside the bottom of the mattress platform.

4. Lift backrest and foot-end panels, allowing easy upper beam access.
5. At the foot end, lift the beams to slot the 2 Platform Bracket's Fixing-Bolts (Nylon Bush) into the 2 Pedestal End's Fixed J-Hooks.



6. Lift the beams to fully seat the fixing-bolts.
7. Position the nylon bush to the outside, and the thin spacer/washer between the metal brackets. Spacer variations exist on early models.
8. Repeat above steps at the head end.
9. Using the 5mm Allen Key, firmly tighten all 4 Upper Beam Fixing-Bolts, ensuring that each bush is correctly located in its J-Hook.
10. Using the 13mm spanner, confirm that all 4 Fixing-Bolt Nuts are firmly attached to the end of the bolt, with a wide space between the nut and the upper beam bracket.Note: The Head End Swinging J-Hooks must be swung up, then down into the nylon bushes. Also, the head end fixing-bolts have a wider spacer.

DO NOT TIGHTEN these Fixing-Bolt Nuts! The Swinging J-Hook (Growth Link Plate) and the additional space between the nuts and the brackets allow for platform flexing and full bed operation particularly for Trendelenburg positions.

Connecting cables (FloorLine-i)

Cables connect the Control Box with:

1. The Mains Power Outlet
2. The Handset
3. The 4 Actuators (Hi-Lo Head, Hi-Lo Foot, Backrest, Kneebreak).

- All cables are pre-attached to the Control Box, which is located on the inside of the Head End Pedestal on the Bed Base.
- The two Hi-Lo Actuators are located inside the Head and Foot End Pedestals and cables are pre-attached to their actuators.
- The Backrest & Kneebreak Actuators are located on the underside of the mattress platform. Their respective cables must be attached to their appropriate mini-fit plugs.

1. Attach the mains cable to the mains power outlet, rechecking for damage in transit.
2. To allow better access to the underneath of the mattress platform:

- Use the handset to raise the bed to its maximum height
- Lift backrest and foot-end panels

3. Connect the Backrest (short) cable to the short mini-fit plug cable, and lock in the plastic retaining clips, ensuring that the locking tabs sit in the plug's slots securely, as pictured.

4. Connect the Kneebreak (long) cable to the long mini-fit plug cable and lock in the retaining clips, as pictured.
5. Secure all cables to the inside frame of the mattress platform with the plastic 'p' clips.

Connecting cables (FloorLine-i Plus)

Cables run between the Control Box and the various actuators. The cables and Backrest & Kneebreak actuators are attached to the upper and lower beams of the bed frame.

1. If used, detach the additional Junction Box and re-attach the Backlit Handset Control.
2. Connect up all cables as per the Electrical Cable Connection Chart (see below). Where necessary, secure all cords/cables to the bed frame with the plastic clips.
3. Attach the mains cable to the mains power supply, re-checking for possible transit damage.

The Hi-Lo Actuators are attached to the Foot End and to the Head End.

The Hi-Lo Actuator Cables are secured to the inside of the lower beam with a 'P' Clip.

Electrical cable connection chart (FloorLine-i Plus)

FROM	TO
Backrest Actuator	Control Box Port 1.
Head End Lift Actuator	Control Box Port 2.
Kneebreak Actuator	Control Box Port 3.
Foot End Lift Actuator	Control Box Port 4.
Under Bed Light Junction # 1.	Control Box Port HB
Under Bed Light # 1, Port 1.	Under Bed Light # 2, Port 5.
Under Bed Light # 2, Port 1.	Attendant Control Panel
Handset	Under Bed Light # 2, Port 2 or 4.
Port Plugs	Empty Ports

Note: Under Bed Light #2 is on the same side as the directional or green castor.

Unlock factory-default setting (FloorLine-i Plus)

All functions are locked as a pre-set factory default. The functions must be unlocked with the Lockout Button on the ACK. To unlock each function it is necessary to hold the 'Lockout' Button simultaneously with each function button, one at a time. Each function button's LED light will stop illuminating, when the function has been unlocked. (This is a toggled action, so repeating this process will lock a function and illuminate the LED light for that function).

Handset control initialisation (FloorLine-i Plus)

Initialisation sets the system up for the initial/ base position, for the electric actuators.

