



# Icon Active/Icon Active Lite

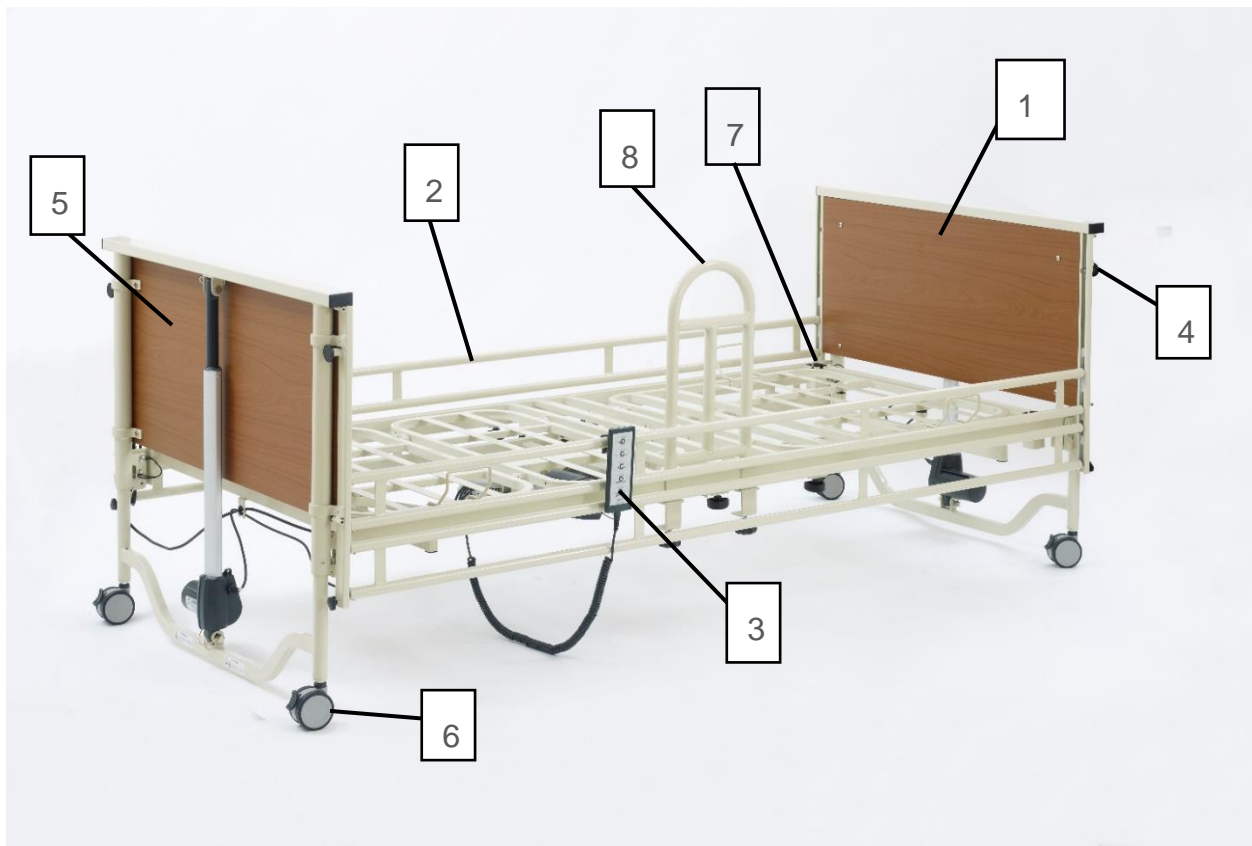
USER MANUAL



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## Product Positioning Map



- 1- Head Panel (available with or without wooden sleeve)
- 2- Metal 4-Bar Bed Rail (3 bar aluminum bed rails available)
- 3- Hand Control
- 4- Bed Rail Release Lever
- 5- Foot Panel (available with or without wooden sleeve)
- 6- Castors with Brakes
- 7- Housing for Lifting Pole (On Both Sides)
- 8- Bed Lever (available accessory)

# 1.0 INTRODUCTION

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Dear customer,

Apex Medical Limited wishes to thank you for purchasing one of our specialist beds and for the trust shown in our products.

The electrical safety and functionality of each bed has been tested by the manufacturer in order to avoid any faults.

This manual contains important information regarding the safe setup and use of the bed. It is important that anybody involved should have read and understood its contents. Failure to do so could result in damage to the bed and may invalidate the warranty. Please be aware that elements of the bed are heavy. Those involved should observe the safe lifting and manual handling techniques recommended under Health & Safety Regulations

This manual provides useful information to the buyer and to the end user on all the functions which will allow the safe and practical daily use of this bed.

Therefore we recommend you to use this manual as a handy guide and to keep it safe for any future requirements.

## 2.0 GENERAL INFORMATION

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### Before using the bed:

Read through this whole manual in order to avoid causing damage to the bed due to improper use.

Before using this care bed, the user must ensure that the bed has been delivered in a serviceable state and there is no damage. This bed conforms to all the requirements of Directive 93/42/EEC for medical products and it is classified as a Class I medical device.

This manual contains safety instructions which must be fully respected. All the people involved with using the bed must know the complete contents of this manual and observe the safety warnings listed herein.

### Information for the owner:

Every electrical appliance may cause hazards if used incorrectly. Therefore it is necessary to instruct the user on how to use the care bed correctly and to issue the user with this manual for reference.

## 2.1 Groups of people mentioned in this manual

The manual may refer to the following groups of people somehow involved with using the bed:

- **Supplier** - The supplier (for example: suppliers of medical products, dealers, health care authorities, etc.) can be any physical person or juridical body which uses this bed or under whose name the bed is being used. The supplier is responsible for providing the necessary information to the user.
- **Carer**- the carer is the person authorised to use the bed and to carry out any operations on the bed on the basis of his/her training, experience or education, and who has been trained to use the bed. Furthermore, the user must be able to recognize and avoid potential hazards and evaluate the condition of the patient.
- **User** - In this manual the term user refers to the person who has been identified as the beneficiary of the bed.
- **Specialised personnel**- The term specialised personnel refers to the owner's co-operators who are authorised, on the basis of their training or education, to deliver and assemble.

## 2.2 Safety Warnings

The Icon Active/Lite bed range is a high technology product, and would therefore advise you to read the complete manual. Make sure to only use the bed if it is in good condition. These safety warnings are provided to avoid injury.

