

USER'S MANUAL
AND TECHNICAL DESCRIPTION
NANO – CARE COT



REV. 05-2017

Dear Customer:

We would like to thank you for your trust in our products. We believe that you will be satisfied with your decision during the whole life of this product. Our hospital cots stand out for their high quality and reliability, as well as for their useful value, thanks to the use of carefully selected materials, state-of-the-art manufacturing techniques and the expertise of our skilled staff.

INTRODUCTION

Its purpose is to accommodate children with illness, disability or convalescence.

The way for accommodation, adjustment, treatment, transport, handling of the patient and / or the performance of other secondary functions will be different depending on the model and variants of the product. Thus, at list one third or more people will be required, in the case that the patient has reduced functional capacity. Its use does not require any skill or special training. It is intended to be used in hospital environments.

This product complies with the requirements established by Directive 93/42/EEC on medical devices. The manufacturing has been carried out in accordance with the Quality Management System implemented in the organization in accordance with EN ISO 9001:2000 standard.

Therefore, it is very important that the manual was accessible to the user throughout the life time of the cot.

WARNINGS



- Medisa shall not be liable for any damage, injury or accident caused by a misuse, carelessness or negligence.
- Safety and use instructions must be strictly be fulfilled.

The manufacturer reserves the right to modify this manual due to product upgrades or technical changes. The information provided in this manual may be slightly different with respect to the basic design of the product.

DELIVERY.

The Nano models are delivered fully assembled, except for their optional accessories. These accessories should be placed before use as it is explained in chapter *Headboard and Footboard*. On delivery note a remark must be done specifying that the delivery has been complete. **Any failure or damage must be dully reported to the transport Agent and to Medisa (consult *Contact* chapter) by writing before accepting the order.**

To move the cot during loading and delivery, be sure that it is unbraked (consult *Central brake system* chapter). The wheels of the cot have been designed for inner areas and for the transport in levelled, clean and stable floors (ceramic, linoleum, plaster floors, etc.) Wheels could be damaged if the cot is moved through rugged and unclean surfaces.

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SAFETY INSTRUCTIONS.

- Before using this cot, the staff must be familiarized with this user manual and the operations defined therein. All operations must be carried out as defined in this manual.
- In the event of any defect which may jeopardize the patient or user security or may damage the cot or the building contents, remove the cot and do not use it until the defect is corrected.
- In order to ensure the correct operation of the cot, it must be operated only by those who have been properly trained or those having enough experience.
- Before use, the user has the obligation to be sure that the cot works correctly and that there is no damage.
- This cot must only be used on clean, hard, flat surfaces and according to the established conditions on *Use conditions* section.
- During transport inside Hospital, side rails must be placed in their upper position.
- When a patient is lying on the cot, the braking system must be locked (except for transporting the cot); this will eliminate any risk when the patient stands up or moves.
- Select cot height according to patient needs. No one else could be sitting on the cot.
- When adjusting the sections of cot, check that there is no risk of trapping for the patient, other people or the accessories.
- In case that there are accessories fixed to the cot (IV pole, lifting pole, etc.) check that they have enough room to move together with the cot to avoid shocking with other objects.
- During adjustment for Trendelenburg position, medical staff should pay attention to the distance between the lifting pole / IV pole (if used in the cradle) and the wall, and the objects placed in it or any other environment since there is a potential risk of collision and the subsequent damage to them.
- You must not use the crib in an environment where there is a risk of explosion or in the presence of flammable anaesthetics.
- For cot maintenance, use only original and suitable materials and components; otherwise Medisa will not be responsible for any damage or accidents that may arise.
- Only mattresses and accessories manufactured by Medisa should be used; in case of use of incompatible mattresses, the protective barriers could malfunction, placing the patient's safety at risk.
- The deterioration and wear of the moving components must be checked at least once a month.
- Undercarriage area must not be used as a storage place. If an object is placed in the space under the bed, it could cause damage to the cradle or objects by adjusting the height of the object.
- The crib should only be used on hard, flat and clean surfaces.
- The maximum safe working load of the crib should not be exceeded, even in short periods. The temperature and humidity ranges for the best operation of the cot are the following:

We recommend you to install the cot in a dry place, essentially, indoors.

ENVIRONMENT CONDITIONS.