1. All functions are initialised by pressing the 'HI-LO UP' and 'HI-LO DOWN' buttons EXACTLY AND SIMULTANEOUSLY on the Backlit Handset Control. An intermittent beep will begin. Keep pressing the buttons until the beep stops.
2. Initialise the HI-LO actuators by pressing the 'HI-LO DOWN' button until the mattress platform is at the bed's lowest height. Hold the button for approx. 1 second after the actuators have stopped. Both actuators are now set to be at their lowest position. The Backrest and Kneebreak actuators do not employ any positional feedback, and do not require initialisation.
3. Confirm that the lowest position of the mattress platform is perfectly horizontal.

Connecting mattress retainers

Using the screws provided, attach the 4 mattress retainers to the mattress platform.

Concluding assembly

1. Add any ordered accessories such as Self Help Pole, IV Pole, wall bumper, etc.

8. Assembly/Disassembly

ENG

2. Re-check that all attachments are tightened
3. Lower (identical) Head & Footboards into the bracket slots on the inside of each pedestal end (in front of the IV Pole slot).
4. Ensure the bed is fully cleaned before placing the mattress on the bed.

Test all functions

1. Check all Handset button and for FloorLine-i Plus the ACK buttons are working to the full travel range of adjustment for each position (Backrest, Kneebreak, Hi-Lo, Trendelenburg/ Rev, Auto Contour, CPR).
2. Confirm mechanical working order of the CPR Emergency quick release level. (FloorLine i-Plus)
3. Confirm working order of all other attached accessories.

Battery back up (FloorLine-i Plus)

The Backup Battery will take approx. 12 hours to fully charge. While charging, the ACK indicator light will flash yellow/orange. To ensure long battery life, the bed should be connected to mains power at all possible times.

Disassembly

Do the assembly instruction in reverse.

9. Operation Instructions

ENG

9.1 Before putting this bed into service for the first time

1. Read through this Instruction Manual completely, understanding all operations and functions, (Operating The Bed). Pay special attention to all safety issues, so as to prevent injury to persons, or damage to the bed or environment, due to incorrect operation.
2. Confirm that the electricity supply and the wall power-point/outlet/socket are both compatible with the bed's voltage requirements and the bed's mains supply cable plug. This will differ between countries.
3. Inspect the mains supply cable for perfect condition. Check for any damage in transit..
4. Fully unpack and assemble the bed and attach all accessories.
5. Confirm that all cables and cords (eg mains-power supply cable, motor cables and handset cable) are connected and securely routed out of the way of all the bed's moving parts, so they can not be damaged. Also confirm that there are no obstacles, (eg bedside cabinets, chairs, or wall fixtures, etc.) which could impede adjustment of the bed.
6. Confirm that all nuts, locking bolts, pins and fasteners are fully engaged and correctly tightened. Ensure that the battery is plugged into the control unit. Regular checks are recommended (see the Checklist).
7. For safety, ensure that all bed wheel castors are locked unless the bed is being moved.
8. Test that the bed and all its accessories (including all adjustment functions) are all fully functioning and in perfect working order.
9. Clean and disinfect the bed prior to placing the mattress and any bedding on the bed, for first time use.

9.2 Putting the bed into service

1. Read and follow the previous section, including reading this Instruction Manual, and attending to all safety issues & operation usage.
2. Confirm wheel castors are locked.
3. Ensure clearance for bed movements.

Provided the above has been complied with, the bed may now be put into service.

1. Confirm that the wall power switch is OFF (in countries where this applicable).
2. Plug the mains supply cable into the wall power-point/socket/outlet.
3. Turn ON the wall switch at the power-point, (country-determined).

This bed should be connected to the mains power supply and remain switched on at all times, to guarantee that the bed's battery backup is adequately charged and ready for operation at any time.

4. Check that the bed has been initialised, is fully functioning and in perfect working order
5. Confirm that the bed has been cleaned and disinfected.

9.3 Putting the bed back into service

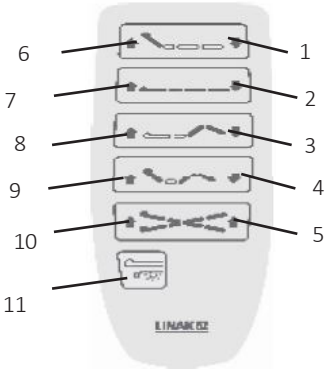
1. Read and follow the previous two sections (reading the Instruction Manual, attending to all safety issues & operation usage).
2. Conduct a complete Maintenance Check for safe bed functioning and perfect working order. Especially check for the safe routing of all cables/cords and clearance for all bed adjustments.
3. Verify wheel castors are locked.
4. Confirm mains wall power is OFF.
5. Recheck the mains cord/plug for damage while out of use, push into wall socket.
6. Turn ON the wall switch (in countries where this is applicable) and leave permanently on, for charging back-up battery.
7. Confirm bed is cleaned and disinfected.

