

Special Products and Service

Casystems

General User/ Safety Guide

WOBURN ULTRA-LOW

PROFILING BED

V3





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# CAUTIONS & WARNINGS



### READ THIS INSTRUCTION MANUAL AND OBSERVE SAFETY INSTRUCTIONS



#### **CAUTION**

Please read and observe this instruction manual before use of bed. In the event the Ultra-Low bed changes owners, please supply this instruction manual to the new owner.

When the bed is moved on the transport frame take care not to allow it to overbalance. The narrow, tall design saves storage space but may tip over if handled carelessly.

Please check all fixings on your bed at least once a month. Pay special attention to sleeping platform connections.

Before cleaning and disinfection, the mains plug must be disconnected and hung safely.

Plugs for the handset and the motors which are inserted into the mattress base control box and the motor unit must remain plugged in. This is necessary to prevent water ingress to the control box.

Do not sit on the leg section of the bed when operating the raise function.

Ensure the recommended service and maintenance schedule in this manual is completed. Failure to do so could invalidate warranty claims.



#### **WARNING**

Before lowering the bed check the area underneath is **COMPLETELY** clear. Any obstructing article could be damaged or could cause instability to the bed.

Take care when lowering the bed to ensure limbs of any person or other objects present do not become trapped under the bed. The lowering rate will reduce when 120mm from floor level, to allow the operation to be stopped and the bed raised before any limb or object becomes trapped. Do not store the power supply under the bed.



#### 1 GENERAL INFORMATION



#### BEFORE USING THIS BED FOR THE FIRST TIME:

- Read through the instruction manual. Please note in particular that the various safety instructions must be observed
- Clean and disinfect the care bed before first use

Harvest Healthcare beds bear the CE mark and meet all safety and functionality requirements. The care beds were tested according to the international standards which contain the safety requirements for medical products. These safety requirements can only be met however if the user satisfies themself of the proper state of the care bed (including accessories) before using the bed.

Please observe the legislation in your country.

#### 1.1 EXPLANATION OF THE SYMBOLS USED



Read information with this symbol carefully and follow instructions. This information is safety-relevant.



This symbol indicates hazards due to electrical voltage. There is mortal danger!



This symbol indicates general hazards. There is danger to life and health.



Conformity mark in accordance with the Medical Device Directive (93/42 EEC).



The electrical equipment is splash-proof.



Symbol for Protection Class II device, double shock-proof



Symbol for type B device according to DIN EN 60601-1.



Medical Device





This care bed may only be used indoors



This product must be disposed of in a separate refuse collection in the European Union. Do not dispose of as normal domestic waste.



Symbol for direct current.



Symbol for alternating current.



Maximum permissible load.



Maximum patient weight.

#### 1.2 DEFINITION OF THE GROUPS INVOLVED

#### **OPERATOR**

An operator is any person who uses the care bed or on whose instruction it is used (e.g. nursing homes, specialised retailers, health insurance companies, medical suppliers).

#### **USERS**

Users are persons who, as a result of their vocational training, experience or briefing are authorised to operate the care bed or to carry out work on it, or are instructed in handling the bed. Furthermore the user can recognise and avoid potential dangers and assess the clinical condition of the patient.

#### **PATIENT / OCCUPANT**

Persons in need of care, handicapped or infirm and occupying a care bed.

#### **QUALIFIED PERSONNEL**

Qualified personnel are employees of the operator who as a result of their vocational training or briefing are entitled to deliver, assemble, disassemble and transport the care bed. In addition, these persons are instructed in the cleaning and disinfection regulations for the care bed.



If any serious incident occurs in connection with the Woburn bed range, you must report it to Manufacturer TekVor Care GmbH and or the responsible Health Authority as well as Harvest Healthcare Ltd.



#### 2 INTENDED PURPOSE

#### 2.1 USE FOR THE PURPOSE INTENDED (APPLICATION ENVIRONMENT)

This care bed is intended for accommodating patients or occupants (with body mass ≥150cm to max. 185kg for Woburn Ultra-Low) in residential homes, nursing homes and in care in the home (application environments 3 and 4) and may only be used under the conditions for use described in this Instruction Manual.

Any other use shall be regarded as non-compliant with the regulations and is excluded from any liability.

#### ATTENTION: The care bed is not designed for use in hospitals.

The care bed is not suitable for medical electrical applications which involve intravascular or intercardiac processes with the patient. The care bed is not designed for the transport of patients.

Under certain conditions the care bed can be used for other medical purposes with medical appliances such as antidecubitus mattresses, aerators, alimentation systems etc. In this case all bed functions must be locked out with the nurse key on the handset for safety. The medical appliance providers are liable for the compliance of the device with the directives of IEC 60601-1-1.

If other electrical devices are used in the bed and to prevent the risk of an electrical shock, protective measures and precautions must be established to prevent power cords being trapped in movable parts of the bed.

