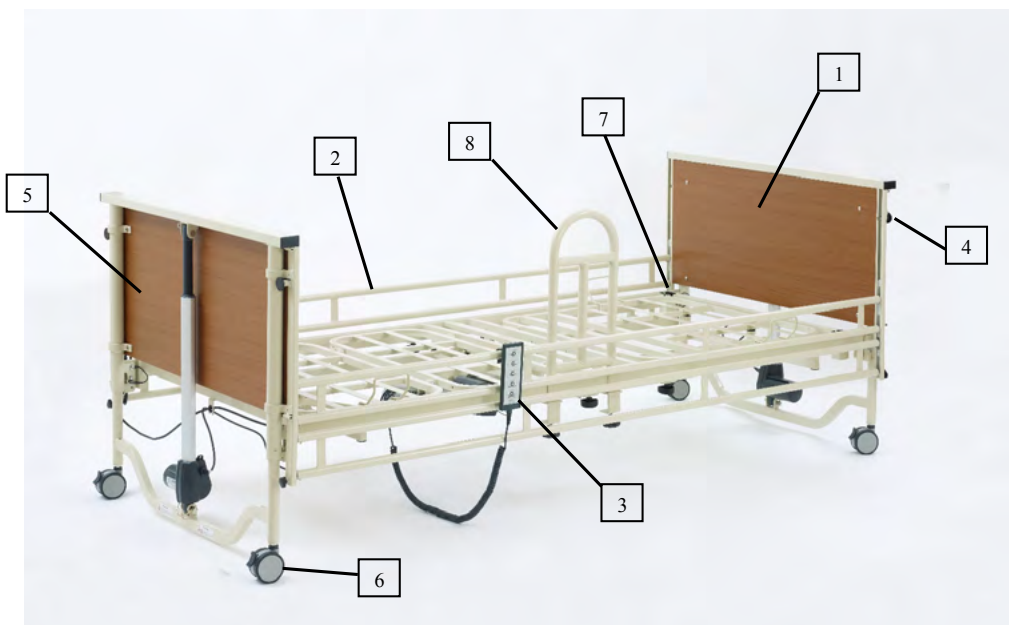


CONVERTISS STANDARD PLUS



MANUFACTURING STEEL
MAXIMUM PATIENT WEIGHT : 135 kg
CLASS 1 MEDICAL DEVICE

ALL OUR DEVICES COMPLY WITH NF EN ISO 60601-2-52: 2010



- 1- HEAD PANEL (available with or without wooden sleeve)
- 2- METAL 4-BAR BED RAILS (3 bar aluminium bed rails available)
- 3- HAND CONTROL
- 4- BED RAIL RELEASE LEVER
- 5- FOOT PANEL (available with or without wooden sleeve)
- 6- WHEELS WITH BRAKE
- 7- HOUSING FOR LIFTING POLE (on both sides)
- 8- BED LEVER (available accessory)

INDEX

INTRODUCTION	p.2
2. GENERAL INFORMATION	p.3
2.1 Groups of people mentioned in this manual	p.3
2.2 Safety warnings	p.3
2.2.1 Safety symbols used	p.3
2.2.2 Safety warnings for the owner	p.4
2.2.3 Safety instructions for the user	p.4
2.3 Product description	p.5
2.3.1 Proper use	p.5
2.3.2 Special features	p.5
2.3.3 Materials used	p.5
2.3.4 Frame	p.5
3. ASSEMBLY AND OPERATIONS	p.6
3.1 Assembly	p.6
3.1.1 Use of accessories	p.8
3.2 Operations	p.8
3.2.1 Requirements of the installation site	p.8
3.2.2 Operations	p.8
4. FUNCTIONING	p.9
4.1 Special safety warnings	p.9
4.2 Hand control	p.9
4.2.1 Hand control use	p.9
4.3 Swivel wheels	p.10
4.4 Lifting Pole	p.10
4.5 Bed Lever	p.11
4.6 Dynamic Mattress	p.11
4.7 Bed Rails	p.11
4.8 Bed End Panels	p.12
5. CLEANING AND DISINFECTING	p.13
5.1 General information	p.13
5.2 Cleaning and disinfection program	p.13
5.3 Training of users	p.13
5.4 Detergents and disinfectants	p.14
5.4.1 How to use disinfectants	p.14
6. MAINTENANCE	p.14
6.1 By the user	p.14
6.2 By the owner	p.16
6.3 Spare parts	p.19
6.4 Electrical components replacement	p.19
7. ELIMINATING DEFECTS	p.20
8. TECHNICAL DATA	p.21
8.1 Size and weight	p.21
8.2 Electrical data	p.21
8.3 Environmental conditions	p.21
9. LABELLING	p.22
10. WARRANTY	p.23

1. INTRODUCTION

Dear customer,

NAUSICAA Médical wishes to thank you for purchasing one of our nursing beds and for the trust shown in our products.