### 2.2.1 Safety Symbols used

The following symbols appearing in this manual:

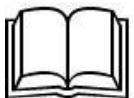


This symbol indicates the dangerous power voltage which could put the user's life at risk.



This symbol indicated hazards which might jeopardize the user's life and cause health problems.

Warnings against damages to property:



This symbol indicates a general useful suggestion to the user. Following this suggestion. It will be easier to use the bed and to understand the instructions.

The safety symbol used does not replace the safety text it refers to.

It is always necessary to read the relevant safety warning in full and to follow it carefully!

### 2.2.2 Safety warnings for the owner

- Before the bed is used, inform the user about safely operating the bed by strictly following this manual which must be provided together with the bed. Inform each user of any possible dangers due to any improper use. Pay special attention when using the electric functions and the side rails.
- Nursing beds are classified as active Class I medical devices. You must fulfil your obligations in accordance with the current regulations about installation, operation and

use of medical devices, to ensure a safe and durable use of this medical product without any risks for carers or users and any third parties. In case of a prolonged use of the bed, it is necessary to carry out an inspection, after a certain period of time (we recommend at least every year), to check its functionality and any visible damages (see Chapter 6).

- Make sure that only qualified personnel use this bed.
- Make sure that any possible substitute personnel are also sufficiently trained on how to use the bed correctly.
- In case any additional electric accessories are used such as air compressors for overlay mattresses, make sure they are properly installed and work correctly. In particular pay attention to the following:
  - Make sure all cables, flexible tubes etc are fixed correctly.
  - Do not use a multiple socket under the bed (possible fire hazard in case of contact with liquids). If in doubt, please contact the manufacturer of the accessories.
- Make sure all staff comply with the safety warnings.

Make sure that any possible substitute personnel are also sufficiently trained on how to use the bed correctly.

In case any additional electric accessories are used such as air compressors for overlay mattresses, make sure they are properly installed and work correctly. In particular pay attention to the following:

Make sure all cables, flexible tubes etc are fixed correctly.

Do not use a multiple socket under the bed (possible fire hazard in case of contact with liquids). If in doubt, please contact the manufacturer of the accessories.

Make sure all staff comply with the safety warnings.

### 2.2.3 Safety instructions for the user

- Make sure to be instructed on the safe use of the bed by the supplier and/or reading this manual carefully.
- Before each use check the condition and for the absence of defects in the Icon Active/Lite bed.
- Make sure there are no obstructions such as furniture or inclinations of the ceiling when making any adjustments.
- In case any additional electric components are also used such as hoists, reading lamps or air compressors for overlay mattresses, make sure their cable does not get caught in the mobile parts of the bed or get damaged.
- Multiple sockets must not be used for connecting any external electrical components.



- If you suspect damage or malfunctioning, immediately disconnect the power plug from the wall, clearly mark it as “Damaged” and deactivate the Icon Active/Lite bed. Immediately inform the Supplier of the bed about this situation. In chapter 6.1 you will find a checklist to assess the condition of the bed.



### Safety warnings for the User/Carer

- The power cord must be installed so that when operating the bed it is not carried away, crushed or damaged by any moving parts.
- Before transport totally remove the plug from the socket.
- When the bed is not used, make sure there is no possibility for the hand control to fall and get damaged (it must remain attached to the hook). Make sure the cable cannot be damaged by any moving parts of the Icon Active/Lite bed.
- Place the bed in the lowest position when you leave the user unattended on the bed. In so doing, the risk of injuries to the user when getting on and off the bed is minimized.
- The adjustments can be made only by trained personnel or in the presence of experienced staff.
- Check the power cord regularly for possible mechanical damages (abrasions, uncovered wires, bends, dents, etc). especially in the following cases:
  - After each mechanical overload (for example: crushing of the cable with the bed itself or with a trolley, after strong tractions and bending of the bed with the power cord plugged in)
  - After each change of position/after every movement before inserting the plug during the normal operation by the user
  - Regularly check that the power cord assembly is properly tightened.

## 2.3 Product Description

### 2.3.1 Proper Use

- The Icon Active/Lite bed, referred to throughout this manual as “bed”, is designed for people with varying conditions and levels of mobility and is suitable for home care.

- The bed was not specifically designed for hospital use.
- This bed can be used as an aid and can be recommended by medically trained personnel e.g. Occupational Therapists and it can be used for, care or observation of the user.
- This bed does not have any special options suitable for an equipotential connection. Make sure to take this aspect into account before connecting with any other (medical) equipment already linked to the power supply.
- This bed must be used only by competent persons.
- This bed is designed for repeated re-use. Please follow the instructions listed below:
  - Cleaning and disinfecting (see chapter 5)
  - Maintenance / Verification of tests (see chapter 6.2)

This bed can be used only according to the use conditions described in this manual. Any other use is not to be considered as proper.

### 2.3.2 Features

- Electric height adjustment of the bed surface from 24.5cm to 64cm.
- Electric backrest (with Auto-Regression) section adjustment from 0° to 72°.
- Electric leg section adjustment from 0° to 33°.
- Four individually braked castors
- Mattress surface 198 x 88cm.
- Integrally extendable to 213 x 88cm.
- Overall dimensions about 213 x 100cm.
- Bed rails on both sides of the bed are able to drop down.

### 2.3.3 Materials used

The bed is mostly constructed by steel tubing profiles, covered by a polyester powder coating or by a metallic zinc or chrome coating. The head/foot panels are made of wood or similar material, whose surface is waterproof.

**The surfaces are not harmful in contact with the skin.**

### 2.3.4 Frame

The bed is supplied dismantled to be easily transported into the house, It is made up of two metal frames with wooden panels (head panel and foot panel), a mattress with motor, a pantograph mechanism with an electric actuator and one lifting pole with grab bar (accessory NOT included with the bed). The bed has four independently braked castor wheels.

**Mattress Base-** The mattress base is divided into a backrest, a fixed central element, a leg support and a knee raiser. These elements are adjustable. The foot or head parts of the mattress base can be adjusted in height horizontally or obliquely compared to the floor. All the adjustments are performed by electric motors by using a hand control.