9.4 The main functions of the bed

The mattress platform has four main panels that can be adjusted into different positions.

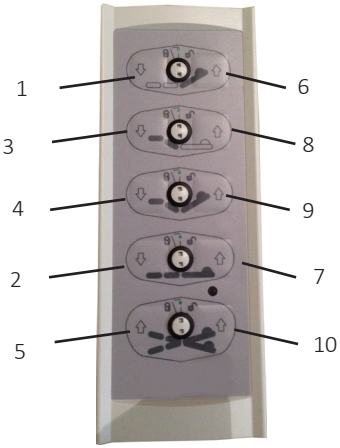
9.5 Backlit handset

FloorLine-i Plus



1. Back rest down
2. Hi-lo down
3. Knee break down
4. Auto contour down
5. Trendelenburg tilt
6. Back rest up
7. Hi-lo up
8. Knee break up
9. Auto contour up
10. Reverse Trendelenburg tilt
11. Under bed light on/off

FloorLine-i



1. Back rest down
2. Hi-lo down
3. Knee break down
4. Auto contour down
5. Trendelenburg tilt
6. Back rest up
7. Hi-lo up
8. Knee break up
9. Auto contour up
10. Reverse Trendelenburg tilt

The Backlit Handset is directly connected to the control box, via a curly cord. Used predominantly by the patient, each button has a Raise (Left Side) and a Lower (Right Side) function that adjusts all mattress platform positions.

- All the buttons (labelled below) should be explained to the patient.
- When the bed or individual sections of the bed have reached the desired position release the button to stop movement.
- Movement in the opposite direction will be resumed when the appropriate button is pressed.
- When maximum raised or lowered positions of mattress base or backrest are reached, a built-in limit switch will automatically override the handset button and movement will stop.
- When not in use, the handset is designed to clip over the mattress retainers on the sides of the mattress platform or over the Head & Foot Boards.

NOTE: If a problem occurs with the handset, confirm that the correct Initialisation Process was completed during Bed Assembly.

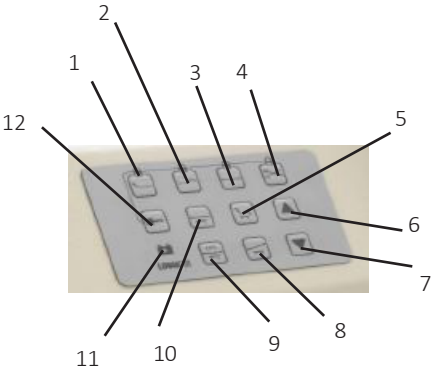
9.6 Lockout (this information is only for the FloorLine-i bed since the lockout for FloorLine-i Plus is controlled through the attendant control keypad.

A small blue plastic ‘lock out key’ is included, to lock any function on the bed:

1. Insert the key into the two holes in the button you wish to lock out
2. Gently turn the key from the ‘green’ - 12 o’clock position toward the unlock or lock symbols at 11 or 1 o’clock positions respectively.

Gently turn the lockout key in the holes, or key tabs may break.

9.7 Attendant Control Keypad (this information is only for the FloorLine-i Plus bed)



1: Backrest
2: Kneebrake
3: Hi-Lo
4: Trendelenburg/reverse
5: Auto-contour
6. Raise
7: Lower
8: Single button trendelenburg
9: CPR
10: Level bed
11: Battery charging indicator light
12: Lockout

The Attendant Control Keypad (ACK) can be used in addition to the Backlit Handset to adjust the bed movements. It allows a nurse/carer to control the bed's positioning operations and can limit the patient's control, improving comfort and safety of high risk patients and limiting guest interference, with it's handset lock out function. It is located on the bed's foot end.

The raise and lower buttons work in conjunction with the function buttons. Push both a Function Button together with the Raise-Button (or the Lower-Button).

Function buttons

Backrest - Press the Backrest button AND the Raise OR Lower button simultaneously to adjust the backrest up or down.

Kneebreak - Press the Kneebreak button AND the Raise OR Lower button simultaneously to adjust the kneebreak up or down.