#### 2.2 NON-COMPLIANT USE

All uses deviating from the intended purpose, which may also be hazardous as a result. This includes for example:

- Loading the care bed beyond the safe admissible working load (see section **13.1** and identity label on bed frame).
- Operation of the care bed by patients or occupants who have not been instructed in its use.
- Use of the care bed for children.
- Attempting to move the care bed when castors are braked.
- Use of the care bed on a non-horizontal surface (max. incline 5°).



#### 3 GENERAL REGULATIONS FOR USERS

The care bed must only be used for the purpose intended. When installing, operating and using the care bed, respect the regulations in your country and the general recognised rules of technology and the occupational health and safety and accident prevention regulations.

If the care bed is in a faulty state, in which the patient/occupant, care personnel or third persons could be endangered, do not operate.

#### **3.1 QUALIFICATION OF USERS**

The care bed must only be operated by persons who have the corresponding training or experience to enable them to handle the care bed correctly.

#### 4 SAFETY INSTRUCTIONS

#### 4.1 GENERAL SAFETY INSTRUCTIONS



#### Never store anything under the bed.

Ensure children cannot operate the control system and check no pets are under the bed before operating any of the functions. Do not sit on the leg section of the bed when operating the raise function.



During the briefing, specific attention must be drawn to any potential dangers which can occur despite correct operation. Before putting the care bed into service for the first time, the Instruction Manual must be read in detail by the user / care personnel.



When operating the adjusting functions, there must not be any objects or limbs in the area of movement of the care bed. **Risk of crushing**.



If the physical or mental state of the patient requires it, the handset should be locked on the reverse side when not in use (nurses' key). See detailed description of the locking operation at section **7.2**. (it may be advisable to keep the handset out of reach of such a patient to avoid the risk of strangulation with the handset cord).



Adjustments to the bed must only be carried out by suitably instructed persons or in the presence of an instructed person.





Unplug the mains plug from the socket before moving the care bed and take care to avoid dragging the mains plug across the floor when moving the bed.



The mains plug must always remain accessible to enable immediate cut-off by unplugging the mains plug from the wall socket in case of emergency. The mains cable must be free and away from the bed frame. Otherwise, the mains cable may be torn out and damaged. In addition, the mains plug may be pulled out of its socket and electric leads exposed as a result. If the mains cable or the mains plug is damaged, the relevant part must be replaced. This work should only be carried out by the manufacturer or authorised professionals.



When connecting the mains plug, do not use multiple sockets since liquids may penetrate into these (fire hazard and electric shock).



When the bed is stationary the castors must always be in the braked position. If the castors are not braked, the bed can move when the occupant gets into and out of bed, since the occupant uses the bed for support. Injury can result if the care bed rolls away.



In order to move the care bed, the brakes on all four castors must be released and the mattress base moved to the lowest horizontal position.



The maximum duty cycle and the safe working load must not be exceeded otherwise safe operation cannot be guaranteed (please refer to the Technical Data in section 14).



The bed must not be used in rooms where there is a risk of explosion.



#### 4.2 SAFETY INFORMATION FOR THE OPERATOR



With the help of this Instruction Manual, instruct each user in the safe operation of this care bed before it is put into service for the first time.

Advise the user of any hazards which may occur if not handled correctly.

Only persons who have been properly instructed may operate this care bed. This also applies for persons who only operate the care bed on a temporary basis.

According to the Medical Products Act (German abbreviation: MPG, Medizinproduktgesetz), care beds are Class I active medical products.

Please observe your obligations as the operator in accordance with the Operators of Medical Products Ordinance (Medizinprodukte-Betreiberverordnung, German abbreviation: MPBetreibV), in order to ensure the permanently safe operation of this medical product with no risk of danger to patients, users or third parties. If the care bed is used on a long-term basis, checks for proper functioning and for any visible damage must be performed and documented at least once a year. Refer to section **10.2** for this purpose.

#### 4.3 SAFETY INFORMATION FOR THE USER

Ensure the operator instructs you in the safe operation of this bed.

In addition, pay particular attention to the general safety information as described in 4.1.

Adjustments of the bed must only be carried out by suitably instructed persons or in the presence of an instructed person.

Make sure the mattress base is at its lowest position before leaving the patient unattended. This will minimise the risk of injury to the patient when getting in or out of bed.

If there is a suspected fault or damage, unplug the mains plug from the socket. Clearly mark the care bed as "Out of Order" and immediately take it out of service and inform the person in charge without delay.



#### 4.4 CLEANING & DISINFECTION



Before cleaning and disinfection unplug the mains plug hang safely. Plugs for the handset and the motors which are plugged into the control box must remain in their sockets to prevent water from getting into the control system.



Do not immerse electrical components in water but wipe them with a damp cloth. Do not use a high pressure cleaner or a water jet. Only disinfection by wiping is allowed.



Wear waterproof gloves when cleaning and disinfecting to avoid skin irritation.



Attention: In the event of disinfection by spraying on a large scale with products containing alcohol there is a danger of explosion and fire.