**Bed Rails-** To protect users from possible accidental falls from the bed, the bed is equipped with rails (meet clause 201.9.8.3.3.3 of IEC 60601-2-52) on both sides, which can act as a barrier or be lowered when not in use. The blocking mechanism is locked and it can only be released by pulling the lever out on the side (see No. 4 on Page 4)

**Electric system-** The electric operating system of this bed is safe and easy to use. It consists of:

- Electronic controllers. A minimum protection voltage of 24 volts is produced which is not dangerous for the patient and the user. The electric motors and the hand controls are connected to the central controller with connectors, which work with a minimum protection voltage of 24 volts.
- Separate electric motors for the back and the leg supports.
- Two electric motors to adjust the height of the mattress base (one in each bed end).
- A hand controller unit with fixed hook.

## 3.0 ASSEMBLY AND OPERATION

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- The bed is supplied disassembled.
- The bed should be assembled on location by suitably competent persons.
- The installation must be carried out by a minimum of one person.
- Ensure that the local electricity mains voltage corresponds to that marked on the main controller label before connecting to the supply.
- Ensure that cables from actuators are plugged into the main controller correctly.
- The fuse in the mains 'safety connector' plug should not exceed 5amps.
- The bed should be located on a level surface & not sited on loose floor coverings.
- The cable from the mains electricity supply must be kept away from the lifting mechanism & castors to avoid danger of shearing or crushing.
- The brake on each castor must be applied whilst the bed is in use.
- Do not position objects under the bed.
- Always ensure that limbs or body parts of both user and carer are not protruding from the bed, are not between the side-rails or in the way of the lifting mechanism when using the powered functions.
- When raising/lowering the bed, be aware of any fixtures such as window sills, shelf units and electrical power sockets which may obstruct the raising/lowering of the bed or cause damage to the fixtures. Re-position the bed if necessary.
- If moving the bed to a different location, always ensure that all bed functions are at their lowest position before disassembling and remember to remove the plugs from the mains electricity power supply.
- Never use the side-rails to push or pull the bed. Always use the head and foot boards.
- With or without occupant, the bed should only be moved at slow speed and not pushed over a threshold.
- Once the bed is re-sited, remember to re-apply the brakes.

### Packaging units:

- **Carton 1:** Mattress platform, mattress retainers and 3-bar side rail end caps. Main control unit, hand control, back & foot rest actuators and connecting cables are already attached to the bed frame.
- **Carton 2:** Bed end (head/foot panel) with Hi-Lo actuators.
- **Carton 3:** Two aluminum 3-bar side rails OR two metal 4-bar bed side rails and fingers.

## 3.1 Assembly

Unscrew the 4 hand screws on both the head and foot halves of the frame. Use the bars provided to connect the two halves of the frame together, ensuring the end of each bar with the hole **A** is inserted first into the foot end frame with the hole **B**. Also note the location tab **C** should be facing down.



Push the connector bar fully into the frame until the hole on the frame is completely covered by the bar as shown in the photo on the right.

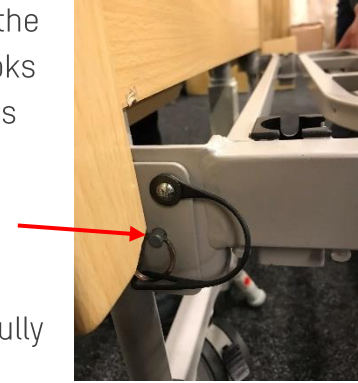


Tighten the hand screws on both sides of the foot end frame to hold the connector bars in place. Then insert the other end of the connector bars into the head end frame (below left). Once the two halves of the frame meet without any gap, tighten the hand screws on the head end of the frame (below right)





Remove locking pin from both sides of the head and foot boards and align the hooks on either end of the frame with the slots on the head/footboard before fully inserting the hooks into the slots.



Push in the retaining pin into the hole fully to secure the frame into position.



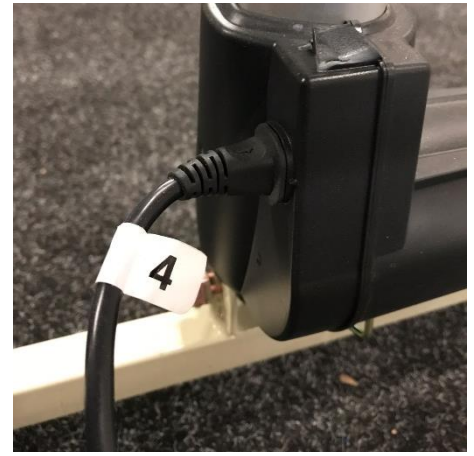
The main control box comes already attached to the knee break actuator with all the cables for the actuators and the handset connected.

The knee break actuator should be mounted under the bed frame so that the motor end (the end where the cables connects to the actuator) is towards the centre of the bed and the extending ram of the actuator is connected to the moving knee break section of the mattress platform.

In order to insert the securing pin into the end of the extending ram you need to manually lift the knee break and pull out the ram so that it is away from the control box it is attached to, allowing you to insert the locking pin. Please see image to the left.

The backrest actuator should then be mounted under the bed frame again so that the motor end is towards the centre of the bed and the extending ram is connected to the moving back rest section of the mattress platform.

Ensure all mounting pins are fully inserted through the bed frame mounting points on both sides of the actuator and the spring loaded locking loops are in the closed position.



All the cables should be already attached to the control box and numbered 1 – 4 with a tag on the opposite end where they connect into each actuator. The number inside the control box (re circles above) should correspond with the same number on the other end of each cable.

Number 1 cable should be connected into the backrest actuator.

Number 2 cable should be connected into Hi-Lo actuator at the foot end of the bed.

Number 3 cable should be connected into the backrest actuator.

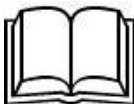
Number 4 cable should be connected into the Hi-Lo actuator at the head end of the bed.



**Pay attention to position the back and foot rest actuators correctly! They should never be inverted.**



**Make sure not to damage any cables. Verify that the cables do not get tangled and that they do not get caught in any in moving parts.**



**In case of replacement of any individual components, always make sure that the electric plugs are then properly inserted into the controller. Only in this way the bed will function properly.**

### 3.1.1 Use of Accessories

Apex Medical Limited can supply various accessories for use with this bed including a lifting pole, bed lever and dynamic mattress systems. For correct installation of accessories please refer to section 4 of this manual.