The cot must be used in an inner environment in which:

- Room temperature ranges between **10° C** and **50° C**.
- Relative humidity varies between **40%** and **80%**.
- Atmospheric pressure varies between **700 hPa** and **1060 hPa**.



Under other conditions, consult us. The cot has been designed for medical purposes rooms.

ELECTRIC POWER SUPPLY

Power supply is designed to be connected to 100V, 120V o 230V networks and 50-60 Hz alternating current, so it can be used in different countries without any problem (specify it when the order is placed).

The design of the power supply includes the following safety systems

- **EOP system** (Electric overload protection): it protects the motor of overworking by current disconnection in case of overwork during adjustment.
- **EAS system** (electric protection against shortcuts): the power supply is designed in a way that terminals lead to a shortcut in the actuator when it is not working. This property gives the actuator a higher capacity of self-blocking. It has also a safety system that cuts the current supply and actuators stop when the maximum consumption achieves the limit value.
- Earthing cable with Class I protection to avoid derivations in patient or users who are in contact with the cot.
- The device has a slow-cut thermal fuse for protection against overloads, depending on the operating voltage.
- It allows to connect different optional accessories, such as a 24V (1.2 AH) external battery for the operation of the cot without connection to the power supply.

WARNING:

Under request, cots can be produced with electric parameters according to each country rules (different voltage, types of voltage, types of plugs, etc.)



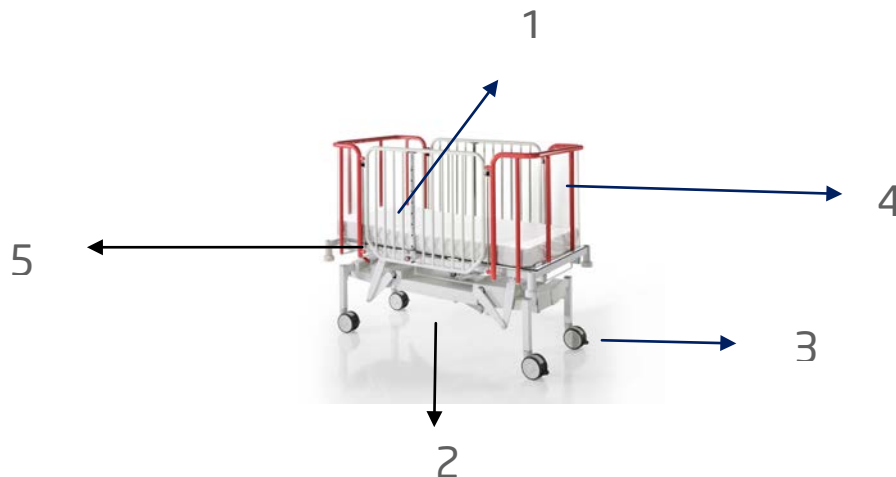
As the product receives power from the power supply, the most sensitive components could be affected by an emerging electromagnetic field. To avoid the maximum risk of this type of unwanted effects, the cot has been manufactured according to EN 60601-1-1 standard. The cot must be used in accordance with what is established in this manual to avoid such problems.

SPECIFICATIONS.

The different Equipment features and choices are described as follows:

Side rails:

- Steel vertical bars side rails (optional)
- Transparent plastic sheet side rails
- Electric height adjustment



1. Backrest adjustment
2. Height adjustment
3. Four integrated wheels of 120 mm of diameter .Central brake and steer
4. Headboard / Footboard
5. Set of side rails

INSTALATION AND COMMISSIONING OF THE COT

1. Remove packaging and destroy the material in an ecological way.
2. Check that everything is delivered according to the delivery note.
3. Read carefully this manual and keep it in a safe place.
4. If temperature is different during transport or storage, do not connect the cot to the power supply until unless 24 hours, to adapt it to the temperature conditions.
5. Install accessories.
6. Plug the cot to the power supply, including the connection to potentials adjustment (consult *Connection for potential adjustment*) and charge the battery (if it is included in the cot)
7. Check the following points
 - Backrest, Trendelemburg and height adjustments
 - Wheels locking system
 - Patient handset functions
 - Adjustment of side rails

CONNECTION TO THE POWER SUPPLY.

Power cable is a fix element in the cot. Plug it to the power supply.