Hi-Lo - Press the Hi-Lo button AND the Raise OR Lower button simultaneously to adjust the mattress platform height up or down.

Trendelenburg/Reverse Trendelenburg

Press the Trendelenburg/Reverse button AND the Raise OR Lower button at the same time to put the bed into Trendelenburg or Reverse-Trendelenburg positions.

LOCKOUT - Press any function button together with the Lockout button to restrict that bed function. The functions which are locked out will show a yellow/orange light. To Unlock, press the function button, again, with the Lockout button; the light will toggle out.

Level Bed - Press the Level Bed button AND the Raise OR Lower button, the bed will first take the position to the highest or lowest height respectively and then flatten and level the bed to a flat deck position.

Auto-Contour - Press the Auto-contour button AND the raise button simultaneously, to put the bed into an auto-contour (cardiac chair) position. Now, pressing the auto-contour button AND the lower button simultaneously, the mattress platform will flatten out but may stay in a tilted position.

CPR - This button automatically and quickly levels the mattress platform into the horizontally flat CPR position. The sequence of movements firstly levels the mattress platform to a horizontal/flat position, then

secondly flattens out the Backrest & Kneebreak simultaneously.

Single Button Trendelenburg - Press the Single-Button-Trendelenburg for an immediate Trendelenburg position (Head Down/Feet High).

9.8 Mattress Platform Positions

- True Floor-Level - 99mm (4”) off floor
- Highest Platform Height 799mm (31½”)
- Backrest Panel - 70º
- Thigh Panel - 45º }operate together as
- Calf Panel- 25º }the kneebreak panel
- Kneebreak Position 110º
- Trendelenburg Tilting Position 18º
- Reverse-Trendelenburg Tilt Position 18º
- Head High Trendelenburg Tilt Position 45º
- Head Low Trendelenburg Tilt Position 45º

9.9 Digital control box functions

- Battery Back-Up System
- CPR Quick Release System (only P5)
- Patient Egress/Under Bed Light (Only P5)
- Service Monitor (option)

9.10 Castors and brakes

The FloorLine-i Plus and FloorLine-i bed is fitted with Dual Wheel Castors as standard.

The set of standard wheel castors comprises:

- 1 black Steering/Directional Castor
- 3 grey Braked Castors

Directional lock

The Directional Lock (black) is located on one castor at the head end. It can be locked in any position to aid and ensure a smooth and straight path down a hallway.

The Directional Lock Castor should be engaged to the “ON” position at all times. To disengage the Directional Lock, depress the “OFF” lever.

Braked castors

Braked Castors (grey) are locked by depressing the front of the pedal on each castor lever. This is done by foot pressure when wearing appropriate protective shoes.

Brakes are released by depressing the top of the castor lever until it unlocks.

Do not attempt to set or release the brakes using your hands or fingers as injury may occur.

9.11 Moving the bed

Before moving the bed, raise the mattress platform to a minimum of 200mm from the floor.

- When moving the bed, first release the brakes on all castors so that the bed can move freely.
- **If brakes are not released and the bed is forcibly moved when the wheels are locked, the bed may be damaged.**
- Re-engage the directional lock to assist with steering.
- To control movement forwards or backwards only, orientate the directional/steering wheel, so it is parallel with the side edge of the bed and then depress the lock lever to the “ON” position with your foot. This will engage a lock on this wheel which will permit the bed to run straight forward or

backward when being moved. The wheel itself can be positioned towards the front or the back of the castor outrigger but it is recommended to point down the bed's length.

For safety, if leaving the bed for any time ensure castors are turned inwards and locked.

9.12 Folding the bed - (Requires two persons)

The FloorLine-i Plus and FloorLine-i beds are designed to be folded for transport, relocation and storage.

Requirements

1. Two qualified assembly persons
2. A mains power outlet/power-point

Tools required:

1. 3mm & 5mm Allen Keys
2. 13mm & 17mm spanner/socket wrench
3. Packing tape for securing panels
4. Small flat screwdriver

Folding stages

1) Preparation
2) Disconnect Cables
3) Loosen Bed Base Bolts
4) Remove Mattress Platform from Bed Base
5) Fold Mattress Platform
6) Fold Bed Base
7) Ready bed for storage

Preparation

1. Remove all bedding and accessories. (e.g. Mattress, Side Rails IV/Self Help Poles).
2. Remove the Head/Footboards and store.
3. Using the handset, test all functions of the bed. Complete a visual inspection. Report any faults or damage.
4. Clean the bed thoroughly.
5. Ensure there is sufficient floor space for disassembly.
6. Disassemble on a covered surface (e.g. a blanket), to protect both floor and bed surfaces.
7. Connect the mains power cable to the mains power outlet.
8. Ensure all castors are locked for safety.
9. Using the handset, flatten/neutralize all the bed positions (backrest, kneebreak, Trendelenburg/reverse).