**Use of non-Apex Medical Limited accessories is not advised. Installing third party accessories could restrict the moving parts of the bed. The warranty does not cover any damages caused by use of third party accessories and your warranty could be void if third party accessories are installed and used.**

## 3.2 Operations

**Every time before using the bed, the user must make sure that:**

- The castors of the bed are locked (see also chapter 4.3).
- The power supply is compatible with the bed (230 Volt, 50 Hertz).
- The power cable is plugged in and placed in such a way that it cannot be damaged.
- The power cable, the motor cables and the hand control cable are not damaged by any moving parts of the nursing bed.
- There are no obstacles in the way such as bedsides or chairs.
- Any accessories are installed correctly and do not restrict the free movement of any part of the bed -especially the backrest and knee break mattress platform.
- All control functions have been accurately inspected (see also chapter 6.1) and are working properly.
- Only after having carried out the above operations it will be possible to start using the bed.





### 3.2.1 Requirements of the Installation Site

- Make sure there is enough space to allow the whole range of adjustments of the bed. There should not be any furniture or other objects close to the bed such as window sills.
- If the bed is to be used on parquet floor, make sure that the use of wheels will not cause any discolouring due to the parquet waterproof treatment. It is possible to use the bed on tiles, carpets, laminated floors and linoleum.
- A 230 volt power outlet, correctly installed, must be located at the head of the bed.
- If there is the need to use other accessories (such as compressor systems, bed levers etc...), make sure they are correctly fixed and that they work properly. In particular, make sure all different cables are safely connected and no moving part of the bed is restricted from moving freely as it should. In case of questions or doubts please contact the manufacturer of such accessories.



**During the installation of the bed you must take the following issues into serious consideration to minimize potential fire hazards due to external influences. Inform the user and the personnel about these issues!**

- If possible, use only non-flammable mattresses and linens.
- DO NOT smoke while in bed as there is no guarantee against risks caused by smoking tools (such as lighters, matches) depending on the mattresses and linens used.
- Use any electric accessories (electric blanket) and appliances (lights, radios) only if they are in a good condition.
- Make sure these appliances are used only for their intended purpose and that they cannot accidentally end up on and under the sheets (risk of overheating).
- Absolutely avoid using extension cables or connections to multiple sockets under the bed (fire hazard due to the penetration of liquids).
- Extension cables and/or power multiple sockets should never be used at all.

### 3.2.2 Operations

After the assembly of the bed, make sure to carry out an inspection in conformity with chapter 6.2.

After carrying out all the instructions listed in chapters 3.1 to 3.2.2 the bed can start functioning.

## 4.0 FUNCTIONING

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### 4.1 Special Safety Warnings

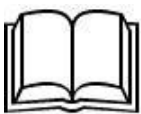


- When making the adjustments make sure that no parts of the body of any users and other people, especially children, are positioned under any adjustable elements or under the bed frame to avoid being caught or injured.
- Once you have made the necessary adjustments and positioned the bed correctly, make sure to lock the back rest and leg adjustments possibilities with the hand control, to protect the user/carer from unwanted movements (risk of crushing of his/her limbs).
- In case of use of accessories on the electric bed, make sure such accessories do not crush or cut the user with sharp edges during the legs and backrest adjustments. If this condition is not guaranteed, the user/carer must not proceed with the backrest and legs adjustments.
- Make sure the power cable and the hand control cable do not get caught anywhere or get damaged.



Before each operation with the bed, make sure the power cable is not stretched, crushed or damaged in any way.

When making the adjustments, make sure there are no obstructions such as furniture or a ceiling inclination, to avoid possible damages.



As with all electrical appliances, despite the compliance with prescribed values, it is not possible to totally exclude the possibility of interferences from other electrical devices which might be nearby (for ex. the "buzz" of a radio). In such a rare case, increase the distance of the bed from the interfering device, do not use the same socket or temporarily disconnect such device.

## 4.2 Hand Control

- The electric functions of the bed are activated by the user and by the carer with the use of the hand control.
- The electric motors work if the corresponding buttons are pressed.
- It is possible to adjust different sections in both directions.
- The hand control can be attached to the bed where needed with a hook.
- The spiral cable allows freedom of movement.

### 4.2.1 Hand Control Use



#### **Backrest adjustment**

When the bed is in use these buttons are used to change the angle of the backrest.



#### **Leg support adjustment**

When the bed is in use these buttons are used to change the angle of the leg support (knee break).



#### **Backrest and leg support combined adjustment (Auto-Contour)**

When the bed is in use these buttons are used to change the angle of the backrest and the angle of the leg support simultaneously.



#### **Height adjustment of the mattress base**

When the bed is in use these buttons are used to change the height of the mattress base. When the height is adjusted there is an automatic horizontal positioning of the mattress base in the highest/lowest position.



#### **Angle adjustment of feet – head section (Trendelenburg Tilt)**

When the bed is in use these buttons can be used to lower the foot or head section independently. When the height is adjusted there is

an automatic horizontal adjustment of the mattress base if lowered at the feet in the highest position and/or in the lowest one.

Before lowering either section, you need to release the brake of the two castors on the head or foot panel end, to avoid possible damage to the floor.



**Trendelenburg Tilt** is when the foot end is raised higher than the head end. This is a potentially dangerous position for some users. Trendelenburg Tilt should only be used if appropriate medical advice has been obtained or if you are sure this position is safe for the user.

**Nurse Lock-Out** Each pair of buttons on the handset can be individually locked out to prevent unwanted operation. Using the blue key provided with the handset you can turn the central lock to either UNLOCKED (12 o'clock position) or LOCKED (1 o'clock position).

## 4.3 Swivel Castors

The Icon Active/Lite bed has four swiveling castors which can be locked individually.



- Bring the mattress base into its lowest position.
- Before each operation of the bed, make sure the power cable is not stretched, crushed or damaged in any way.



**How to apply the brake:** Press the rocker lever down with your foot until it clicks.

**How to release the brake:** Press the rocker lever up with your foot until it clicks

## 4.4 Lifting Pole (optional)

In both corners of the mattress base, towards the head panel, there is a round insert with a cavity into which the lifting pole must be placed. The lifting pole must be inserted in the side from where the user gets in or out of the bed to help him/her out. Only use the manufacturers lifting pole design for this bed.

### Assembly

- Place the lifting pole fully and securely into the cavity housing. The metal pin must be placed into the cavity. Make sure that there can be no rotational movement of the lifting pole.