#### 4.5 SERVICING & MAINTENANCE



Servicing work must only be carried out by persons who have at least read the safety regulations and are qualified according to the MPBetreibV (Operators of Medical Products Ordinance) § 4 and 6.



A technical check and/or safety inspection must be conducted at least once a year and after a lengthy break in use and before each further use. See section 10.



Any defects, damage or signs of wear must be rectified without delay. Only original spare parts from Harvest Healthcare Ltd may be used, otherwise all guarantees or warranties will be excluded.

The 9V block battery is the energy store for electrical emergency lowering in the event of a power failure. The energy store is sufficient for one emergency lowering only and must then be replaced. If the expiry date of the battery has elapsed, replace immediately. Since batteries are subject to self-discharging, it is recommended the battery is replaced every two years if not used. Ensure it is a type 6LR61 alkaline manganese battery. Used batteries must be disposed of in an environmentally compatible way.



Please check all fixings on your bed at least once a month. Pay special attention to sleeping platform connections.



#### 4.6 ACCESSORIES

The optional accessories available include a patient lifting pole of which the safe working load of 80 kg **must not be exceeded**. The lifting pole may only be used within its admissible adjusting range which is defined by the sleeve on the bed. Otherwise the bed can tip up and result in serious injury.

#### 4.7 ELECTROMAGNETIC COMPATIBILITY

Regarding their emitted interference and interference resistance the electric motor units comply with the requirements of EN 60601-1-2:2007 (see section **13.7**), but it is possible electrical devices may interfere with each other. In this case switch off the care bed for a short time or remove the interference source. We refer to the paper of the BfArm reference n° 9/0508 (Bundesinstitutfür Arzneimittel und Medizinprodukte).

#### 4.8 TRANSPORT & STORAGE

The care bed can be easily transported on the transport frame. It can be maneuvered in very small spaces on its castors.

If the bed is stored, the 9V block battery should be removed.



State as delivered (in cover)



Care bed on the transport frame



When the bed is moved on the transport frame take care not to allow it to overbalance. The narrow, tall design saves storage space but may tip over if handled carelessly.

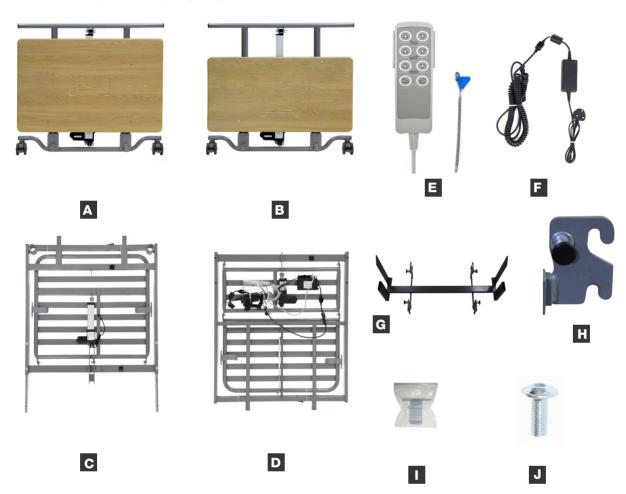
#### 4.9 SERVICE LIFE & DISPOSAL



The normal service life for care beds in domestic use is approximately 5 years. The care bed must not be disposed of as normal domestic waste after its service life has expired. To ensure that it is disposed of in an environmentally compatible way please contact Harvest Healthcare Ltd.



#### 5 PRE-INSTALLATION CHECK



#### After unpacking check the following parts are present:

- Power supply with cord and plug Headboard A В Footboard G Transport bracket (x1) C Bed platform (head end) Quick release connection bracket (2x fixed, 2x un-fixed) D Bed platform (foot end) Folding Mattress Guide (Spare) J E Handset with locking device 8 x Fixed, 8 x Un-fixed
- /I

On delivery check the packaging is not damaged. Report any visible damage to the transport company immediately.

#### 6 INSTALLATION & COMMISSIONING



Harvest Healthcare recomends a risk assessment is completed by the Operator before this bed is assembled.

#### 6.1 REMOVAL FROM THE TRANSPORT FRAME

Lift the cover from the bed unit and transporting device.

Please do not dispose of the cover. It can be used again as a dust cover in the event the care bed is later stored in the transport rack.

Remove the bed platform (head end) platform to lift sysyem connector. This will be required later.



**Bed as delivered** 



Care bed on transport device



Do not remove the cardboard protection from the top of the headboard or footboard sections at this time as it will protect the bed during assembly.



Lift the foot end of the bed platform from the transport device. To prevent fingers being trapped, please hold the inside of the platform section and not on the outer frame (see images).

Lay the platform section face down on the floor.





To remove the backrest section from the transport frame, lift and slide sideways between the head and footboard sections.



Take care not to knock the two frames together.



