Medical Parallel Transport Bed

Instruction Manual



Manufacturer/After-sales service: Xiamen Ciitto Medical Technology Co., Ltd.

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Contact: 0592-3357757

Life Span: 5 years

Version: V1.0

Preface

We sincerely thank you for choosing our Medical!

- To use the product safely and correctly, please read this manual thoroughly before operation.
- Please safely keep and take this manual along for reference if possible.
- If you spot confusion in some statements, please contact us immediately.

1 Safety Cautions

The warning symbols and legends shown in the instructions are for your reference to use the product safely and correctly, preventing potential harm; Warning symbols, legends and their meanings are listed as follows:

 PROHIBITION	PROHIBITION Means Forbidden with detailed items expressed in words or figures within or beside the mark. Left one means General Forbidden.
 MANDATORY	MANDATORY Represents enforcement (what must be obeyed). Specific mandatory content is expressed in words or figures within or beside the mark. Left one means General Mandatory.
 CAUTION BREAKAGE	CAUTION Means Caution with detailed items expressed in words or figures within or beside the mark. Left one means Caution Breakage.

WARNING

This product should be operated by professional medical staff who have received specialized training and are qualified. Please read this manual carefully before operation.
Do not use in a mixture of flammable anesthetic gas and air or a mixture of oxygen or nitrous oxide.
Do not use this product near heat sources (such as transformers), high temperatures, fire sources, or outdoor rainy days, otherwise it will damage the equipment.
Do not use insecticides, thinners or chemical liquids to clean the device, otherwise it may cause damage or corrosion to the surface of the device.
Do not place obstacles between the moving parts of the device. When the bed parts are moving, keep your body part away from the moving parts to avoid pinching.
Do not throw equipment and batteries into a fire, as this may cause an explosion.

Caution

Please avoid collisions with hard objects and do not disassemble or assemble it by yourself.	
Do not stamp, jump on the bed or use the bed with more than 1 person, in prevention of bed structure damage and personal injury.	
This product should be placed on a flat indoor floor.	
This product is suitable for transporting patients or people with limited mobility. Each time a single person uses it, the patient must lie flat on the bed (mobile telescoping board) in the middle effective range. Do not site on the device with two or more people. No other items can be carried.	
This product is equipped with casters. Please use the brake device of the casters to position the bed before performing other operations.	
The control handle should be kept clean and dry to avoid damage to electricity leakage. It must be hung up after use and not left in random. Do not take it apart at will.	
When moving, please loosen the brake and hang the control handle on the armrest. Do not step on the cables.	
Due to the heavy weight of this product, no less than two personnel should be in position during transport. When going past slopes (angle less than 6 degrees, the height of overpass less than 20mm), the manpower should be increased accordingly to prevent the equipment from being unable to control.	
In order to reduce the risk of patients falling when left unattended, handrails should be put on and the bed height should be adjusted to the lowest.	
When encountered with product malfunctions, please turn off the main power immediately.	
Please turn off the main power when not using the bed.	
It is recommended not to use the bed in a strong electric field environment.	
Please place the product in a dry environment.	
Internal power supply should be checked regularly and replaced if needed.	
If you are in need of component replacement, please contact the manufacturer. Do not use components otherwise acquired as they are not included in after-sales service.	
When encountered with malfunctions, please ask for professional maintenance.	
When the product or components reach the end of lifespan, do not discard. Please dispose the expired product or components under professional assistance.	
If needed, the manufacturer can provide necessary information for users.	
The EMC of this product requires special precautions, and its installation and use must comply with the requirements of the manual.	
Portable and mobile RF communication devices may affect this product.	
When charging, the operator should not touch the metal electrode part of the charger output head and personnel at the same time.	
Before use, please check if the bed can complete the height adjustment stroke without being stuck by wires.	
Please pay attention to the hand pinching parts, such as the lifting mechanism, to avoid	

injury.	
Non-professionals should not open the fuse base.	
Non-professionals should not replace the battery.	

2 Product Introduction

The Medical Parallel Transport Bed adopts the twin lifting frames in its main structure to transport patients with a retractable lying board aligned with another bed.

3 Intended Use

Used for transporting and moving patients in medical institutions.