Disconnect cables

1. To allow better access to cables and bolts:

1) Raise the bed to its maximum height and
2) Lift backrest and foot-end panels

2. Release the backrest and kneebreak cables from the plastic retaining clips (1 backrest cable clip/3 kneebreak cable clips) that secure them to inside of the mattress platform frame.
3. Disconnect the kneebreak (long) cable from its mini-fit actuator plug, by first removing the plastic retaining clip with a small flat screwdriver. Keep the plastic retaining clips safe by storing them inside the mini-fit plugs. Keep the cable safe, during the disassembly process.
4. Repeat above step for backrest (short) cable.

Note: Nothing needs to be done with any other cables, as they all remain connected to the control box and attached to the bed base during storage.

Loosen the bed base bolts

1. To aid bed base folding later, at each pedestal end, use the 17mm spanner, to completely loosen all 8 Bed Base Lower Beam Bolts (4 x Hinging Bolts and 4 x Pedestal Latch Locking Bolts), that are seated in either end's Pedestal End Lower Brackets. DO NOT REMOVE THE NUTS from the end of these Bolts.

2. Also on the bed base, use the 5mm Allen Key to loosen ONLY, the 4 Centre Saddle Locking Bolts (locking bolts sit outside of the hinging circlip pins). DO NOT REMOVE THE LOCKING BOLTS, from the lower beam centre saddle.

Remove mattress platform

1. At each pedestal end, use the 5mm Allen Key, to completely loosen all 4 Mattress Platform Upper Beam Fixing-Bolts that are seated in the Fixed (foot end) and Swinging (head end) Pedestal End Bracket J-Hooks. DO NOT REMOVE THE NUTS from the end of these Fixing-Bolts.
2. Using handset, take bed to its lowest position.
3. Unplug the Mains Power Cable from the power outlet and safely store it, out of the way.

The 4 Fixing-Bolts must be un-slotted from the J-Hooks (one on each side, and at each end).

4. Standing either side of the head end, lift out the beams. The Swinging J-Hook may facilitate disconnection. Lay carefully on bed base, so as not to scratch bed paintwork.
5. Repeat the above step at the foot end.
6. With one person on either side, carefully lift the platform up and off the bed base. Carefully place on the protected floor, on its side edge. Take care not to scratch bed paintwork.

Keep all cables and actuators safe!

Fold mattress platform

1. Holding the mattress platform upright, tape the backrest and kneebreak panels to the mattress platform frame. This prevents them from swinging loose and getting damaged.
2. Remove the 2 locking lanyard pins on either side of the centre hinge saddle.
3. Fold the two ends together and secure closed by reinserting the lanyard pins in the same holes and hooking the metal transport latch.
4. Store safely.

Fold bed base

1. All bolts have been pre-loosened, as above.
2. Ensure the J-Hooks are put back into their original positions, on each pedestal end. Failure to do this may damage bed!
3. Remove the 4 Lower Beam Centre Saddle Locking Bolts (Locking Bolts are on the outside of the Hinging Circlip Pins).
4. On either side of the Head End, hold the pedestal end cap at the top of the pedestal with one hand, and with the other hand reach down and firmly lift the Head End Cross Bar, that joins the two lower beams, to lift the slots on the Lower Beam Brackets off the Pedestal Bracket Latch Bolts. Slowly fold the Head End pedestal down flat onto the bed base beams.
5. Lock head end pedestal to the beams with the plastic transport latch.
6. Repeat the above for the foot end pedestal.
7. Unlock the Foot End Castors ONLY.
8. Standing either side of the centre hinging saddle, pull the saddle cross bar up, folding the beams/pedestal ends into a vertical position. The base will roll along the foot end castors into a folded position standing on its 4 castors.
9. Ensure that the centre saddle is horizontal to replace the 4 Centre Saddle Locking Bolts, with the 5mm Allen Key, thus locking the base into its folded position.
10. Safely lock all castors, until ready to move the bed.