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

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

Therefore, we recommend you to use this manual as a handy guide and to keep it near your bed.

In the hope that for you and for the users of this nursing bed to succeed, we are confident that our product will greatly contribute to achieving this goal.

CONVERTISS NAUSICAA
Médical

2. GENERAL INFORMATION



Before using the bed:

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

Before using the nursing bed, the user must verify its perfect functional status and complete efficiency. 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 nursing bed correctly.
- Inform the user of where this manual will be kept.

2.1 GROUPS OF PEOPLE MENTIONED IN THIS MANUAL

The manual may refer to the following groups of people that are involved with installing, inspecting using, testing or repairing the bed:

• Owner

The owner (for example: suppliers of medical products, dealers, health care authorities, etc.) can be any physical person or judicial body which uses the nursing bed or under whose name the bed is being used. The owner is responsible for providing the necessary information to the user.

• User

The user is the person authorised to use the nursing 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 perform basic safety checks on the bed, and also be able to recognise and avoid potential hazards, as well as evaluating the condition of the patient.

• Patient

In this manual the term patient refers to the person who needs to be taken care of, who might be sick or disabled and therefore in need of using this bed.

• Specialised personnel

The term specialised personnel refers to the owners own technicians or personnel from the owners appointed company who are authorised, on the basis of their training or education, to deliver and assemble the bed.

2.2 SAFETY WARNINGS

The nursing bed is a high technology product therefore, all relevant personnel should read the complete manual when the bed is delivered. Make sure to use the nursing bed only if it is in a good and fully functioning condition. The aim of the safety warnings are to avoid injuries to the user or the patient.

2.2.1 SAFETY SYMBOLS USED

The following symbols appear in this manual:

Warnings against injuries



This symbol indicates the presence of dangerous power voltage which could jeopardise the user's life.



This symbol indicates the presence of hazards which might jeopardise the user's life or cause health problems.

Warnings against damages to property



This symbol indicates a potential damage to things or properties. Damages to the bed mechanism, to its materials or to the environment might occur.

2. GENERAL INFORMATION



This symbol indicates a general useful suggestion. 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 the information and warnings contained in 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 bed 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 patients, 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).

7

- 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 and safely.
- 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 relevant staff are aware and fully comply with the safety warnings.

2.2.3 SAFETY INSTRUCTIONS FOR THE USER

- Make sure the user is instructed on the safe use of the bed by the owner.
- Before each use check the good condition and the absence of defects in the nursing bed.
- Make sure there are no obstructions such as furniture or inclinations of the ceiling before and during making any bed position 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 is not able to 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 any malfunction, immediately disconnect the power plug from the wall, clearly mark it as "Damaged" and deactivate the nursing bed. Immediately inform the owner 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

- The power cord must be installed so that when operating the bed it cannot be disconnected, crushed or damaged by any of the moving parts of the bed.
- Before transport you must remove the electric power plug from the socket.
- When the bed is not used, make sure there is no possibility for the hand control to fall and become damaged (it must remain attached to the hook). Make sure the cable cannot be damaged by any moving parts of the nursing bed.
- Place the bed in the lowest position when you leave the patient unattended on the bed. In so doing, the risk of injuries to the patient when getting on and off the bed is minimised.
- 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.)
- Regularly check that the power cord assembly is properly tightened.

2. GENERAL INFORMATION

2.3 PRODUCT DESCRIPTION

2.3.1 PROPER USE

- The nursing bed, hereinafter simply called "bed", is designed for disabled or ill people and is suitable also for home care use.
- The bed was not specifically designed for hospital use.
- This bed can be used for treatment with a doctor's prescription and it can be used for diagnosis, care or observation of the patient.
- 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 adequately trained people.
- 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 must be used only according to the use conditions described in this manual. Any other use is not to be considered as correct or safe.