4 Contraindication

N/A

5 Major Technical Parameters

5.1 Designated working conditions

1）Temperature: 5℃～40℃ (41℉～104℉)

2）Relative humidity: 30%～75%

3）Air pressure: 86kPa～106kPa

4）Power source:

Adapter input voltage: AC100-240V, 50/60Hz

Adapter output voltage: DC29V, 6A

Internal battery voltage: DC24V

Input power: 200VA

The time required for the battery to be fully charged:8h

5.2 Dimensions of wooden packaging box (length * width * height)

1）CM-ETB-2ND: 2320 * 910 * 840mm

2）CM-ETB-2NG: 2500 * 910 * 840mm

5.3 Dimension parameters:

No.	Item		Model	
			CM-ETB-2ND	CM-ETB-2NG
1	Transport bed	Length	2210mm±50mm	2390mm±50mm
		Width	800 mm±50mm	800 mm±50mm
		Height (overall)	750 mm-1150mm±50mm	750 mm-1150mm±50mm
		Height (board)	560mm-960mm±40mm	560mm-960mm±40mm
2	Lying Board	Length	1840 mm±50mm	2000 mm±50mm
		Width	700 mm±50mm	700 mm±50mm

5.4 Performance parameters:

No.	Item	Model	
		CM-ETB-2ND	CM-ETB-2NG
1	Retractable lying board parallel stroke	560mm±40mm	560mm±40mm
2	Lifting stroke	400mm±40mm	400mm±40mm
3	Self-descent (full load)	≤10mm/h	≤10mm/h
4	Maximum safe load	≤200kg	≤200kg
5	Noise	≤65dB	≤65dB

5.5 Safety features

Shock proof type: type Ⅱ, internal power source;

Degree of shock proof: type B application;

Classification according to the degree of safety for use with flammable anesthetic gases mixed with air/ oxygen/ nitrous oxide: non-AP/ APG type;

Working pattern: intermittent;

Power source: input voltage: AC100-240V, 50/60Hz. Internal voltage: DC24V;

Input power: 200VA;

Protection against defibrillation discharge effects: non-applicable;

Signal input and output: N/A;

Equipment installation: non-permanent;

6 Product Structure

【Main product structure】

The Medical Parallel Transport Bed mainly consists of a bed frame, lying board, lifting mechanism, translation mechanism, casters, guardrail (Type A and Type B optional), control device, control handle, braking device, battery, power adapter.

The main structure of the Medical Parallel Transport Bed is shown in Figure 1:

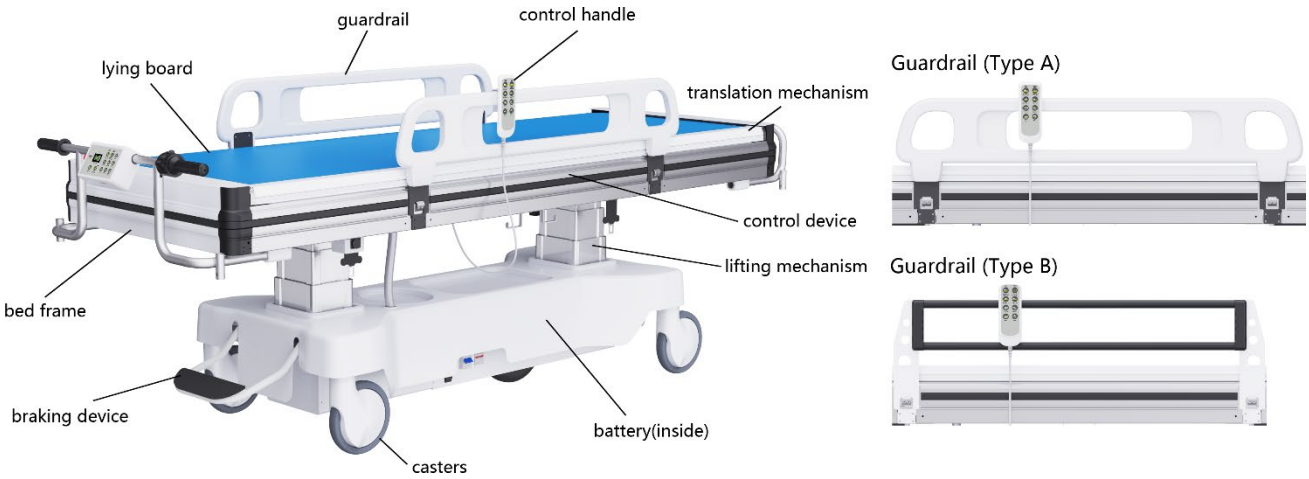


Figure 1 Main Structure

7 Functions

6 major functions of the Medical Parallel Transport Bed:

a) Height adjustment

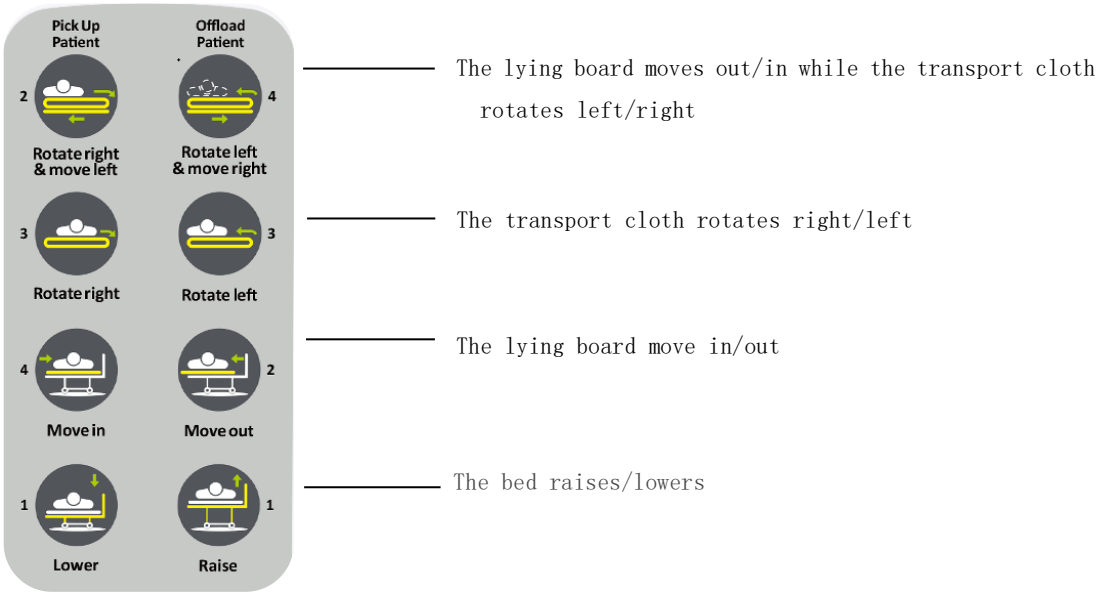
b) Retractable lying board

c) Transport cloth

d) Movable guardrails

e) Castor brakes

f) Electric power assistance



8 Installation and commissioning

The manufacturer is responsible for the installation and commissioning of the instructions for the use of the Medical Parallel Transport Bed before shipment, and the customer receives the goods and removes the packaging accessories, and puts it on a flat and safe ground. It can be turned on and used directly. Be sure to read the instructions carefully before use.

9 Accessory name and function

a) Casters: The casters are used for the movement of the Medical Parallel Transport Bed.

b) Transmission mechanism: It realizes the functions of lifting, moving in, moving out, and rotating the bed surface of the Medical Parallel Transport Bed, as well as the left and right rotation of the rotating cloth.

10 Instructions

- **Please read the instruction manual carefully before using this product**

1) Put the equipment in a flat and safe room, remove all packaging materials, and check if there is any accessory missing. If you have any problems, contact the manufacturer immediately. Do not disassemble the product without permission.

2) After confirming the intactness of the product, turn on the main switch (under the pedestal hood) as shown in Figure 2 to ON.

3) Hold the power button on the integrated console at the front handle, as shown in Figure 3. When the power display window lights up, the battery is activated to power the transport bed.

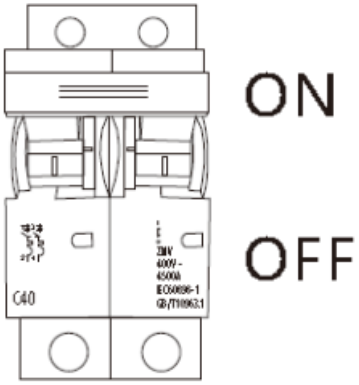


Figure 2 Main Switch

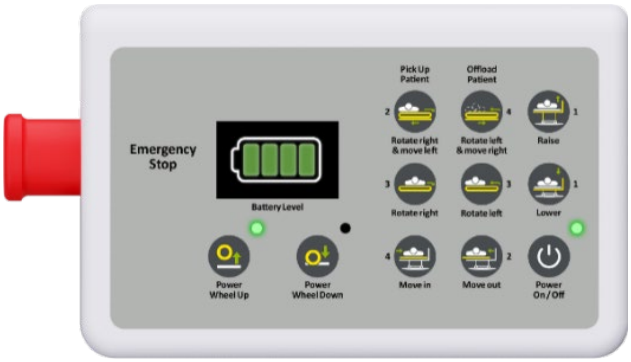


Figure 3 Integrated Console

4) Center Control Lever

At the headboard end of the bed (the side with control handle), step down the central control lever. When you hear a "click" sound, the four casters are self-locked at the same time, braking the transport bed.

To release the brake, lift the central control lever upward.