9.13 CPR Emergency quick release system (this information is only for the FloorLine-i Plus bed)

The CPR emergency procedure (combined rescue breathing and chest compressions) is used on a patient in cardiac arrest. CPR can be administered when the bed is in a CPR position - a totally horizontally, flat mattress platform.

The FloorLine-i Plus bed is fitted with CPR Quick Release Levers, and also a CPR button on the Attendant Control Keypad.

CPR Quick Release Levers

Pull either one of the RED CPR Quick Release Levers, located under either side of the backrest. This will immediately (mechanically/ manually) lower the Backrest panel to a flat position.

When using the Emergency Release Levers, DO NOT stop the backrest panel until it has fully lowered, or actuator damage may occur.

CPR button on the ACK

The bed will quickly and electrically level the bed into the horizontally flat CPR position. The sequence of movements firstly levels the mattress platform to a horizontal/flat position, then secondly flattens out the Backrest & Kneebreak simultaneously. (Note: Early models may have a different sequence!)

Regularly check the mechanics (see below) of the CPR Quick Release Levers to ensure the system is always operating correctly.

If intubation or head access is required…

1. Raise the bed, if it is at Floor-Level.
2. Remove the Headboard. There is no need to place the headboard under the mattress, as all Human Care bed platforms are solid enough for effective chest compressions.
3. Release the Brakes, to allow the bed to be pulled out from the wall for easy access to the patient's head. Once the bed is positioned, reapply the brakes.

CPR Emergency Quick Release System, Testing Operation & Making Adjustments

1. Raise the back rest using the handset, while applying slight hand force to the top of the back rest panel. The back rest should raise to it's highest position; if it doesn't then the CPR cable is too tight and the release mechanism is partially engaged. The cable needs to be loosened via an adjustment (Photo 1).

Photo 1.

2. Check the CPR cable tension, it should not be too tight, you should be able to move the cable laterally slightly (Photo 2).

Photo 2.

3. The CPR cable is adjusted by loosening the two locking nuts and moving the threaded section in the required direction, 'In' to loosen or 'Out' to tighten (Photo 3). Access to both locking nuts can be gained from underneath the mattress platform.

Photo 3.

4. Repeat Step 1, the back rest should raise to it's highest position with a slight downward hand force applied.
5. To ensure that the quick release system is operating properly, raise the back rest to it's highest position with the handset then by using slight downward hand force on the top of the back rest panel with one hand lift the red CPR lever upward with the other using the inside of your fingers (Photo 4). The back rest panel should lower quickly.

9. Operation Instructions

ENG

photo 4.

Note: After an initial "Run-in" period, the cable might loosen slightly. This is normal. A minor adjustment should be made, as per Step 3.

9.14 CPR & Intubation (this information is only for the FloorLine-i bed)

The CPR emergency procedure (combined rescue breathing and chest compressions) is used on a patient in cardiac arrest.

CPR can be administered when the bed is in a CPR position - a totally horizontally, flat mattress platform.

If CPR, intubation or head access is required

1. Raise/lower the bed, to the preferred height. Note: This FloorLine-i bed does NOT feature any CPR Emergency Quick Release systems!
2. Remove the Headboard. There is no need to place the headboard under the mattress, as all Human Care bed platforms are solid enough for effective chest compressions.
3. Release the Brakes, to allow the bed to be pulled out from the wall for easy access to the patient's head. Once the bed is positioned, reapply the brakes.

10. Maintenance and service

ENG

10.1 Inspection, care and maintenance check list

User inspections should be carried out every 6 months, for the life of the bed. Care should be taken when performing maintenance.

Serial No: .....

Check: See bed description, accessories and all functions	Check for Damage/Cleanliness Confirm Secure Perform Adjustment/Cleaning	OK	Faults: Action Cleaning Parts to Order
VISUAL CHECK of the Electrical Components			
Cables - Plugs (Clips)	No Cracks/Breaks, Correct Routing & No Hanging Cables		
Actuators & Junction Boxes Control Box Unit Battery Back-Up Unit Under Bed Light	No Cracks/Breaks/Dents/Corrosion Bulbs work Securely Fitted		
Handset Attendant Control Keypad Wireless Infrared Handset Flexible User Panel	Casing/Membrane Faceplate Intact Confirm backlit/indictor lights work Confirm ACK handset 'lockout' works Securely Fitted		