#### To release the transport brackets

Remove the height-adjustable head and foot end panels from the transport frame one at a time. Pull out the locking pin and rotate it a quarter of a turn. This should prevent the locking pin from reengaging back into the hole on the transport bracket. When the two pins have been disengaged remove one of the lift platforms from the transport bracket.

Lay the head and foot end panels (with the headboards facing upwards) at each end of the mattress platform.



The power supply cables for the height adjustment motors are wound around its housing or could be clipped onto the actuator clip.







#### 6.2 ASSEMBLY OF THE CARE BED

#### Connecting the two halves of the mattress base:



Once the platform sections are together install the final fixing screws.

Use the supplied allen key to tighten all 8 fixings (4 fixings on each side of the platform).





First, remove the plug cover by unscrewing the two fixing screws.





Connect the height adjustment colour coded yellow motors and the knee break adjustment colour coded blue motor to the control box.



The backrest motor is supplied already plugged in colour coded white. After inserting all plugs, screw the plug cover back onto the power supply unit housing.

Cut the cable ties securing the handset and the SMPS and power cable to the bed chassis taking care not to damage the cables.







Fix the power cable to the chassis using the bracket at the head end of the bed, pull the cable taut and lock the cable grip. Secure the handset and power cable to the chassis using the cable clips attached to the platform.

Carefully turn over the sleeping platform, to not damage the raise/lower actuator cables

#### 6.3 INSTALLING PLATFORM TO LIFT SYSTEM CONNECTOR

Insert both platforms to lift system connectors into the end of the platform. The end section connecting quick release brackets might be welded or tightly fastened into place.







Connect the platform to the two lift systems, taking care not to trap the raise and lower actuator cables.

When the end lifting frame has been fitted check the locking pin has fully engaged.



Do not use the bed unless the pin has locked into place

Ensure the fixings are secure, take care not to damage them. Tighten the 4 fixings (2 each end).







On each height-adjustable head and foot end there is a cable guide roller, through which the cable of the raise/lower actuator should run.

Locate the cable guide. Remove the split pin and one of the washers. Locate the drilled hole in the platform.

Insert the cable guide so that it protrudes through the other side of the frame. Replace the washer and split pin.

Cut the last cable ties holding the backrest and footrest sections in place, remove the final carboard protection from the head and foot sections.

DO NOT cut the cable tie securing the backrest actuator (right image).







#### 6.4 CONNECTING THE CARE BED TO THE MAINS SOCKET



#### Reduce the risk of the mains cable being crushed



Lay the coiled cable over the crossbeam from the head or foot end as shown in the picture.

Use the red Velcro fastener supplied with the bed to loosely attach the power cable to the actuator at the head end (see picture).

Ensure the power supply is never positioned on or under the bed.

#### Avoid rolling the bed over the mains cable.

Insert the mains plug into the socket.

The mains plug must always remain accessible to enable immediate removal from the wall socket in case of emergency.

The electrical adjustment motors are now ready for use.

#### 6.5 PLACING INTO SERVICE

Make sure all assembly steps have been carried out according to section 6.1 and 6.2.

Carry out a safety check according to **section 10.2** after assembly.

Clean and disinfect the bed as described in chapter 8 before putting into service and before each further use.

#### 6.6 DISASSEMBLY OF THE CARE BED

Remove the mains plug from the socket before disassembly.

Disassembly of the care bed is carried out in reverse order of assembly.

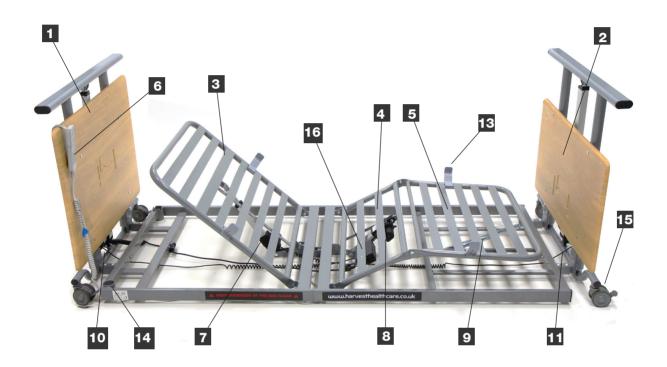
When reassembling the care bed sections onto the transport brackets, please ensure you align the red dots on the headboard section with the red dots on the transport bracket.



# **BED OVERVIEW**

#### 7 DESCRIPTION OF FUNCTION

#### 7.1 BED OVERVIEW



- 1 Head end with integrated height adjustment
- 2 Foot end with integrated height adjustment
- 3 Electrically adjustable backrest
- 4 Electrically adjustable knee break
- 5 Mechanically adjustable leg rest
- 6 Handset with nurses' locking key
- 7 Electric motor unit for backrest
- 8 Electric motor unit for knee break
- 9 Mechanical catch fitting for adjusting leg rest
- 10 Electric height adjustment motor at head end
- 11 Electric height adjustment motor at foot end
- 12 Coiled cable with SMPS power supply transformer box and mains cable with power plug
- 13 Folding mattress guide (x4)
- 14 Locating sleeve for patient lifting pole (as an option)
- 15 Castor with mechanical brake (x4)
- 16 Control unit (low voltage)

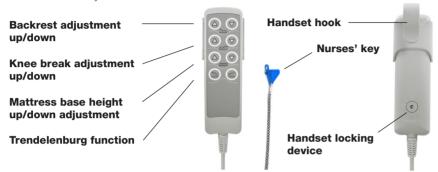
Please Note: The headboard and footboard can be different based on the version purchased.