5) Electric Assisted Caster

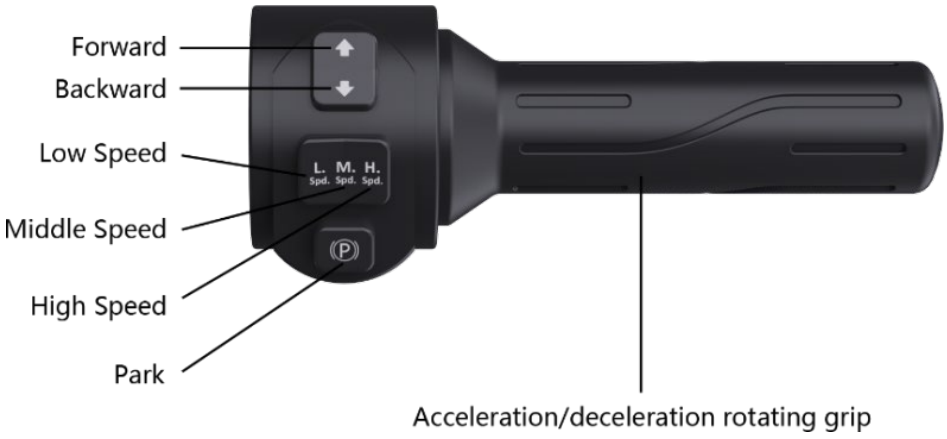


Figure 4 Acceleration/deceleration rotating grip

a: Enable/disable the caster

There is an integrated operation console on the lower left side of the acceleration and deceleration rotating grip of the transport bed (Figure 3). Hold the power button, and the power display will light up, indicating that the control system is turned on. Press “Wheel Down” button to lower the power wheel. When the indicator is lighted, the caster is enabled. Press “Wheel Up” button to lift the caster. Note that every time when the power is turned on, the castor will automatically return to the initial position by default.

b: Move forward with caster enabled

First, please confirm that the transport bed is unbraked and the caster is enabled, and the control system is in effect. Switch the "forward" mode on the speed control handle, and then rotate the handle counterclockwise to start the caster, providing energy to move forward. Releasing the handle stops the power in the caster. Please freely switch between low, medium and high power speed modes according to your actual needs.

c: Move backward with caster enabled

First, please confirm that the transport bed is unbraked and the caster is enabled, and the control system is in effect. Switch the "backward" mode on the speed control handle, and then rotate the handle counterclockwise to start the caster, providing energy to move backward. Releasing the handle stops the power in the caster. Please freely switch between low, medium and high power speed modes according to your actual needs.

d: Emergency brake

When it is necessary to stop the bed immediately during transport, release the handle in Figure 4, hold the park button "P" on the handle controller to stop the bed quickly.

Note: The park button can be used when going through slopes to decrease risk of accidents.

6) Operation instructions for transfer function

a) The transfer function is independently controlled by the handle controller or the buttons on the integrated control box panel.

b) After the battery is powered on to the whole machine, long press the "power switch" button in the control button of Figure 3. The power display screen will light up and the control system will take effect. At this time, the bed can be operated by pressing the button.

c) The left adjustment, right adjustment, sending out, connecting, moving in, and moving out functions of the transport bed must be operated effectively by first lowering the guardrail on the extended side of the lying board.

d) The height adjustment function only works when the lying board is in default position.

e) All operation buttons during the transfer process of the transport bed have a jog effect, and releasing them will stop the action.

Tips: One side of the retractable lying board has no metal bar. This side can detect the status of the guardrail.

f) Picking up and offloading patient functions

f.1) Calibration of transport bed and hospital bed height

Put down the guardrail on the side of the lying board. Use the "Raise" and "Lower" buttons on the control handle/integrated console to adjust the height of the transport bed's retractable lying board to a position slightly higher than the patient's bed surface by 1-2cm. Connect the transport bed seamlessly with the electric bed carrying the patient, step down the central control lever to the braking state, and control the assistance wheel to lift to the disabled state.

f.2) Transport patients to the transport bed

Hold "Rotate right & move left" to send the retractable lying board underneath the patient and transport to the transport bed. Hold "Rotate right" to adjust the position of the patient. Hold "Move in" to retrieve the lying board to the transport bed.

f.3) Transport patients from the transport bed

Hold "Move out" to extend the retractable lying board to the middle position of the hospital bed. Hold "Rotate left" to adjust the position of the

patient. Hold “Rotate left & move right” to fully transfer the patient from the retractable lying board to the hospital bed. The process of transferring the patient from the transport bed to the hospital bed is completed. Hold “Move in” to retrieve the lying board to the transport bed.

Caution:

1) The patient’s bed must be braked.

2) No acute objects are allowed.

3) The patient’s bed should be flat. The depression of surface slope should be no more than 2cm。

4) When transporting, the bed should be rid of gauze, tape and other objects to prevent them from damaging the lying board.

The buttons on the integrated console and control handle are shown below:

To prevent patient injury from falling and damage of the retractable lying board, the functions (Rotate left/right, rotate & turn right/left, move in/out) do NOT work unless: (1) The Medical Parallel Transport Bed is aligned with the bed; (2) The retractable lying board is slightly higher than the bed; (3) The guardrail on the adjacent side is lowered; (4) The brake is enabled.