Accessories (eg USB Ports, Service Monitor	Intact, Clean, & Secure		
VISUAL CHECK of the Mechanical Components			
Nuts/Bolts, Screws/Pins, Lanyards/Clips, Hinges/ Mounts/Bushes-component fixing points	Wear/Damage, Tighten & Secure Clean & Free		
Chassis (Bed Base) - Bed Extension End Covers Push Handle	No Cracks/Dents No Paintwork Flaked/Corroded Clean & Securely Fitted		
Castors & Tyres	Wear/Damage, Tighten & Secure Swivel Independently Test Brakes/Directional Locking Clean & Tightly Secured		
Mattress Platform Panels - Bed Extension Head & Foot Boards Side Rail Brackets CPR Quick Release Levers	No Cracks/Dents No Paintwork Flaked/Corroded Bracket Screws are Tight Clean & Securely Fitted		
Accessories (eg Mattress, Rails, Poles)	Intact, Clean & Securely Fitted		
Serial Number (& Service) Labels, Instruction/ Service Manuals	In Place & Readable		
PERFORMANCE CHECK of all Electrical/Mechanical Functions Using all buttons on the Handset and ACK, and Flexible User Panel and Infrared Wireless Handset, where installed.			
Platform Hi-Lo True Floor Level Highest Platform Level	Test perfectly parallel to floor Confirm Full Range at all 4 corners Quiet & Smooth Operation		
Backrest	Confirm Full Range Quiet & Smooth Operation		
Kneebreak (thigh & calf panels)	Confirm Full Range Quiet & Smooth Operation		
Trendelenburg & Reverse Trendelenburg	Confirm Full Range at all 4 corners Quiet & Smooth Operation		
Battery Backup - Disconnect Mains Power to Test	Check Fully Charged & Operational		
CPR Quick Release System-Mechanical Lever/ Electrical ACK	Confirm Full Range		
Accessories	Intact, Clean & Secure		
Inspector's Name:	Inspector's Signature:		
Inspection result:	Date:		

10. Maintenance and service

ENG

10.2 Cleaning

- Human Care beds can be safely cleaned with all common hospital cleaning agents.
- Wipe all surfaces with a soft cloth moistened with hot water and mild detergent (or the hospital's recommended cleaning solution). Extra care should be taken with areas that harbor dirt or dust. Rinse with clean water and dry with paper towels.
- To clean potentially infectious material such as body fluids. Clean the bed with a disinfectant solution.
- Allow the clean bed to dry before replacing the mattress.

⚠ ***Human Care beds are not intended for use with high pressure steam or jet-stream washing procedures.***

- Do not pour liquids on any part of the bed end panels or close to parts containing electrical componentry, which could damage the electronics.

11. EMC table

ENG

11.1 Guidance and manufacturer´s declaration Electromagnetic Emissions

The Medical Bed is intended for use in the electromagnetic environment specified below. The customer or the user of the Medical Bed should ensure that it is used in such an environment.		
Emissions Test	Compliance	Electromagnetic Environment Guidance
RF Emissions CISPR 11	Group 1	The Medical Bed uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. The Medical Bed is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF Emissions CISPR 11	Class B	
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations / Flicker Emissions IEC 61000-3-3	Complies	

11.2 Guidance and manufacturer´s declaration Electromagnetic Immunity

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

11. EMC table

ENG

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic, Environment Guidance
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6 kV Contact ± 8 kV Air	± 6 kV Contact ± 8 kV Air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrostatic Transient / Burst IEC 61000-4-4	± 2 kV Power Supply Lines ± 1 kV Input/Output Lines	± 2 kV Power Supply Lines ± 1 kV Input/Output Lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV Differential Mode ± 2 kV Common Mode	± 1 kV Differential Mode ± 2 kV Common Mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips, Short Interruptions and Voltage Varitions On Power Supply Input Lines IEC 61000-4-11	< 5 % UT (>95 % dip in UT) for 0.5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles < 5 % UT (>95 % dip in UT) for 5 sec	< 5 % UT (>95 % dip in UT) for 0.5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles < 5 % UT (>95 % dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Medical Bed requires continued operation during power mains interruptions, it is recommended that the Medical Bed be powered from an uninterruptable power supply or a battery.
Power Frequency (50/60 Hz) Magnetic Field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: UT is the a. c. mains voltage prior to application of the test level.			

11.3 Guidance and manufacturer´s declaration Electromagnetic Immunity

The Medical Bed is intended for use in the electromagnetic environment specified below.