# **OPERATION**

#### 7.2 HANDSET WITH LOCKING FUNCTION

The motorised bed functions can be operated via the handset. All functions can be locked with the nurses' key



To avoid damage, the handset should always be hung by the handset hook (e.g. on mattress base) when not in use.



Press only one button at a time, as the system could overload and become damaged.

#### 7.3 LOCKING FUNCTION FOR THE HANDSET

On the back of the handset there is a locking device. All electric adjustment functions can be locked at the same time using the nurses' key supplied.



The switching positions I and II are testing settings, used to check the safety during the annual inspection or after repair work, or each time the bed is put into service again.



### **OPERATION**

#### 7.4 OPERATION OF CASTORS

The castors on the bed can be braked and must be in the braked position during normal operation.









The brakes should only be released when the bed needs to be moved. Please refer to the Safety Information.

#### 7.5 ELECTRIC EMERGENCY LOWERING VIA THE INTEGRATED 9V BATTERY

#### 7.5.1 POSITION AND PRINCIPLE OF OPERATION

The control unit (item 8, Overview) on the bed frame is equipped with a 9V block battery, which makes it possible to make a CPR emergency lowering according to EN 60601-2-52 in the event of a power failure. Please note, however, that this is only possible once per 9V battery, as the capacity of the battery is limited.

After the emergency lowering has been used, the 9V battery must be replaced (Type 6LR61 alkaline manganese battery). The battery should however be replaced every 2 years even if it has not been used.



# **MAINTENANCE**

#### 7.5.2 BATTERY CHANGE

To replace, check or remove the 9V battery, before storage, open the battery compartment on the power supply unit attached to the backrest motor.

Proceed as follows:



#### **UNPLUG MAINS PLUG**

- 1 Unplug from the low voltage control unit at the plug of the connection cable from the SMPS transformer box.
- 2 Remove the battery carrier (the black plastic ring protruding from the control box) and remove the 9V battery. If required, replace it with a new (type 6LR61 alkaline manganese) battery.





**3** Reinstall the battery carrier. Be careful not to damage the wires or washer.



# **TROUBLESHOOTING**

#### 8 CARE, CLEANING & DISINFECTION

Clean and disinfect the bed before placing into service and before each re-use. To clean, wipe the bed by hand with a damp cloth. Use suitable cleaning and conditioning agents for wooden and synthetic furniture.

Household cleaners without ammonium or scouring agents are also allowed, but these should be dermatologically tested.

Solvents and scouring agents are not allowed as they damage the various surfaces of the care bed.

To disinfect: In the homepage of the Robert Koch Institute < http://www.rki.de > you will find a list dated of 31.05.2007 of approved and generally accepted disinfection agents and treatments and how they are to be correctly used.



Before cleaning and disinfection, unplug the mains plug hang up safely. Plugs for the handset and the motors which are inserted in the control unit <u>MUST</u> remain plugged in to ensure that water does not enter the control system.

#### 9 TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION	
	Mains plug not plugged in	Insert mains plug into mains socket	
No Response	Locking function on handset activated	Unlock handset	
The Hooperide	Handset not plugged in	Insert handset into mattress base motor	
	Motor unit not plugged in	Plug motor unit into mattress base motor	
Adjustment functions transposed	Connecting cables on the connectors transposed	Check plugs and connectors and change over plugging in locations	
No function after power failure	9V block battery is discharged	Replace 9V block battery	
Bed only moves very slowly	Bed only adjusted via the battery.  Mains plug not plugged in	Plug in mains plug and replace the 9V block battery as a precaution	



# **SERVICING**

#### 10 SERVICING

#### 10.1 PRINCIPLES

Operators of care beds are obliged according to MPBetreibV (Operators of Medical Products Ordinance) §4 to guarantee the safe condition of the medical product over their entire service life.

The test according to the regulation EN 62353 contains the following minimum requirements:

- Visual check
- Measurement of leakage resistance
- Measurement of leakage current
- Functional test
- Overall evaluation

EN 62353 in section 10.2

The service life of the care bed depends essentially upon the handling and servicing.

To guarantee safe operation, a visual and functional test including an electrical test must be carried out at least once a year. For this purpose, proceed according to the technical safety checklist as per regulation



If there is any doubt about the safety or functionality of the bed or even a part of the bed as a result of the work performed below, the bed should under no circumstances be in service again.