2.3.2 FEATURES

- Electric height adjustment of the bed surface from 24.5 to 64 cm.
- Electric backrest section adjustment from 0° to 72°.
- Electric leg section adjustment from 0° to 33°.
- Four swivel wheels, individually lockable.
- Mattress platform surface 198 x 88 cm.
- Overall dimensions approx. 213 x 100cm.
- Bed rails on both sides of the bed are able to drop down.

2.3.3 MATERIALS USED

The bed frame is mostly constructed from 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, with a surface is waterproof surface.

The surfaces are not harmful in contact with the skin.

2.3.4 FRAME

- The bed is supplied disassembled to be easily transported into the house. It is made up of two metal frames with wooden panel inserts (head panel and foot panel), a mattress base with a motor, a pantograph profiling mechanism with an electric motors, two 4-bar steel or two 3-bar aluminium bed rails, a lifting pole with grab bar (accessory NOT included with the bed) and bed lever (accessory NOT included with the bed). The bed has four swivel wheels, all with a parking brake.

• 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 patients from possible accidental falls from the bed, the bed is equipped with rails (meet clause 2019.8.3.3.3 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 be released only by pulling the lever out on the side (see No. 4 on Page 2)

• Electric system

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

- Electronic controller. 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 control 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 control unit with fixed hook.

3. ASSEMBLY AND OPERATION

- The bed is supplied disassembled.
- The bed is assembled on location by the retailer's personnel.
- The installation must be carried out by a minimum of one person.

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.

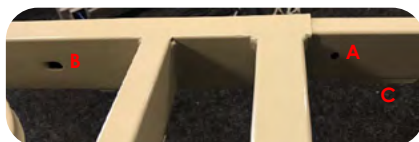
Carton 2: Bed ends (head and foot panels) each with a Hi-Lo actuator;

Carton 3: Two aluminium 3-bar side rails OR two metal 4-bar bed side rails and fingers.

Carton 4: Transport Kit.

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.



3. ASSEMBLY AND OPERATION



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 are not tangled and that they are not able to get caught in any in moving parts during use.



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 will the bed function properly.

3. ASSEMBLY AND OPERATION

3.1.1 USE OF ACCESSORIES

NAUSICAA Médical 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-NAUSICAA Medical 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 OPÉRATIONS

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

- the wheels 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 bedside furniture or chairs.
- all accessories used 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 carrying out the above operations should the bed be regarded as safe to use.

3.2.1 REQUIREMENTS OF THE INSTALLATION SITE

- Make sure there is enough space to safely 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 as near as possible to 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 minimise 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.
- Don't 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 under any circumstances.

3.2.2 OPERATIONS

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

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

4. FUNCTIONING

4.1 SPECIAL SAFETY WARNINGS



- When making the adjustments make sure that no parts of the body of any patients, users and other people, especially children, are positioned under any adjustable elements or under the bed frame to avoid being caught and injured.
- Once you have made the necessary adjustments and positioned the bed rails correctly, make sure to disable the backrest and leg adjustments functions with the hand control lock, to protect the patient 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 patient with sharp edges during the legs and backrest adjustments. If this condition is not guaranteed, the user 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 patient and by the user with a 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.
- Individual functions of the bed can be locked using the hand control.

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.

4. FUNCTIONING



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 wheels on the head or foot panel end, to avoid possible damages 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 patients. Trendelenburg Tilt should only be used if appropriate medical advice has been obtained or if you are sure this position is safe for the patient.

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 WHEELS

The nursing bed has four swivelling castors which can be blocked 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 (ADDITIONAL ACCESSORY)

In both corners of the mattress base, at the head panel end, 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 patient gets in or out of the bed to help him/her out.

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.