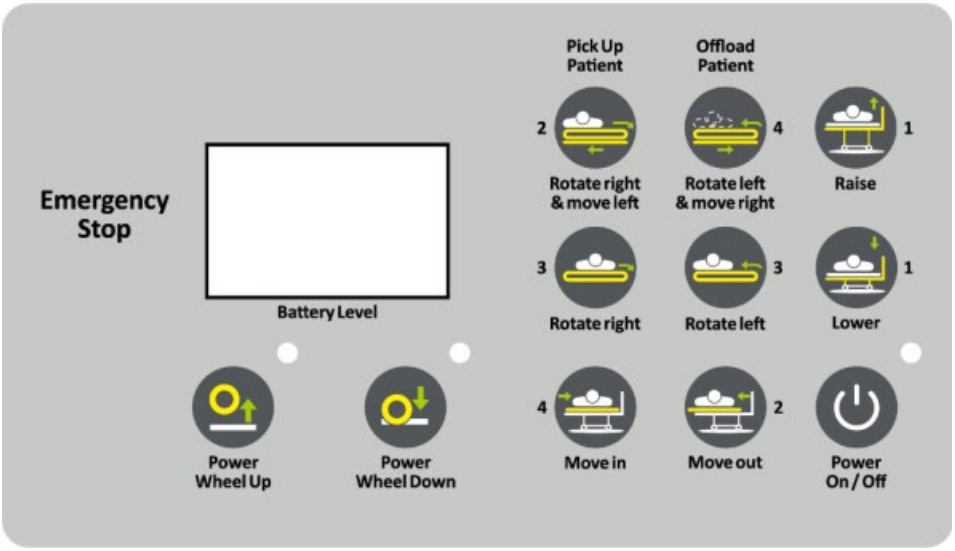


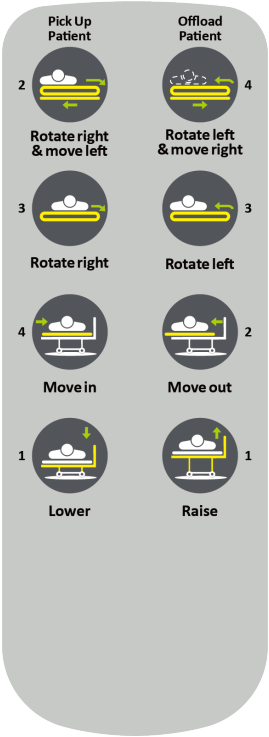
Figure 5 Integrated Console

The transport cloth rotates right while the lying board moves out to transport the patient to the bed.

The transport cloth rotates left to adjust the position of the patient.

The lying board moves in to transport the patient over the transport bed.

Lowers the height of the transport bed. (Only works when the lying board is in default position.



The transport cloth rotates left while the lying board moves in to transport the patient from the bed.

The transport cloth rotates left to adjust the position of the patient.

The lying board moves out to transport the patient over the bed.

Raises the height of the transport bed. (Only works when the lying board is in default position.

Figure 6 Control Handle

g) After use, adjust the equipment to the lowest position, retract the lying board, and press the power button on the handle to turn off the system. Place the transport bed in a safe place and enable the brakes to prevent unnecessary movement, so as not to cause damage to the bed.

11 Safety instructions for the battery

11.1 Using the battery

1) The storage battery is installed on the rear side of the base. On first use, please turn the power switch to “ON” (This status can remain. You can switch this status by pressing the power button on the integrated console). As on Figure 7, turn on the power by pushing the button on the integrated console. When operating, it is necessary to check the remaining power. If the battery shows only one grid left, please charge the battery timely to ensure normal use. The pedestal and the right side of transfer platform have charging sockets. The battery cycle life is not less than 360 full transports.

Warning: Do not use the product when charging.

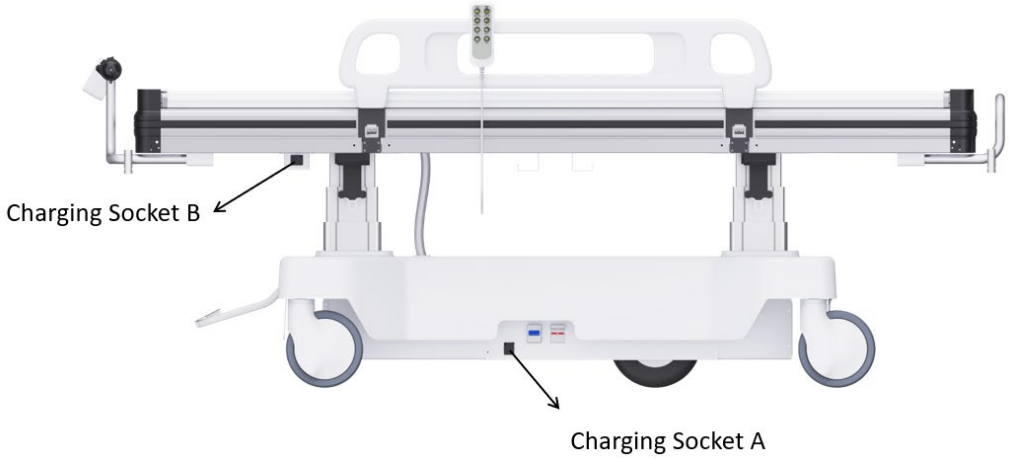


Figure 7 Charging Sockets

2) Working Temperature

Safe working temperature: 5-40℃ (41℉-104℉)