The customer or the user of the Medical Bed should ensure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic, Environment Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150kHz - 80 MHz	3 V	Portable and mobile RF communications equipment should be used no closer to any part of the Medical Bed, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz - 2.5 GHz	3 V/m	**Recommended separation distance** $d = [\frac{3.5}{V_1}]\sqrt{P}$ $d = [\frac{3.5}{E_1}]\sqrt{P}$ 80 MHz to 800 MHz $d = [\frac{7}{E_1}]\sqrt{P}$ 800 MHz to 2.5 GHz

d is the recommended separation distance in metres (m).
P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

a) Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range. b a Field strengths from fixed transmitters, such as base stations for radio, (cellular/cordless) telephones, land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Medical Bed is used exceeds the applicable RF compliance level above, the Medical Bed should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Medical Bed.

b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

NOTE 1 Interference may occur in the vicinity of equipment marked with the following symbol:
NOTE 2 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 3 These guidelines may not apply in all situations.

Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

11.4 Recommended Separation Distances between portable and mobile RF communications equipment and the Medical Bed

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

11. EMC table

ENG

Rated Maximum Output Power of transmitter (W)	Separation Distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = [\frac{3,5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3,5}{E_1}]\sqrt{P}$	800MHz to 2.55 GHz $d = [\frac{7}{E_1}]\sqrt{P}$
0.01	0.12	0.40	0.40
0.1	0.37	1.26	1.26
1	1.17	4.00	4.00
10	3.69	12.65	12.65
100	11.67	40.00	40.00

For transmitters rated at a maximum output power not listed above, the recommended separation distance (d) in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W), according to the transmitter manufacturer.

NOTE 1

At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2

These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

12. Trouble shooting

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Problem	Cause	Remedy
Bed functions are slow	Backup battery is low due to bed not being connected to power source and off at mains power outlet	Confirm mains power cable is plugged in, and outlet switch is turned on, to recharge the battery
Handset does not work	Backup battery has flattened due to bed not being connected to power source and off at mains power outlet	Confirm mains power cable is plugged in, and outlet switch is turned on, to recharge the battery
Handset does not work	Handset cable or mains power cable has been run over by the bed being moved incorrectly	Visually check that mains power and handset cables have no cracks and are intact
Handset does not work	Handset is damaged from being dropped	Order replacement handset
Bed stops operating mid movement	Over-temperature safety cut-off switch activated due to overload on duty cycle	Stop usage of bed functions, until it cools down
One button on the handset does not work	The corresponding actuator or its cable may be damaged or become disconnected	Check that the corresponding actuator and its cables for are correctly connected and are intact
Several buttons on the handset do not work	The control box or any of its cables may be damaged or have become disconnected	Check that all cables are correctly connected and are intact

AUDIBLE ERROR INDICATIONS:

POSITION LOST on an actuator is indicated by an intermittent beep 200msec ON / 200msec OFF.

- Try the HANDSET INITIALISATION/RESET procedure and then in turn run all functions. If problem persists, locate and check faulty actuator or cable for visual damage and replace if required.

FATAL ERROR is indicated by an intermittent beep 50msec ON / 500msec OFF.

- Try the HANDSET INITIALISATION/RESET procedure, and then in turn run all functions. If problem persists, locate and check faulty actuator or cable for visual damage and replace if required.

BATTERY LOW is indicated by a 1 second beep when a function is activated.

- Charge or replace the battery.

OVERHEATING is indicated by a constant beep when a function is activated.

- Allow the system to cool down before operating again.
- Please quote the bed's individual Serial Number, to aid in ordering Spare Parts.
- Please describe/photograph-scan part(s) required, when calling/emailing.
- It is highly recommended that only Human Care authorised accessories/parts are used on Human Care beds.
- The Warranty may be invalidated and injury or damage may occur, if other parts are used.

13. CE Mark

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This bed complies with all requirements of the IEC/ISO International Standards: IEC 60601-2-52:2009

Electrical class

Class 2: 90500, 90502, 90504, 90300, 90301 90303

Class 1: 90501, 90503, 90302

14. Recycling

ENG

Incorrect disposal of this equipment and its component parts, particularly batteries and other electrical parts, may produce substances that are hazardous to the environment. Dispose of in accordance with all applicable national and local regulations. EU WEEE and RoHS Directives require this product not to be disposed of in general waste. Construction Materials The bed is built mostly from steel, or stainless steel. The surfaces have been finished with an electro-coated powdercoating.

15. Spare parts

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Please see separate spare part manual.

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