CONNECTION FOR POTENTIAL ADJUSTMENT



Equipotential connector

As it is possible to place instruments that are intravascular or intracardiacally connected to patient, the cot includes a connection called "potential" that allows adjusting the potentials between the cot and those instruments. The mass connection designed for that purpose is placed under the headboard / footboard of the cot.

Note: The following label marks the position of the connection:



ADJUSTMENT OF THE BED.

The following movements can be done manually:

1. Backrest CPR position
2. Wheels steering and brake adjustment
3. Height adjustment of side rails

STANDARD MOVEMENTS.

All positions can be fixed following the next procedure. Maintain pressed the **selected** function to achieve the desired position.

Patient handset



Backrest adjustment

Matress height adjustment

TRENDELEMBURG/REVERSE
TRENDELEMBURG

Leds of handset locking

HANDSET LOCKING

All functions of the handset can be blocked to avoid the adjustment of the cot by unauthorized persons. For that, the handset is provided with a magnetic black key. By sliding this key over the padlock drawing, the handset can be locked or unlocked. The green led light shows that the handset is operative. If the light is off, functions are locked:



HEIGHT ADJUSTMENT OF MATTRESS



Mattress height adjustment system

The different horizontal positions are accomplished by the lineal actuator through handset. To adjust height just press the button previously described until reaching the desired height.



When height of the mattress is adjusted, it may exist the risk to damage anyone or any object due to the ascending and descending movements of the columns. Before carrying out these operations, check that there are no objects on and under the lower frame which could impede the movement. It must also be taken into consideration to the space around IV and lifting pole and other accessories placed above the plane, which will move when height is adjusted

REVERSE TRENDELEMBURG POSITION



The different trendelenburg / reverse trendelenburg positions are accomplished by the lineal actuator through handset. To adjust it just press the button previously described until reaching the desired position.

BACKREST ADJUSTMENT

Backrest adjustment system



The different backrest positions are accomplished by the lineal actuator through handset. To adjust it just press the button previously described until reaching the desired position

CPR QUICK RELEASE OF BACKREST



The bed includes a manual mechanism to release the backrest in case of emergency (power failure, etc.). There is a bilateral red lever placed in the upper section of the backrest which allows the medical staff to drop the backrest manually.

Pull the lever, this will unlock the motor and the backrest should descend softly until the bed reaches the horizontal



Before adjusting CPR quick release system adjust the side rails into their lowest position. If it is not done, do not place the hand between the side rail and backrest to avoid damages.

While adjusting this system, the user should hold the backrest by grabbing the bow placed in the backrest.

SLIDING SIDE RAILS

To adjust side rails, hold the upper horizontal bar with one hand and **without releasing the side rail**, with the other hand pull out the handle placed in the middle part of the side rail (A). Maintain the red handle pulled out while the side rail is elevated or descended until the desired position. Release the handle making sure that the system fits in one of the holes of the vertical bar.



Do not release the side rail until it is placed in the desired position and the safety system is correctly placed. Otherwise, the side rail could descend suddenly and produce damages.

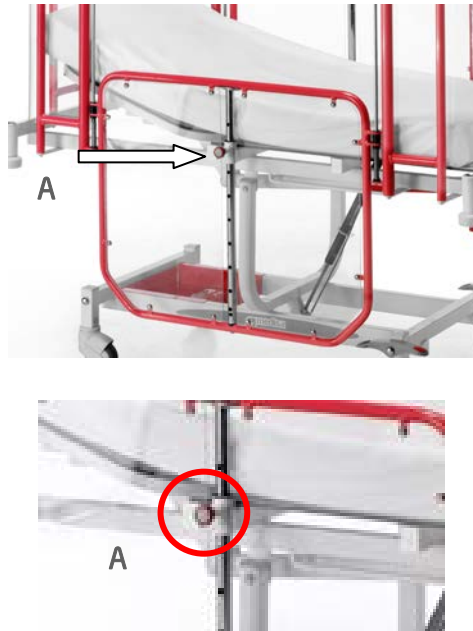
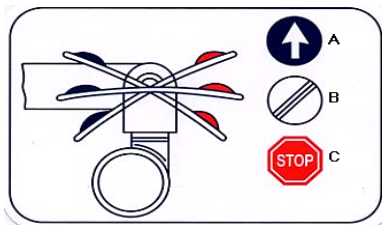


Fig. 3 Side rail height adjustment

CENTRAL BRAKING SYSTEM.