### Disassembly

- Remove the lifting pole from its housing by pulling it upwards.

### Height adjustment of the handle

- The height of the lifting pole handle can be adjusted with the strap supplied.

## 4.5 Bed Lever (Additional Accessory)

The Apex Medical Limited bed lever can be installed to aid the bed user move from a lying to a sitting and to a standing position

### Fitting

The bed lever can be fitted to either side of the bed frame where required. Secure the bed lever by unscrewing the hand screws and fitting the brackets over the frame. Fully tighten the hand screws when the lever is located correctly. The top of the bracket must be flush with the top of the bed frame with no movement possible up or along the frame.

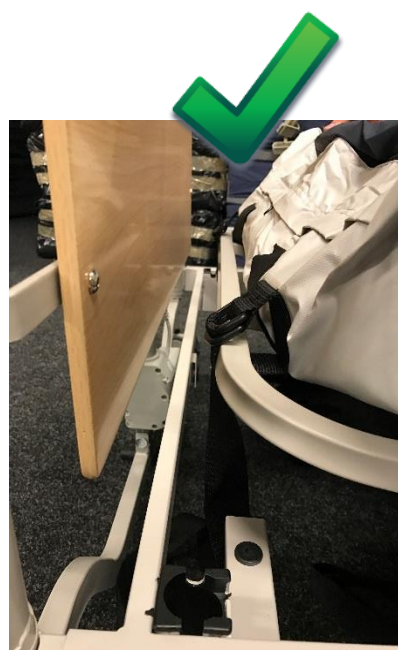


**The Apex bed lever is designed to not restrict any moving part of the bed including the backrest and knee break mattress platform. Do not install any third party bed lever as it may restrict the moving parts of the bed, especially the backrest mattress platform.**

## 4.6 Dynamic Mattress

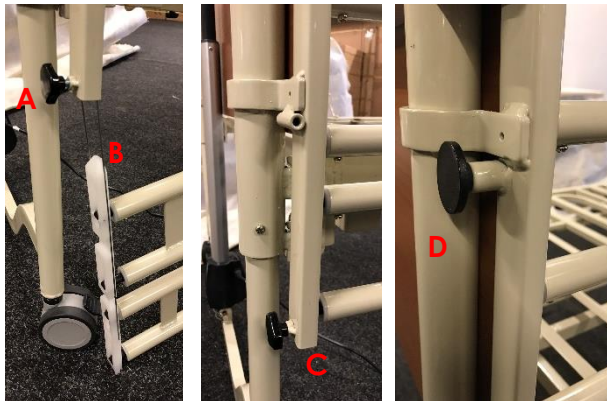
Apex Medical Limited can supply a number of dynamic mattresses for use with the bed if required by the user. There are various ways in which the dynamic mattresses can be secured to the bed to stop it moving or slipping when the mattress platform is profiled but it is essential that in doing so, the movement of the mattress platform is not restricted in any way.

The example below shown in the images is of a dynamic mattress that utilises webbing straps in order to secure the mattress to the bed. The image on the right is the correct way where the straps are only secured to the moving part of the bed, namely the backrest mattress platform. The image on the left shown the incorrect way where the straps have also been secured around the non-moving frame of the bed.



## 4.7 Bed Rails (if applicable)

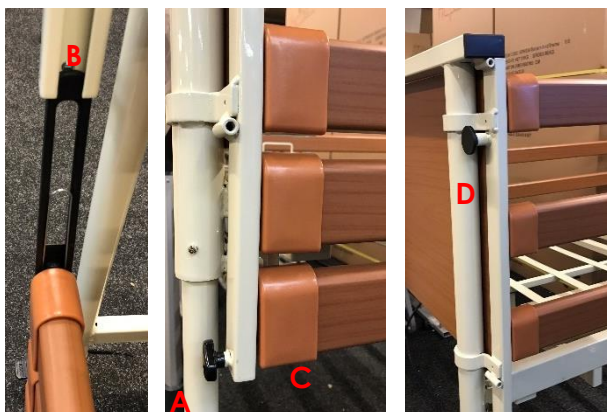
### Fitting of 4-Bar Steel Rails



- Unscrew the small thumb turn **A** at the bottom of each side of both ends of the bed.
- Insert the slider into the bottom end of the side rail tracks with the metal loop **B** pointing upwards.
- When the rail slider is completely lifted above the knob **A**, tighten the knob **A** securely to prevent the rails dropping out **C**.
- To raise the bars pull them up until they click past the release button **D** at the top of each runner.
- To lower the rails, lift the rail slightly and pull out the release button **D** and lower the rails.

### Fitting of 3-Bar Aluminium Rails

- The fitting of the optional 3-bar aluminium rails is similar to the 4-bar steel rails although you need to use the different end caps and sliders provided in the bed frame carton.



- Unscrew the small knob **A** at the bottom of each side of both ends of the bed.
- Insert the slider into the bottom end of the side rail track with the plastic loop **B** pointing upwards.
- When the rail slider is completely lifted above the knob **A**, tighten the knob **A** securely to prevent the rails dropping out **C**.
- Repeat this at the other end of the bed.
- To raise the bars pull them up until they click past the release button **D** at the top of each runner.
- To lower the rails, lift the rail slightly and pull out the release button **D** and lower the rails.



### Special safety rules for the bed rails.

The bed rails should be used to prevent users from possible accidental falls from the bed. However, they cannot prevent the user from voluntarily leaving the bed. To make the best use of their intended protection function, please

observe the following precautions:

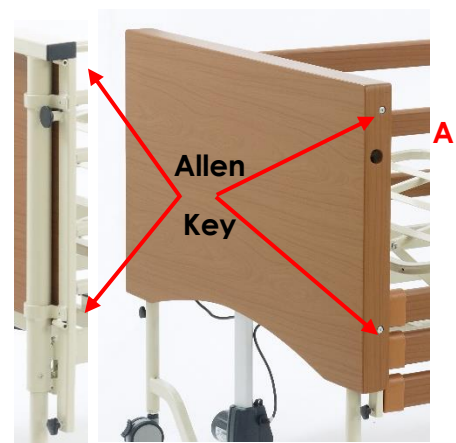
- **IMPORTANT:** Before lowering the bed side rails you **MUST** ensure that no body parts or wires/pipes will be entrapped in doing so.
- Use only undamaged and good condition bed rails positioned at the right distance with the rails locked into place properly.
- Make sure to use only the Apex original bed rails supplied with the bed.
- When using a bed with bed rails you must always verify if they are suitable for each individual user. In particular, it is necessary to pay attention to the distance between the bars in relation to the users' body build. For example, if they are very thin, it could be necessary to use some padding or pads around the bed rails (optional). Only in this way will it be safe to use the bed without the risk of the user being entrapped or falling out.
- The mechanical elements which attach the bed and the rails should be checked regularly to make sure there are no signs of damage. This must be done not only before applying the bed rails, but also during use within short intervals and before any new use.
- When raising or lowering the bed rails always make sure to lock the backrest and leg functions with the hand control to protect the users from any accidental electric movements (risk of involuntarily crushing the users limbs).