Internal battery (after discharge): -5-50℃ (23℉-122℉)

After charging: 0-40℃ (32℉-104℉)

Storage: -5-40℃ (23℉-104℉)

3) The transport bed is equipped with a dedicated charger, which meets the requirements of national standards. Please use the charger to charge in a well-ventilated room (be sure to turn off the main power when charging), and avoid being near heat sources (such as transformers), under high temperature, in direct sunlight, sparks, stoves or in front of fire, environment full of dust or moist, otherwise it will cause overheat, explosion, leak, burn or rupture.

11.2 Replacing the battery

If an additional battery box set and charger are configured, the battery pack can be quickly replaced to power the transfer bed. The replacement should be conducted by professional staff.

1) Battery replacement instructions: Unlock the swivel tongue lock on the battery box at the rear of the base, open the lid, pull the battery out manually until the three slide rails have reached the full distance. Unplug the connection terminal between the battery and the control system, hold the handles on both sides of the battery box with both hands. Lift the battery box out of the transfer car,

and install the new battery box in reverse as shown in Figure 8.



Figure 8 Battery Replacement

2) The replaced battery group should be charged in a safe environment as stated in 11.1.

12 Limit protection device

The Medical Parallel Transport Bed uses a 24V DC permanent magnet motor, which rotates to control the expansion of the bed panel and the overall rise and fall of the transfer cart. The rotation of the bed surface cloth, the telescopic distance of the movable telescopic lying board, and the height of ascending and descending are all controlled by limit switches to control the motor stroke. The transport bed adopts multiple safety protections, such as: handrail status detection, retractable lying board limit function, emergency stop button on the integrated console, etc. And its strength must be adapted to the expected function to ensure the safety of the patient.

13 Cleaning, disinfection, preventive inspection and maintenance

(1) Cleaning

After use, if there is no obvious stain, the bed can be wiped clean with a microfiber clean damp cloth.

(2) Disinfection

The parts in contact with the patient should be wiped 2 times (3 min each time)

with cotton cloth soaked with 75% ethanol. Air dry or wipe the residual disinfectant dry with a clean, dry cloth.

If the equipment is contaminated by the patient's blood or body fluids, apply 500mg/L chlorine-containing disinfectant to thoroughly and repeatedly wipe clean and disinfect the contaminated part of the equipment.

- Clean before disinfection
- Ethanol is flammable. Please avoid fire source during disinfection.
- People who are allergic to alcohol should use ethanol disinfectant with caution.
- Rubber products and plastic products will harden after prolonged contact with alcohol disinfectant, and the residual disinfectant should be removed in time after disinfection.
- Wear gloves when using chlorine-containing disinfectant to avoid contact with skin and inhalation of respiratory tract. If the disinfectant comes into contact with eyes, flush with water immediately. In severe cases, seek medical attention.
- The disinfectant use method and precautions should follow the corresponding product instructions.

(3) Preventive inspection

Preventive inspection must be carried out once a month, mainly to check whether the power plug and the handheld operator plug are loose, whether the fasteners are loose, especially whether the bolts connecting the lifting rod and the bed surface are loose.

(4) Maintenance

The equipment must be regularly maintained according to the after-sales maintenance guide.

(5) Battery maintenance

If the battery has not been used for a long time, to ensure its effectiveness, please charge and discharge the battery every 3 months and regularly check it. The battery should be replaced after one year of use.

Warning: Do not allow water or other liquids to enter the inside of the machine.

14 Normalized symbols

Symbol	Description
	Consult instructions for use
	Type II
	Type B applied part
	Non-domestic waste, please send to corresponding recycling station
	Batch number
	Safe working load
	Intermittent operation
	Fragile, handle with care
	Avoid sunlight
	Avoid rain
	No tumbling
	Temperature limit
	Humidity limit
	This side up