Contact the supplier or manufacturer in this case.



# **SERVICE RECORD**

#### 10.2 LIST OF TECHNICAL SAFETY CHECKS ACCORDING TO EN 62353

Care bed:	WOBURN ULTRA-LOW	Person in charge:	
Serial No.:		Location:	

	INSTRUCTION FOR TESTING	COMMENT	s NO
1	Is the general condition OK?		
2	Are the type plates for the bed and the motors legible?		
3	Is the Instruction Manual available to staff?		
4	Is the use one for which it was intended and is it safe?		
5	No surface damage or corrosion?		
6	Mechanical components and welded joints without faults?		
7	Are all mechanical connecting elements securely fixed?		
8	Mattress base underside undamaged?		
9	Can all adjustment options for the bed be operated without hindrance on site?		
10	Is the mechanism for locking the thigh rest in place in working order?		
11	Has the load test been carried out successfully according to the regulations?		
12	Are the patient's lifting pole with the grab handle and the lifting pole sleeve undamaged and without any signs of wear?		
13	Have castors including locking brake been tested for safe functioning?		
14	Mains cable, connecting cables and plugs without damage?		
15	Fixture available for safe transportation of mains plug?		
16	Strain relief of the mains cable and handset securely attached?		
17	Are all plug-in connections securely attached? (Washers without damage?)		

# **SERVICE RECORD**

	INSTRUCTION FOR TESTING	COMMENT	YES	NO
18	Are cables laid correctly and safely? (No damage)			
19	Motor housing and SMPS housing, mains plug housing without damage?			
20	Are the thrust pipes of the height adjustment motors undamaged?			
21	Functional test of the handset: can the buttons be operated properly?			
22	Functional test of handset locking device: On/Off working correctly?			
23	Testing of initial fault safety by means of integrated blocking box in handset			
24	9V block battery OK / expiry date sufficient until next test?			
25	Is the safe working load adhered to?			
	Overall evaluation of the bed: Bed OK?			

Date:	Next inspection:
Inspected by:	Signature:



The Ultra-Bed bed must be serviced every 12 months in order to take advantage of the 5 year warranty. Please contact Harvest Healthcare if you require another copy of this service record.



### **SERVICING**

### 10.3 CHECKING THE INITIAL FAULT SAFETY BY MEANS OF THE INTEGRATED CONTROL BOX IN THE HANDSET

To check the safety equipment, proceed as follows:



The switching positions I and II are testing settings used only to check the safety during the annual inspection, or after repair work, or each time bed is put into service again.



- Setting switch position 4 (padlock symbol open Move all bed adjustments to a slightly raised position.
- Setting switch position 3 (padlock symbol closed

  When operating the adjustment buttons, no motorised adjustments should be possible.
  - Set switch on the back of the handset to testing position 1 (symbol I).
- When operating the adjustment buttons, no motorised adjustments should be possible.

Set switch on the back of the handset to testing position 2 (symbol II). When operating the adjustment buttons, no motorised adjustments should be possible.

#### 10.4 MEASUREMENT OF OVERALL ELECTRICAL SYSTEM



The measurements described here must only be performed by a qualified electrician or by an electrotechnically trained person, (using suitable measuring and testing devices).

The measurements shall include as a minimum the testing of the housing leakage current and the measurement of the isolation resistance.

The following measured values must be attained:

\*Housing leakage current <= 0.2 mA\*Isolation resistance  $<= 7 \text{M}\Omega$ 

During testing the corresponding button on the handset must be kept constantly pressed.

The measurement is to be performed between:

- \*The control unit and the bed frame
- \*The control unit and the handset



# **SERVICING**

#### 11 GUARANTEE

As stated in our Standard Terms and Conditions, we provide a manufacturer's warranty of 5 years from the date of purchase.

To take advantage of the 5 year warranty, the bed must be serviced (without exception) every 12 months by a Harvest Healthcare Ltd approved technician using only Harvest Healthcare Ltd original spare parts. A service record must be completed (an example can be found on **pages 28-29**).

#### 12 SERVICE LIFE & DISPOSAL



The service life of our care beds in domestic use is assumed to be approximately 5 years. This naturally depends upon the manner of use. The care bed is suitable for reuse if all measures of section 6.3 and 10 are taken. Frequent transportation, setting up and adjustment reduce the service life, as do improper treatment, irregular servicing and exceeding the safe working load or the admissible load cycle of the electric motors. The care bed must not be disposed of as normal household waste after the end of its service life. To ensure that it is disposed of in an environmentally compatible way please contact Harvest Healthcare Ltd.