Failure to comply with the above safety rules could endanger the user with the potential for the user being caught in the bed rails or falling out of the bed.

## 4.8 Bed End Panel Covers (If applicable)

This bed can be fitted with optional wooden bed end panel covers. These can be easily fitted to both the head and foot ends using the 4 Allen key bolts (provided with the panels). Simply place the end panel on the bed end and insert the bolts and tighten all 4 of the bolts using an Allen key.

The side rail release button can be accessed through the hole in the end panel on each side **A**





## 5.0 CLEANING AND DISINFECTING

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### 5.1 General Information

Cleaning is fundamental as well as a proper chemical disinfection. In general, regular cleaning of the bed when used by a single user is sufficient in terms of hygiene. It is necessary to disinfect the bed frame only in case of a visible contamination with contagious or potentially contagious materials (ex. blood, urine etc.) or in case of a contagious disease upon request by the physician.

**Every time the bed is used by a new user, it is mandatory to first clean and then disinfect the bed by scrubbing thoroughly!**



#### **Before you start cleaning:**

- Remove the plug from the socket and make sure it does not come into contact with water or disinfectant.
- Make sure all plugs are properly connected.
- None of the electric components must be externally damaged to avoid the penetration of water or disinfectant liquids which might lead to malfunctioning or damages to the electric components.
- Before using the bed again, by drying or blowing in the power plug, make sure there is no residual moisture left in the electrical contacts.
- The electric components must not be subjected to a water jet, a high pressure cleaner or anything similar! Cleaning should be done with a damp cloth!
- If you suspect that water or moisture have entered into the electric components, immediately remove the power plug from the socket outlet and do not plug it in again. Mark clearly the bed with a "Faulty" sign and make sure it cannot be used. Inform immediately the owner of the bed about the problem.
- In case of non-compliance with these safety rules, it is not possible to exclude the risk of serious damages to the bed with related consequences!

## 5.2 Detergents and Disinfectants

Make sure to follow the recommendations listed below to maintain the bed functionality as long as possible:

- All surfaces must be intact and any damages must be immediately eliminated.
- We recommend using a method of disinfection (wet) by scrubbing. The detergent should not be aggressive (not harmful for the skin and for surfaces) and it must be ecological. In general you can use a household detergent.
- To clean and disinfect the painted metal parts use a damp cloth with a common non aggressive mild household detergent.
- The disinfectant for scrubbing the bed must be chosen from among those recommended (in the indicated concentration).
- Despite the mechanical strength of the bed it is necessary to remove any scratches and dents in the paint with special repair kits in order to prevent moisture penetration.



**Never use abrasive clearing products and stainless steel cleaners containing solvents or clearing pads, to avoid damaging the bed surface.**

**Note – Aldehyde-based disinfectants normally cover a wide action range and are ecological. However, they are potentially allergenic and irritating. Glucoprotamina preparations do not present this problem and are very effective even though in most cases they are quite expensive. Disinfectants based on chlorine splitting compounds can have a corrosive effect on metals, plastics, rubber or other materials in case of a prolonged contact or in high concentrations. In addition, these products can be irritating for mucous membranes and do not have a great environmental resistance.**

### 5.2.1 How to use disinfectants

- You must only use the correct concentration! We recommend using automatic dispensers.
- Prepare the solution always with cold water to prevent the build-up of vapours which might be irritating for mucous membranes.
- Wear gloves to avoid any direct contact with the skin.

- Do not store the disinfectant solutions in open bottles or containers. Make sure to always close them!
- Use bottles with pump dispensers to wet the cleaning cloth.
- Ventilate the room after the disinfection.
- Carry out the disinfection by scrubbing and not by spraying the disinfectant in a large quantitative with the risk of being inhaled.
- This is why rubbing plays an important role.
- Do not use alcohol for large surfaces.

## 5.3 Cleaning and Disinfection Program

- Remove the sheets from the bed to be washed.
- Clean all surfaces including the mattress platform, the plastic inserts and cables with a mild non aggressive detergent, including the hand control.
- The bed should be disinfected by scrubbing using a disinfectant recommended for hospital use especially in case of visible contamination with contagious or potentially infectious material. The same as applicable to beds in intensive care or infectious diseases units.
- It is necessary to disinfect the castors only in case of visible contamination with infectious or potentially infectious material.

**Note: A continuous disinfection is necessary only in case of users with multi-resistant pathogens within a hospital**

## 5.4 Training of Users and Specialised Personnel

To ensure a proper cleaning and disinfecting procedure, we recommend you to appropriately train all users and specialised personnel involved. The following points must be respected:

- Make sure the bed does not get soiled or contaminated during transport to the users house.
- In case of disassembly of the bed, it is necessary to immediately clean and disinfect it by scrubbing. The personnel must be informed about the correct cleaning and disinfecting procedure and carry out his/her necessary treatment properly (according to the steps of the procedure notified by the owner). The disinfectant used must be suitable for the treated surface.
- For this operation the specialised personnel shall be provided with waterproof disposable gloves and aprons.
- For the treatment only clean cloths should be used which must then be taken to be washed.
- After the treatment the personnel should disinfect their hands before leaving the place to go somewhere else. The qualified personnel must be equipped with a disinfectant with dispenser.

Cleaning of the bed directly on site has the advantage that the bed and/or none of its parts can get "soiled" when then transported in the same vehicle with other clean beds. It prevents potentially infectious germs located in the bed frame from spreading around. These recommendations will help to prevent nosocomial infections. If the beds are not immediately reused, they should be stored away with a cover to protect from dust and accidental contamination.