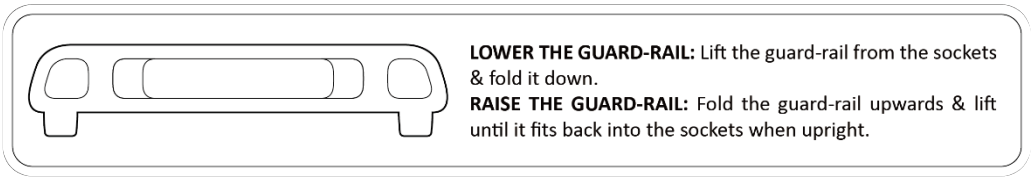


Figure 9 Guardrail(Type A) Label

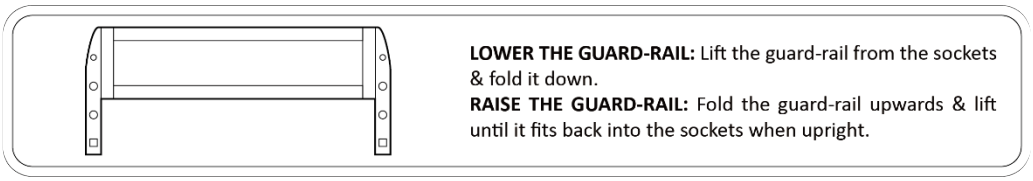


Figure 10 Guardrail(Type B) Label

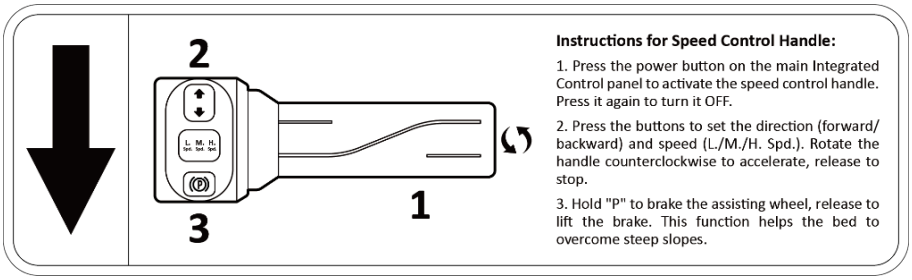


Figure 11 Handle Control Label

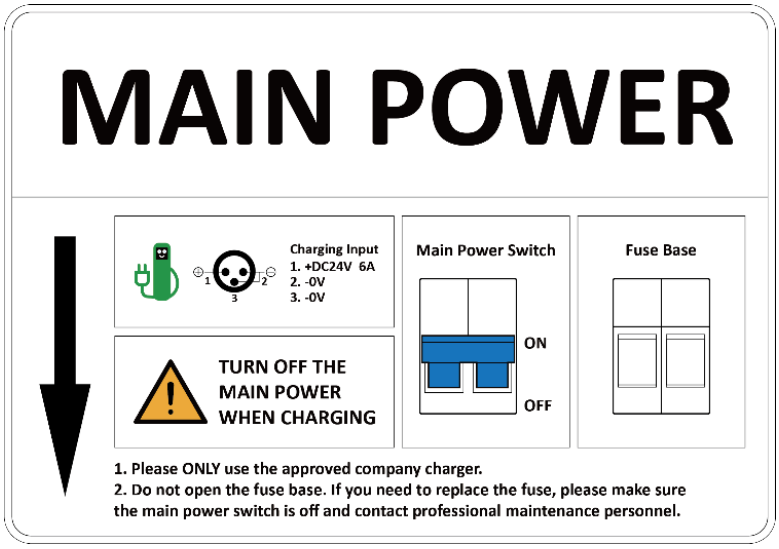


Figure 12 Power Label

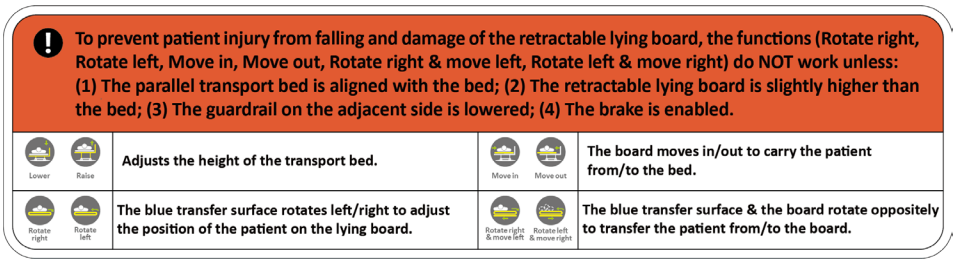


Figure 13 Transport Operation Label



Figure 14 Central Control Lever Label

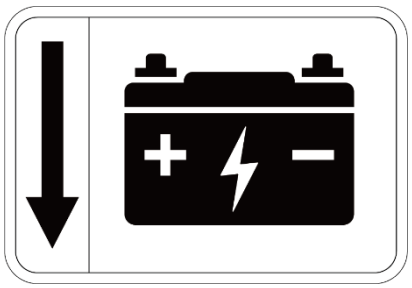


Figure 15 Battery Label

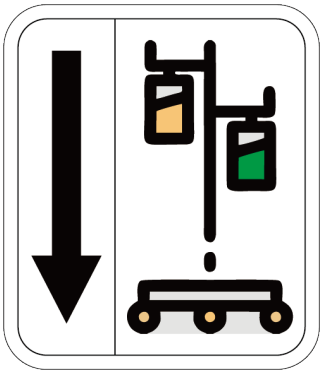


Figure 16 Infusion Stand Label

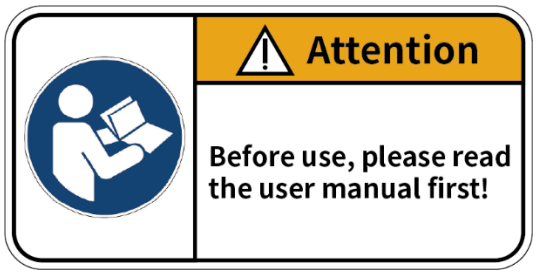


Figure 17 Consult Instructions Label

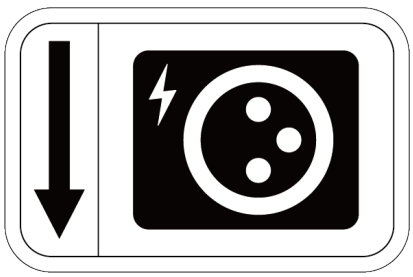


Figure 18 Charging Port Label

15 Replacement instructions for Medical Parallel Transport Bed parts

1）If the control handle fails during normal operation, please contact the professional personnel for replacement.

2）If the consumables of the rotating cloth on the bed surface are damaged, they will be replaced by the professional personnel.

3）The battery is also a consumable product, according to the actual situation of use, the professional staff of the manufacturer will arrange for replacement.

4）Check the appearance of castor regularly to see if they are damaged or cracked. If so, please contact the manufacturer in time to determine whether it needs to be replaced by professional technician.

5）During normal use, if the fuse is damaged, it should be replaced by professional personnel.

6）The Medical Parallel Transport Bed consists of a movable telescopic lying board, a rotating cloth on the bed surface, a lifting structure, a movable telescopic structure, a main controller, a bed frame, a chassis, a motor, a guardrail, a universal castor, a starting device system, a booster structure, and a brake system. The handle operating system must be preventively inspected and maintained by professionals.

16 Fault analysis and troubleshooting methods

Common malfunctions	Method of exclusion
The transport bed does not work	1、Check if the battery is charged 2、 Check if the main power switch is in the ON position
The control handle does not work	1、Check if the main power is on 2、Check if the battery is charged 3、Check if the connection wires of the operation panel are well connected

The control handle does not work or the buttons are malfunctioning	1、Check if the control handle is connected to the main control 2、Check if the light of the control handle is on 3、Check if the main power switch is in the ON position 4、Check if the battery is charged 5、If the previous 4 steps do not work, please replace the control handle