### **TECHNICAL SPECIFICATION**

#### 13 TECHNICAL SPECIFICATION

#### 13.1 TECHNICAL DATA (MECHANICAL)

Safe working load (max. admissible load) Individual loads of the safe working load

185 kg

Max. weight of patient 175 kg
Mattress 200 x 90 x 6cm 10 kg

Total

185 kg

Safe load, patient's lifting pole Max. weight of patient Max. mattress weight:

Length:

Upper level of head section/foot section Height adjustment of mattress base

adjustable height from:

80 kg 175 kg 10kg

2150mm (2000mm long mattress base)

84.5 - 141.8 cm

67 - 640mm

approx. 70°

adjustable electrically up to Thigh rest adjustment continually adjustable electrically up to Foot rest in raised position

Hoot rest in raised position Mattress base surface

Castors with individually lockable brake

Max. castor loading capacity

Operating noise:

approx. 30°

mechanically, -20°-0° in 4 stages

Steel slatted base

Ø 75 mm double plastic castors

80 kg / pcs. (static)

< 53 db(A) at a distance of 1m

#### 13.2 TECHNICAL DATA (ELECTRONIC)

Power supply unit (LIMOSS)

Voltage rating Frequency rating Type of current

Nominal consumption during operation Nominal consumption in idle state

Nominal operating time/ Nominal idle time Primary safety fuse

Battery for emergency lowering

type 6LR61)

Mattress base motor units (back/leg) Height adjustment motor unit Motor unit protection class Control unit MC220 + SMPS MC125

230/240V 50-60 Hz AC ~ 70 Watt 0.5 Watt

2 Min. / 18 Min (max. 5 switching

cycles/min.) 2.0 A

9V block battery (alkaline manganese

2x MD125 (Fa. LIMOSS) 2x MD121 (Fa. LIMOSS)

IPX4



# **TECHNICAL SPECIFICATION**

#### 13.3 TECHNICAL DATA (ENVIRONMENT)

Temperature range during operation Temperature range for storage/transport Humidity of the air Air pressure

+10°C to + 40°C -10°C to + 60°C 30% to 75% rel. Between 795 and 1060 hPa

#### **CLASSIFICATION** 13.4

Medical product Degree of protection to DIN EN 60601-1 Housing degree of protection to EN60529

Max. duty rating Max. switching cycles/min

Safety inspections

Type B (protection against electric shock) IPX 4 (not suitable for automated washing systems)

10%, ON 2 min / OFF 18 min

1 x per year

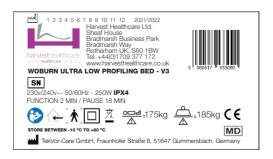
#### **WEIGHTS OF INDIVIDUAL COMPONENTS** 13.5

Mattress base / Head side 23.8 kg Mattress base / Foot side 23.5 kg Head end / Foot end 2 x 13.1 kg/pcs Transporting device (optional) 4.8 kg Headboard 6.3 kg Footboard 6.3 kg

Overall Weight of bed 86.1 kg

#### 13.6 TYPE PLATE

Attached to the outside surface of the mattress base frame. (See Overview)





#### 13.7 INFORMATION ABOUT ELECTROMAGNETIC EMISSIONS

#### **Guidance and manufacturer's declaration - electromagnetic emissions**

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

EMMITED	COMPLIANCE	ELECTROMAGNETIC ENVIRONMENT GUIDELINES
RF emissions according to CISPR11	Group 1 -	The care bed uses RF energy only for its internal functioning. Therefore, its RF emissions are very low and it is unlikely that nearby electronic devices will be disturbed.
RF emissions according to CISPR11	Class B	The care bed is designed for use in all establishments including domestic establishments and those determined to be directly connected to a public supply network that supplies buildings used for residential purposes
Emissions of harmonics according to IEC61000-3-2	Class A	
Emissions of voltage fluctuations / Flicker according to IEC 61000-3-3		



#### **Guidance and Manufacturer's Declarations - Electromagnetic Interference Immunity**

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

INTERFERENCE	IEC 60601	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDELINES
Electrostatic discharge (ESD) according to IEC 61000-4-2	± 6 kV contact discharge ± 8 kV air discharge	± 6 kV contact discharge ± 8 kV air discharge	Floors should be wood, concrete or ceramic tile floors. If the floor is covered with synthetic material, the relative humidity should be at least 30%.
transients / bursts lines lines according to ± 1 kV for input & ± 1		± 2 kV for power lines ± 1 kV for input & output lines	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment.
Surges according to IEC 61000-4-5	± 1 kV Voltage phase-phase conductor ± 1 kV Voltage phase-ground conductor	± 1 kV Voltage phase-phase conductor ± 1 kV Voltage phase-ground conductor	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment.
Voltage dips, short interruptions and supply voltage variations according to IEC 61000-4-11	< 5 % U <sub>T</sub> for ½ cycle (> 95% dip)  40 % U <sub>T</sub> for 5 cycles (60% dip)  70 % U <sub>T</sub> for 25 cycles (30% dip)  < 5 % U <sub>T</sub> for 5s (> 95% dip)	< 5 % U <sub>T</sub> for ½ cycle, 10 ms (> 95% dip)  40 % U <sub>T</sub> for 5 cycles, 100 ms (60% dip)  70 % U <sub>T</sub> for 25 cycles, 500 ms (30% dip)  < 5 % U <sub>T</sub> for 5s (> 95% dip)	The quality of the supply voltage should be equivalent to that of a typical business or hospital environment If the user of care bed also requires continued operation during interruptions in energy supply demands, it is recommended to feed the care bed from an uninterruptible power supply or a battery.
Magnetic field of power frequency (50 / 60 Hz) according to IEC 61000-4-8	3 A/m	3 A/m 0.3 A/m	Magnetic fields of power supply frequency should comply with the typical values, as can be found in a business and hospital environment.