## 6.0 MAINTENANCE

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### Regulations

The owner of the Icon Active/Lite bed, in accordance with the applicable regulations in force, are requested to guarantee the safety conditions of the medical products during their use. To achieve this, it is therefore necessary to regularly carry out inspections and maintenance interventions.

## Notes for the owner

This bed was manufactured to function properly for a long period of time. When used correctly, it can be operated for around 2 to 8 years depending on the conditions and frequency of its use.



**After repeated operations of transport, assembly, disassembly, improper and long-term use it is not possible to exclude that any damages, faults, wear and tear problems might occur. These problems may cause safety risks if not recognized and solved in time!**

Therefore it is necessary both for the owner and the user to follow the safety norms for medical devices with the implementation of regular inspections to verify the correct functioning of the bed.

**Inform the user that it is mandatory to carry out these controls.**

## 6.1 By the User/Carer/Supplier

In addition to regular checks by the specialised staff, even the normal carers (such as nurses, assistants, carers etc.) must perform both a visual and a functional inspection before each new use at regular intervals.

Recommendation: check all mechanical and electrical components once a month. In addition check the power cord and the hand control cable after each mechanical stress and after each change of position.

See the checklist below.

### Checklist for the user

Control		ok	not ok	Problem description
<b>Visual inspection of electrical components</b>				
Hand control cable	Possible damages, cable connection			

Power cord	Possible damages, cable connection			
Hand control	Possible damages			
<b>Visual inspection of mechanical components</b>				
Lifting pole and its housings	Possible damages, deformations			
Bed frame	Possible damages, deformations			
Metal mattress platform	Possible damages, chips			
Wooden head and foot parts	Possible damages, wooden chips			
Mattress base	Possible damages, deformations			
<b>Functional control of electrical components</b>				
Hand control	Test to check if it works properly			
<b>Functional control of mechanical components</b>				
Castors	Test the brakes, moving forwards			
Emergency descent of the backrest	Test according to the instructions			
Knee raiser	Mechanism and attachment			
Accessories	Fixing, possible damages			
Inspector's signature:	Control result:			Date:



If you think that there might be damage or a functional problem, the bed must not be used at all and it must be disconnected from the power supply until the damaged components have been totally replaced or repaired! To replace or repair damaged parts, please contact the supplier of the bed.

## 6.2 By the User

The supplier/carer of this Icon Active/Lite bed is required to carry out regular tests in case of any new installation, any maintenance service and during the normal use operations to ensure the safety of this bed.

These tests must be verified during the regular maintenance services depending on use conditions.

The functional tests, the evaluations, the documentation of the inspection results must be carried out only by the experienced personnel who know the proper way and conditions necessary to implement correct testing.

The evaluation and the documentation of the results can be performed only by skilled electricians with additional medical and technical knowledge.

The controls must be carried out according to the sequence below:

- Visual inspections
- Electrical measurements
- Functional tests

### Frequency of the inspections

As a benchmark, we recommend an examination every six months can be extended in accordance with the terms of use on its own responsibility respecting a share of proven error of 2% to a maximum of two years.



**If you think that there might be a damage or a functional problem, the bed must not be used at all and it must be immediately disconnected from the power supply until the damaged components have been totally replaced or repaired!**

The pages below can be used as an inspection protocol.

### Sheet 1 of 2

Client/ Medical Centre/ Surgery:			
Address:			
Task carried out: Testing of the bed/ Testing before the first use of the bed			
Testing after repair / maintenance			
Device type: Care/Community Bed	Protection class: I		
Bed type:	Inventory number:		
Place:	Serial number:		
Manufacturer: Apex Medical Limited	Parts used: none		
Equipment used [Type/ number of inventory]:	1.		
Classification according MPG: class I	2		
I. Visual inspection	ok	not ok	Problem description
Visual inspection of electrical components			
Identification labels and stickers	In place and clearly readable		

Housing of the control device	Properly positioned, damages			
Housing and lifting tubes of the motors	Properly positioned, damages			
Hand control	Damages			
Power cable of the motors, hand control cable	Properly positioned, damages			
Connector and clamp of the controller	Properly positioned			
<b>Visual inspection of mechanical components</b>				
Identification labels and stickers	In place and clearly readable			
Lifting Pole	Damages, deformations			
Bed frame	Damages, deformations			
Wooden slats	Damages, wooden chips			
Wheels	Damages			
Mattress base	Damages, deformations			
Wooden panels	Damages, wooden chips			
Welding	Welding problems			
Knobs	Correct fixing			
Worn out parts, eg. hinged points	Damages			
<b>II. Electrical measurement in accordance with VDE 0751-1:2001-10 (power from the device, direct )</b>				
Proceed as follows:		ok	not ok	Problem description
1. Insert the power cord of the bed into the testing outlet of the measuring device.				
2. Connect the probe of the measuring device to a free conductor element of the frame (such as a screw or similar).				
3. Activate the motors with the hand control for the duration of the measurements				
4. Start the measurement procedure with the appropriate device.				
	Limit Value	Value of the first measurement	Current actual value	
Result: bed SK II (type B)	0,1 ma	ma	ma	



Protocol system for testing electrical medical devices Sheet 2 to 2

III. Functional control		ok	not ok	Problem description
<b>Functional control of electrical components</b>				
End stroke of the motors	Automatic disconnection			
Controller and motors	Unusual noises			
Controller and motors	Test according to use instructions			
Strain relief cord	Connecting cable properly fixed			
<b>Functional control of the mechanical components</b>				
Hinged and pivot points	Working smoothly			
casters	Brakes, moving forwards			
Knee raiser	Hinge point			
Accessories (ex. Trapeze bar, handle)	Mounting, damages, suitability			
Inspection result:				
All values within the allowed range:    yes    no		Next inspection date:		
The test was passed:            yes    no				
If the test not passed:				
Mark test applied:            yes    no				
This inspection protocol included:				
Notes:				
Tested on:	Examiner:	Signature:		
Evaluated on:	Owner /staff:	Signature:		

## 6.3 Spare Parts

Replacement parts are available From Apex Medical Limited by indicating the item number, order number and serial number. The necessary information can be obtained from the identification label placed on the bed.

Model	Bed model
Type	Article number
Series	Serial number

## 6.4 Manufacturer's Address

To obtain functionality and warranty, replacements should only be the original spare parts from Apex Medical Limited.