The electric assisted castor does not work	1、Check if the power wheel is in the lowered state 2、Check if the operation panel is turned on normally and the operation panel indicator light is on normally 3、Check if the main power switch is in the ON position 4、Check if the battery is charged 5、Check if the castor is damaged
The transport cloth is off track	Refer to the suggestions of after-sales maintenance personnel or perform a detailed manual push-pull reset operation description to prevent reverse operations and jams in the transfer cloth
The electric assisted castor cannot be raised or lowered	1、Check if the indicator lights on the control panel are functioning properly 2、If step 1 is normal, confirm if the emergency stop button is pressed (if the emergency stop button is pressed, the lifting function of the electric assisted castor will fail)

17 After-sales service

If you have any questions during use, please contact the company's after-sales staff for consultation in time.

【Except for the terms agreed upon in the contract, warranty matters shall not apply】

1）Sensory phenomenon which can be regarded to have no functional impact;

2）Discomfort caused by changes over a period of product lifetime (natural deterioration including painting surface, plating surface, etc.).

Warranty is not applicable in the following situations:

1）Failure to implement the manufacturer's designated regular inspection and maintenance;

2）Improper or wrong maintenance;

3）Usage not according to this manual (overloading, misuse, etc.);

4）Unauthorized modification without the permission of the manufacturer;

5）Natural disasters such as typhoons, floods, fires and earthquakes.

【Customer obligations】

1）Any operation should strictly follow the instructions in this manual;

2）Inspection and maintenance should be timely implemented according to the manufacturer's instructions.

18 Environmental conditions for product transportation and storage

1、During the transportation of the product, violent vibrations, direct exposure from sun or rain, and rolling should be avoided;

2、Storage temperature: -20℃～+50℃ (-4℉～+122℉);

3、Relative humidity: ≤95%;

4、Air pressure: 86kPa～106kPa.

19 Packing list

Only use original parts and check whether the received parts are complete.

Item	Quantity
Transport bed	1
Charger	1
Instruction Manual	1
Certificate	1

Certificate

Manufacturer: Xiamen Ciitto Medical Technology Co., Ltd.

Product Name: Medical Parallel Transport Bed Model: CM-ETB-XXX

Production Batch: _____

Inspection Date: _____ Inspector Code: _____