4. FUNCTIONING

4.5 BED LEVER (ADDITIONAL ACCESSORY)

The NAUSICAA Médical 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 Apollo bed lever is designed to not restrict any moving part of the bed including the side rails and backrest 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 (ADDITIONAL ACCESSORY)

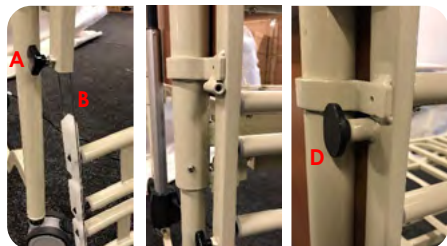
NAUSICAA Médical can supply a number of dynamic mattresses for use with the bed if required by the user. There are various ways in which the dynamic mattresses can be secured to the bed to stop it moving or slipping when the mattress platform is profiled but it is essential that in doing so, the movement 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

Fitting of 4-Bar Steel Rails



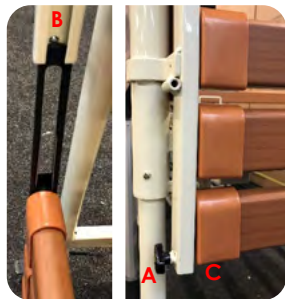
- Unscrew the small thumb turn **A** at the bottom of each side of both ends of the bed.
- Insert the slider into the bottom end of the side rail tracks with the metal loop **B** pointing upwards.
- When the rail slider is completely lifted above the knob **A**, tighten the knob **A** securely to prevent 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.

4. FUNCTIONING

- 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 patients from possible accidental falls from the bed. However, they cannot prevent the patient from voluntarily leaving the bed. To make the best use of their intended protection function, please observe the following precautions:

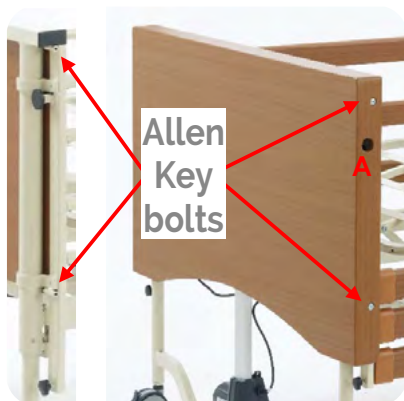
- **IMPORTANT:** Before Lowering the bed side rails you **MUST** ensure that no body parts or wires/pipes will be entrapped in doing so.
- Use only undamaged and good condition bed rails positioned at the right distance with the rails locked into place properly.
- Make sure to use only the Apollo original bed rails supplied with the bed.
- When using a bed with bed rails you must always verify if they are suitable for each individual patient. In particular, it is necessary to pay attention to the distance between the bars in relation to the patients' 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 patient 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 patient from any accidental electric movements (risk of involuntarily crushing the patient's limbs).

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

4.8 BED END PANEL COVERS (ADDITIONAL ACCESSORY)

The Proteus 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. CLEANING AND DISINFECTING

5.1 GENERAL INFORMATION

Cleaning is fundamental practice as well as an appropriate chemical disinfection. In general, regular simple cleaning of the bed when used by a single patient 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, pus etc.) or in case of a contagious disease upon request by the physician.

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



Before you start cleaning:

- Remove the plug from the wall socket and make sure it does not come into contact with water or disinfectant.
- Make sure all of the plugs are properly connected and fully inserted into the beds electrical control box.

• Check that there is no damage to any of the electrical components 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, make sure there is no residual moisture left in the electrical contact by drying or blowing in the power plug.

• The electric components must not be subjected to the use of a water jet, a high pressure cleaner or anything similar! Cleaning must only be done with a damp cloth!

• If you suspect that water or moisture may 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 the owner of the bed about the problem immediately.

Non-compliance with all of these safety rules, could lead to serious damage to the bed!

5.2 CLEANING AND DISINFECTION PROGRAM

• Remove the sheets from the bed to be washed.

• Clean all surfaces including the mattress platform, the plastic inserts, the hand control and cables with a mild non aggressive detergent.

The bed should be disinfected by scrubbing using a disinfectant recommended for hospital use and especially in any case of visible contamination with contagious or potentially infectious material. The same protocols as used on beds in intensive care or infectious diseases units.

• It is necessary to disinfect the wheels only in case of visible contamination with infectious or potentially infectious material.

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

5.3 TRAINING OF USERS AND SPECIALISED PERSONNEL

To ensure a proper cleaning and disinfecting procedure, we recommend that you 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 patient's house.

• In case of disassembly of the bed, it is necessary to immediately clean and disinfect it by scrubbing. The personnel involved in this 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.

• Only clean cloths should be used for the treatment and these cloths must be taken to be washed.

• After the treatment the personnel involved should disinfect their hands before leaving the place to go somewhere else. The qualified personnel must be equipped with an appropriate 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 bed is not immediately reused, then it should be stored away with a cover to protect from dust and accidental contamination.