Before moving the cot, check previously the position of the levers on the castors: two symmetrical levers, one at each end of the lower frame, under footboard.



A – Steering mechanism: put your foot on the left or inner side of the lever (green colour) and push it down until it remains fixed in its new position (titled to the left). One of the front castors, meaning those closer to the back section, remains fixed in the longitudinal direction of the bed for an easier transfer of the same, by pushing it from the foot end. The steering feature is activated.

B – Neutral position: in order to place the lever in its neutral, horizontal position, press the corresponding side of it, either the left one (green) or the right one (red). In this way, every castor moves freely, which allows transferring the bed in all directions.

C – Central brake system: put your foot on the right or outer side of the lever (red colour) and push it down until it remains fixed in its new position (titled to the right). All four castors remain fixed and the bed is ready for hospital use.



Check that the central brake system is activated both when the bed stands by and during the installation and disassembling processes.

Accessories.



IV pole

Detachable and height adjustable (optional). Steel structure with epoxy coating. Place the end on any socket of each corner of the cot. Make sure that it is completely inserted and fixed.

CLEANING AND DISINFECTION

Medisa products reduce cleaning time up to a 30%. Smooth surfaces and detachable panels allow an easy and quick cleaning.

Basic instructions:



Use disinfectants designed for sanitary devices cleaning. The optimum PH for these products should be between 6 and 8. In any case:

Do not use basic or acid chemical products out of the optimal pH value range: 6-8.

Do not use abrasive cleaning material such as scourers, etc.

Do not use caustic or corrosive substances.



Do not use chemical substances which may affect the structure of the bed (acetone, toluene, gasoline, etc...).

Use a damp cloth to clean the bed and be careful with its electric components



Use a damp cloth to clean de bed and be careful with its electric components. Beds are not designed to be cleaned in automatic washing machines, or water pressure, shower or steam cleaning.

The manufacturer shall not be liable for the damages caused by the use of inappropriate detergents or disinfectants.

Medisa recommends the use of Ministry of Health authorized disinfectants.

Cleaning procedures

- Adjust the cot to its highest position, and place the mattress into sitting position to have easier access to the back for cleaning.
- Block the adjustment buttons, including pedals.
- Unplug the cot from the power supply.
- The cot should be cleaned in an adequate place for cleaning. Activate braking system of wheels.
- Proceed with cleaning and disinfection as much as needed.

Cleaning recommendations.

Cleaning recommendations	Surface
Daily cleaning	We recommend you to clean every day all those parts of the bed exposed to the effects of contamination, in particular, because of bare-hand contact and frequent use. Use a cloth with an appropriate cleaner or disinfectant to clean the sections of the bed. After each recovery period, it is essential to clean and disinfect the contaminated surfaces of the cot.
Cleaning to change the patient	The components of the bed laid down in paragraph 1 and in addition: <ul style="list-style-type: none"> - All bed covers, - The top side of the metal transport system, - The surface of the column system, - The mattress on all sides, - Metal components of the bed, - The area around the IV pole and lifting, - Shock Records, <ul style="list-style-type: none"> -- The wheels and levers Central braking system.
full cleaning and disinfection	All bed components set out in paragraphs 1 and 2, plus: <ul style="list-style-type: none"> - All internal components of the structure accessible. - Bottom of the bed.

PROBLEMS AND SOLUTIONS

Description of the problem	Cause	Solution
One control does not work; it's not possible to adjust height or sections.	The bed is not connected to the power supply	Check power supply
One control does not work; it's not possible to adjust height or sections though the bed is connected to the power supply .	The function is blocked on the nurse blocking facility	Check and unblock the movements

The bed vibrates		Call Technical service
Blocking system does not work		Call Technical service
Wheels do not brake	Brake system is worn	Change wheels (call Technical service)
Wheels don't turn correctly	Dirty wheels	Clean wheels



Do not try to repair the electric motors during malfunction!

Do not open the motor protection case or the protecting cover of the power supply!

STORAGE.

Recommendations to store the bed:

Remove the accessories.

Pack the bed and its accessories or protect them to prevent damages to their structure.

The storage conditions must be the same as those of the operative environment.

MAINTENANCE.