#### Guidance and Manufacturer's Declarations - Non-life-support devices

Electromagnetic Interference Immunity

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

INTERFERENCE	IEC 60601	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDELINES
Conducted RF interferences according to IEC 61000-4-6 Emitted RF interferences	3 V eff 150 kHz - 80 MHz 3 V/m 80 MHz - 2.5 GHz	3 V eff	Portable and mobile radios, including cables, should not be used closer to the care bed than the recommended working clearance that is calculated by the equation for the appropriate frequency.  Recommended working clearance $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$ $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ where P is the power of transmitter in watts (W) according to specifications of the transmitter manufacturer and d is the recommended working clearance in meters (m)  Field strengths from fixed RF transmitters should, at all frequencies, according to a site survey a - Note p. 5 be lower than the level of agreement be b - Note p. 5  In the vicinity of equipment, bearing the following symbol, interference is possible.

Note 1: At 80 and 800 MHz, the higher frequency range must be taken.

Note 2: These guidelines may not apply in all situations. The propagation of electromagnetic waves is affected by absorption and reflection from structures, objects and persons.



- a. Field strengths from fixed transmitters, such as base stations of mobile telephones and land mobile radios, amateur radio, AM and FM radio and TV broadcast can not be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey is recommended. If the field strength at the location of the care bed exceeds the specified compliance level above, then the care bed should be monitored with respect to its normal operation. If abnormal performance is observed, it may be necessary to take additional measures, such as reorienting or relocating the care bed
- b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

# Recommended working clearances between portable and mobile RF communications equipment and the care bed

The care bed is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or user of the care bed can help to prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF

OUTPUT POWER OF TRANSMITTER - W	WORKING CLEARANCE ACCORDING TO TRANSMISSION FREQUENCY - M			
	150 kHz to 80 MHz at 3 V/m $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	80 MHz to 800 MHz at 3 V/m $d = \left[\frac{3.5}{E_1}\right] \sqrt{P}$	800 MHz to 2.5 GHz at 3 V/m $d = \left[\frac{7}{E_1}\right] \sqrt{P}$	
0.01	0.12	0.12	0.23	
0.1	0.38	0.38	0.73	
1	1.2	1.2	2.3	
10	3.8	3.8	7.3	
100	12	12	23	

For transmitters not rated in the list above, the working clearance can be determined using the equation, which belongs to the transmitter, where P is the nominal output of the transmitter in watts (W) according to specifications of the transmitter manufacturer.

NOTE 1: An additional factor of 10/3 is applied when calculating the recommended working clearance between transmitters in the 80 MHz to 2.5 GHz frequency range in order to reduce the probability that a mobile/portable communication device unintentionally brought into the patient area could lead to interference.

NOTE 2: These guidelines may not apply in all situations. Propagation of electromagnetic waves is affected by absorption and reflection from structures, objects and persons.



All parts and data continually undergo further development and may therefore deviate from the details given.

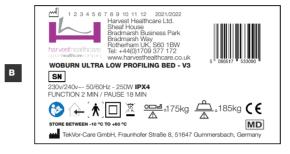


# **LABELS**

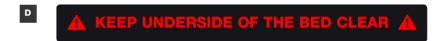
#### **13.8 LABELS**

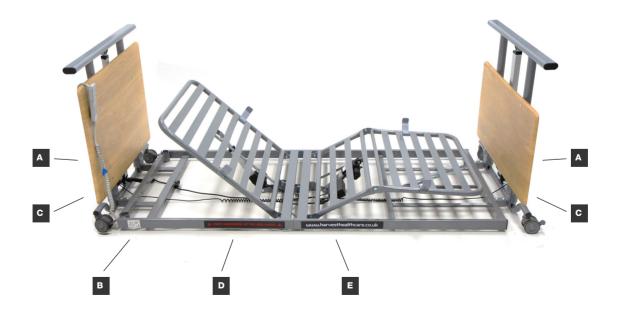














# **DATE OF PURCHASE**

Date of purch	lase:
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# **NOTES**




# **NOTES**




# **NOTES**






Special Products and Service

#### **Contact Us**

Units 5 and 6 Lower Vicarage
Road
Southampton
Hampshire
SO19 7RJ
T: 02380 420678
E: info@easycaresystems.co.uk

www.easycaresystems.co.uk