5. CLEANING AND DISINFECTING

5.4 DETERGENTS AND DISINFECTANTS

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

- All surfaces must be intact and any damages must be immediately rectified.
- 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 mild 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 for this procedure (and used 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 cleaning pads, to avoid damaging the bed surface.

5.4.1 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.

6. MAINTENANCE

Regulations

The owners of the nursing beds, 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 recognised and then rectified before re-use!

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 check.

6.1 By the user

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

6. MAINTENANCE

Checklist for the user

Control		ok	not ok	Problem description
Visual inspection of electrical components				
Hand control cable	Possible damages, cable connection			
Power cord	Possible damages, cable connection			
Hand control	Possible damages			
Visual inspection of mechanical components				
Lifting pole and its housings	Possible damages, deformations			
Bed frame	Possible damages, deformations			
Metal mattress platform	Possible damages, chips			
Wooden head and foot panels	Possible damages, wooden chips			
Mattress base	Possible damages, deformations			
Metal bed rail bars	Possible damages, chips			
Functional control of electrical components				
Hand control	Test to check if it works properly			
Functional control of mechanical components				
Casters	Test the brakes, moving forwards			
Emergency descent of the backrest	Test according to the instructions			
Bed rails	Locking and unlocking mechanisms			
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 immediately disconnected from the power supply. It must not be used again until the damaged components have been totally replaced or repaired!
- To replace or repair damaged parts, please contact the owner of the bed.

6. MAINTENANCE

6.2 By the owner

The owner of this nursing 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 experienced personnel who have the appropriate knowledge and in conditions necessary to implement the correct testing.
- The testing evaluation and the documentation of the results must only be performed only by skilled electricians with additional appropriate medical and technical knowledge.
- The test must be carried out according to the sequence below:

1. Visual inspections
2. Electrical measurements
3. Functional tests

Frequency of the inspections

As a benchmark, we recommend that a full examination is conducted at least every year. This can be extended to a maximum of two years in accordance with the terms of use on your own responsibility reflecting a proven fault rate in this time of 2%.



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.

Client/ Medical Centre/ Surgery:				
Address:				
Task carried out: <input type="checkbox"/> Testing of the bed <input type="checkbox"/> Testing before the first use of the bed				
<input type="checkbox"/> _____ <input type="checkbox"/> Testing after repair / maintenance				
Device type: <input type="checkbox"/> Nursing Bed		Protection class: <input type="checkbox"/> I		
Bed type:		Inventory number:		
Place:		Serial number:		
Manufacturer: <i>Apollo Healthcare Technologies Ltd.</i>		Parts used: <i>none</i>		
Equipment used (Type/ number of inventory): 1.				
Classification according MPG: <i>class I</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			

6. MAINTENANCE

Visual inspection of mechanical components					
Identification labels and stickers	In place and clearly readable				
Lifting Pole	Damages, deformations				
Bed frame	Damages, deformations				
Metal mattress platform	Damages, chips				
Wheels	Damages				
Mattress base	Damages, deformations				
Wooden panels	Damages, wooden chips				
Welding	Welding problems				
Bed rail bars	Damages, chips				
Knobs	Correct fixing				
Worn out parts, such as the hinged points	Damages				
II. Electrical measurement in accordance with VDE 0751-1:2001-10 (power from the device, direct)					
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		

6. MAINTENANCE

Protocol system for testing electrical medical devices Sheet 2 to 2

III. Functional control		ok	not ok	Problem description
Functional control of electrical components				
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			
Functional control of the mechanical components				
Hinged and pivot points	Working smoothly			
casters	Brakes, moving forwards			
Bed rails	Locking and unlocking mechanisms			
Knee raiser	Hinge point			
Accessories (ex. Trapeze bar, handle)	Mounting, damages, suitability			
Inspection result:				
All values within the allowed range: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> yes <input type="checkbox"/> no		Next inspection date:		
The test was passed: <input type="checkbox"/> <input type="checkbox"/> yes <input type="checkbox"/> no				
If the test was not passed: <input type="checkbox"/> <input type="checkbox"/> defective, do not use the bed! => Maintenance <input type="checkbox"/> defective, do not use the bed!! => Elimination <input type="checkbox"/> The bed does not meet the safety requirements				
Mark test applied: <input type="checkbox"/> yes <input type="checkbox"/> no				
This inspection protocol included:				
Notes:				
Tested on:	Examiner:	Signature:		
Evaluated on:	Owner/staff:	Signature:		

6. MAINTENANCE

6.3 Spare parts

Replacement parts are available From NAUSICAA Médical Ltd. 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

To obtain a proper functioning and warranty replacements it is necessary to use only original spare parts supplied by NAUSICAA Médical Ltd!