The cleaning and disinfecting activities may result into damages to the parts of the bed. Every **three months**, it is important to apply silica gel on the following parts:

- The joints between the side rails and the mattress
- Plastic sockets for headend and bed end
- Sockets for accessories (lifting pole, I. V. pole, etc....)
- The joints of the height and section adjustment mechanisms



After a period of twenty-four (24) months, the user must ask for preventive maintenance for the examination table to the manufacturer or the service authorized by the company. The responsible for maintenance will provide a list of the checks undertaken.



In the event of a major defect, do not use the bed but contact the manufacturer or distributor immediately.

DISPOSAL.



This bed is composed of metallic and plastic parts.

The disposal of this bed must be carried out by a specialized company.

ENVIRONMENTAL PROTECTION

Nano Care cot is manufactured with materials that do not damage the environment, since it **does not contain any dangerous substance, like cadmium, mercury, asbestos, PCB or CFC**. Moreover, the bed produces a notice according to Public Health standards.

The product contains recyclable steel, plastic and electronic components. At the moment the bed is discontinued, to reach an optimum recycling procedure, separate each element different from the rest, in order to re-use the raw materials of each component.

Consult :

- ❖ **CSN 77 0052-2 Packaging waste Part 2: Identification marking of packaging for subsequent packaging waste recovery**
- ❖ **CSN 77 0053 Packaging waste Instructions and information on way of disposal of used packaging**



The product may contain plumb accumulators (AKB) marked with this picture. Once its life ends, deliver them to an authorized company or return them to the manufacturer (transport costs are not included)



The product is not designed for destruction together with domestic residues



This product has been manufactured that complies with the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/CE.

This product may contain substances that could be harmful to the environment if disposed of in places (landfills) that are not appropriate according to legislation. Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

A correct destruction of this product will help to preserve natural resources and to avoid possible negatives effects on environment and human Health. Ask for details to proper authorities



WARNING: Sanctions may be imposed under national regulations if the destruction process is performed incorrectly.

GUARANTEE AND SERVICE

The manufacturer or the authorized service grants a guarantee which covers all their products for a period of two (2) years from the date of purchase.

During said guarantee period, any defect affecting the operation of the equipment due to faulty manufacture will be replaced free of charge. This guarantee covers the free replacement or repair of defective parts.

The manufacturer reserves the right to revise the product before repairing it in order to determine the nature and cause of the defect and whether it is covered by the guarantee.

This company shall not be liable for any damage or loss caused by the period during which the bed is out of service.

Duration

The guarantee period for all our products is two (2) years from the date of purchase. An original purchase invoice showing its exact date of issue must be submitted. No guarantee extension will be granted, under any circumstances, after the replacement of any part in accordance with the guarantee terms.

Exclusions

The guarantee does not cover the installation, start-up, cleaning, replacement or supply of any type of spare accessories. Moreover, this guarantee does not cover any damages caused by an Act of God or as a result of the following: improper installation, improper use, improper handling by technical assistance experts not expressly authorised by this company, proven miss use, bumps, drops, exposure to degradable environments, smoke, fire, neglect, improper maintenance and, in general, any external cause to the product itself. This guarantee covers neither the travel expenses nor the shipping costs. The manufacturer shall not be liable for any damage, injury or loss caused by misuse of the product.

Signs and symbols used



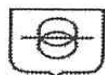
Transformer thermal protection.



Protection against electric shock accidents arising from type B -instrument



Warning in the instruction manual



Electromagnetic compatibility.



Instrument for indoor use.

IDENTIFICATION LABEL

All the beds are identified by means of a label placed on the lower frame, under the ABS housing. When you contact the manufacturer or distributor (claims, technical service, orders), provide them with the data included in the identification label:

The image shows a rectangular identification label with a dashed border. On the left is the 'medisa' logo. To its right is the company name 'MEDICAL IBÉRICA, S.A.' followed by the address 'C/ Lanzahita, 6 Pol. Ind. Albarreja', 'FUENLABRADA, C.P. 28946', 'MADRID (ESPAÑA)', and contact numbers 'TEL.: 91 208 94 00' and 'FAX.: 91 208 94 01'. A 'CE' mark is on the right. Below this information are three input fields: 'CODIGO:' with a single box, 'LOTE:' with two boxes, and 'MODELO:' with a long box. At the bottom right, it says 'FÁBRICA EN ESPAÑA'.

Contact.

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