To order spare parts, for any requests or assistance and for further information please contact:

Apex Medical Limited ,  
Unit 33 Great Western Business Park  
McKenzie Way  
Worcester  
United Kingdom  
Tel: +44 (0)1905 774695  
Email: [sales@apexmedicalcorp.co.uk](mailto:sales@apexmedicalcorp.co.uk)  
Web: [www.apexmedicalcorp.com](http://www.apexmedicalcorp.com)

## 6.5 Electrical Components Replacement



- Dangerous for your life, life threat, due to electric shock!
- Before starting any operations remove the plug from the wall outlet!
- Any electrical equipment operations must be carried out only by qualified service and repair staff members, by the producer or by qualified and licensed Electricians, in accordance with VDE and relevant safety standards!



- Disassemble the operating system only in the horizontal position to avoid the danger of being crushed by any elements falling from the mattress base. The drive components are maintenance free and cannot be opened. In case of malfunction, the component in question must be completely replaced!

## 7.0 ELIMINATING DEFECTS

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Should any anomalies occur during use, it is necessary to contact the suppliers qualified personnel trained for the maintenance and repair of the bed.

The user shall in no case try to eliminate any malfunctions that might occur in the electrical equipment!



- Dangerous for your life, life threat, due to electric shock!
- Any interventions to the electrical equipment must be carried out only by qualified service and repair staff members, by the producer or by qualified and licensed electricians, in accordance with VDE and relevant safety standards!

## Possible solutions

The following table is useful to eliminate possible problems and faults:

• Problem	• Possible causes	• Solution
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>• The hand control and / or the operating system does not work</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>• Power cord not connected</li> <li>• Plug not under voltage</li> <li>• Hand control plug not properly connected</li> <li>• Faulty parts</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>• Insert the power cord</li> <li>• Check the socket / the fuse box</li> <li>• Check all connections</li> <li>• Inform the owner and ask for repairs</li> </ul>
<ul style="list-style-type: none"> <li>• Pressing the keys, the movements are activated only for a short time</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Too much weight on the bed</li> <li>• The bed hits against an obstacle</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Reduce the load</li> <li>• Remove the obstacle</li> </ul>
<ul style="list-style-type: none"> <li>•</li> <li>• Movement in one direction only</li> </ul>	<ul style="list-style-type: none"> <li>• Defective hand control or operating console</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Inform the supplier and ask for repairs</li> </ul>
<ul style="list-style-type: none"> <li>• Function in contrast with the instruction on the hand control</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Reversed motor connectors</li> </ul>	<ul style="list-style-type: none"> <li>• Inform the Manufacturer and ask for repairs</li> </ul>
<ul style="list-style-type: none"> <li>•</li> <li>• The movements stop immediately after a longer adjustment time</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Activation of the circuit breaker in the transformer</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Put in a rest position and let the system cool down for about 20 to 30 minutes</li> </ul>

## 8.0 TECHNICAL DATA

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### 8.1 Size and Weight

**Bed fitted with rails:**

	Icon Active/Lite
Mattress base	89 x 202 cm
Overall dimensions	100 x 216 cm (235cm)
Weight capacity	180 kg

## 8.2 Electric Data

### Operating device (Main Control Unit):

Type	Linak CA4 Series Control Unit
Input voltage	AC 230 V + 10%, 50/60 Hz
Classification	Class II

### Hand control:

Type	Linak (10 button) with individual lock-outs
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### Electric motors for height adjustment of the mattress base and backrest and footrest:

Type	Linak LA27 Series Linear Actuators
SpeedatMaxload - Minimum/Average(mm/s)	4.5/5.5

## 8.3 Environmental Conditions

### Noise during adjustments: max. 48 dB(A)

The following environmental conditions must be respected:

### Storage:

	Minimum	Maximum
Storage temperature:	+ 5° C	+ 50° C
Relative humidity:	50 %	70 %

### Functioning:

	Minimum	Maximum
Environmental temperature	+ 10° C	+ 40° C
Relative humidity:	20 %	90 % (without condensation)
Air pressure:	700 hPa	1060 hPa

## 8.4 Norms and Applied Guidelines

Directive CE 93/ 42	Medical Devices Directive
VDE 0751-1:2001-10	Safety verification for electrical devices
EN 12182:1999-11	Technical aids for disabled persons
DIN 32977-1:1992-07	Appropriate design for disabled persons
EN 14971: 2001	Application of risk management to medical devices
DIN EN 1970 : 2005-10	Adjustable beds for disabled persons
EN 60601-1: 1996-03	Safety of electrical medical equipment
EN 60601-1-2:2002-10	Electromagnetic compatibility
DIN EN 60601-2-38/A1: 2001	Nursing beds electrically controlled (if required)

Classification as class I medical product (according to MPG § 13)

## 9.0 WARRANTY

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The beds have a 3 year warranty period for any production faults from their purchase date. Keep the purchase receipt. In particular, the guarantee of the beds will NOT cover:

- Damages due to improper use by the user
- Damaged or ruined parts due to wear and tear or due to excessive exposure to sunlight
- Damages caused by loss or spillage of liquids
- Damages from collisions or impacts against walls, furniture etc
- Tears and accidental damages, cigarette or open flames burns etc

### Warranty Terms

- The warranty is not transferable
- Repairs must be carried out by an authorised dealer
- Any repairs or alterations made by someone other than the dealer will void the warranty; The warranty of any replaced components will have the same expiry date of the original warranty;

### The warranty will be void in the following cases:

- Damages caused by lack of maintenance
- Damages caused by incorrect maintenance
- Modifications or repairs carried out by someone other than the dealer
- Modifications or repairs with parts not original

If the device has problems, please contact your local authorised dealer and give all the information necessary to identify the defect and the type of repair. The manufacturer reserves the right to change weights, measures or other technical data contained in this manual without notice. The information contained in this manual is approximate.

## 10.0 DECLARATION OF CONFORMITY

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The Company,

**Apex Medical Limited ,**

Declares that

The articles which it sells, called **Icon Active/Lite** and related accessories, are classified as Class I non-invasive Medical Devices according to Medical Directive 93/42/EEC and to national law no. 46/97 and comply with the European Directive on CE marking; in addition

- they are not measuring instruments;
- they are not intended for clinical investigations;
- they are sold in non-sterile packaging;

The above mentioned devices meet with the essential requirements and provisions of Directive 93/42/EEC.

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McKenzie Way

Worcester

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