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

Lits, Verticalisateurs (Lève-Personnes/Releveur-Mobile) & Lève-Personnes Mobile
Téléphone : 04 66 71 71 80
Fax : 04 66 71 71 81
Mail : sav@nausicaa-medical.com

6.4 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. ELIMINATING DEFECTS

Should any anomalies occur during use, it is necessary to contact the owner's 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!

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

8. TECHNICAL DATA

8.1 Size and weight

Bed fitted with rails:

	Apollo – Proteus
Mattress base	88 x 198 cm (216cm)
Overall dimensions	100 x 213 cm
Weight capacity	180 kg

8.2 Electrical data

Operating device (Main Control Unit):

Type	Linak CA4 Series Control Unit
Input voltage	AC 230 V, $\pm 10\%$, 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
Minimum / Average speed at full load (mm/s)	4.5 / 5.5

8.3 Environmental conditions

Noise during adjustments: max. 48 dB(A)

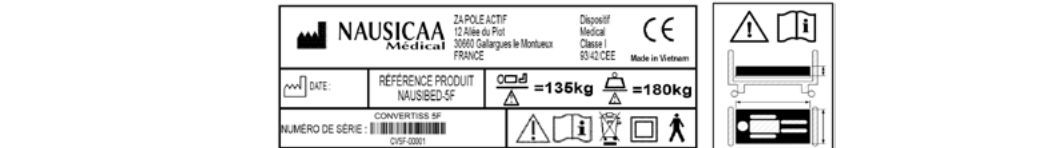
The following environmental conditions must be respected:

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



10. WARRANTY

• Article 1 : NAUSICAA Médical S.A.S. warrants this product against any defects in manufacturing and assembly of mechanical and electronic components. This warranty is for devices used only in accordance with NAUSICAA Médical S.A.S. terms of use.

The warranty covers all mechanical and electrical parts, except battery and breakage.

This warranty whose terms of use are defined below is valid for 60 months from the date of first departure from NAUSICAA Médical S.A.S.

• Article 2 : The warranty entitles the free labor and the free replacement of defective parts.

• Article 3 : The original out-going shipping costs of the device and all associated costs are the responsibility of the distributor. The goods always travel at the risk and the responsibility of the distributor.

Under warranty : return costs after intervention will be borne by NAUSICAA Médical S.A.S.

Out of warranty: return costs are at the expense of the distributor whether or not he accepts the repair estimate.

• Article 4 : The warranty does not apply if the claims are consecutive to:

- accident, misuse or neglect of the unit by the end customer.

- shipping performed without adequate protection.

- alteration or transformation not validated by NAUSICAA Médical S.A.S.

- the impact of external elements (natural disaster, fire, shock, humidity, flood, lightning, ...).

- installation and/or use in a non-compliant way with technical standards and safety (in case the unit would work in a country other than the country of origin) ; and/or if the electrical power is not suited for the operating voltage of the device.

- a lack of routine maintenance.

• Article 5 : The distributor may not invoke the benefit of the warranty:

- if the device serial number has been removed, altered or rendered illegible.

- if the device under warranty has been modified without the approval of NAUSICAA Médical S.A.S.

• Article 6 : During the repair of any defective equipment, no loan will be made.

• Article 7 : All warranty claims must be exercised through the distributor.

• Article 8 : Sending spare parts under warranty will be made after consultation with the distributor customer service.

• Article 9 : Defective parts changed under or out of warranty will be guaranteed for 6 months from the date of repair or sending of the spare parts.

• Article 10 : No distributor can unilaterally change the terms of this warranty.

NAUSICAA Médical

Service Commercial Siège
Téléphone : 04 66 51 50 80

Fax : 04 66 51 50 47

Mail : contact@nausicaa-medical.com
www.nausicaa-medical.com

Votre correspondant :

Manufacturing by NAUSICAA Médical S.A.S.



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