



## User Manual

### Alternating Bubble Pad & Pump System

**Model : TS-10B**



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## 1. Safety Criteria

CE EN60601,EN60601-1,EN 60601-1-2 , FCC Part 18-Class B



Type BF Applied part



Attention: consult Accompanying documents



Operating instructions



No AP/APG IPX0

Medical Device Classification: Class I

## 2. Warnings

The product is only intended to be used as an auxiliary device. The manufacturer does not have the absolute responsibility and obligation to guarantee its full effects.

### \* Power Unit:

- \* Do not open the power unit without guidance to prevent danger.
- \* Do not insert items into any opening of the power unit.
- \* Do not drop the power unit.
- \* Do not use the power unit in places exposed to water, liquids, oil, smoke, and flammable chemicals.
- \* Use fuses as marked: **T1A / 250V**.
- \* The product is contraindicated to anesthesia procedures and is only indicated for use by the user in normal conditions.
- \* This the power unit is **not** AP/APG protected.

### \* Bubble Pad:

- \* Prevent the patient from placing his/her head or neck between the bubble pad and the side rail.
- \* Do not use sharp or pointed objects since this will damage the bubble pad or use high temperature objects since this may accidentally destroy the bubble pad.
- \* Do not use the bubble pad in places exposed to water, liquids, oil, smoke, and

flammable chemicals.

- \* The product is contraindicated to anesthesia procedures and is only indicated for use by users in normal conditions.
- \* This the air mattress is **not** AP/APG protected.

### 3. Product Functions

**Purpose: The product is for the purpose of aiding the prevention of pressure ulcers and effective treatment of patients.**

Pressure ulcers are commonly known as bedsores. They occur when there is damage caused by pressure (or shear) or friction to the skin, or even the underlying tissues, muscles and bones. Pressure ulcers are a common problem of patients suffering from long-term physical immobility including those who are inflicted with spinal cord injury, bedridden for a long-term, not clearly conscious, inflicted with bladder or bowel incontinence, diabetes, skin fragility, physical weakness or malnutrition. It is an extremely complex task to treat pressure ulcers once they occur. In a minor case, the wounds take weeks to heal. In a severe case, sepsis, amputation or death may occur. This not only damages health, but also is a burden to and waste of medical resources. Using the bubble pad can aid the prevention of pressure ulcers and effective treatment of patients.

The bubble pad can be placed on the overlay of a standard medical bed. The bubble pad can be alternately inflated and deflated with two rows of coupled air hoses that are connected to the power unit and activated in the **Alternating Pressure Mode**.

- ◆ **Theory of Alternating Pressure Mode:** This process allows effective arrangement in a way that a single area of the body remains in a completely pressure free and lifted state for a fixed period. This allows body tissues to be temporarily relieved of pressure and blood to circulate smoothly around the tissues. This in turn heals, improves and prevents the occurrence of pressure ulcers.

### 4. Product Setup Contents

1. One the power unit
2. One the bubble pad
3. One the power cord
4. One the user manual
5. One the air hose



## 5. Product Features

### Enhanced Design Features of the Power Unit

1. For hanging, the safest iron material is used for hanging hooks and its withstanding ability is far higher than plastic material.
2. For shock absorption, the deflation pump inside is equipped with a specially designed suspension shock absorption system and a foot mat is provided outside the unit in order to reduce the shock when the unit is in contact with the patient's bed.
3. The compact size feature: The system is of a compact size, making it easy for placement and storage and taking into account the streamlined system appearance and practicality.
4. The cotton air filter is to be replaced outside. Therefore, the replacement can be done without opening the unit.
5. The use of the double external fuse holders allows the unit to provide better safety protection.
6. The specialized power management with an independent power cord and a master power switch on the side can better ensure safety.

## 6. Installation

Step 1: Place the bubble pad evenly on the overlay, and to fix it in the overlay to turn over the front & behind of the flat piece.

The end with a connector to the power unit is the feet end.

Step 2: Check if the securing position of the bubble pad is centered.

Step 3: Hang the power unit on the panel at the feet end.

Step 4: Connect the air hose at the feet end of the bubble pad to the air outlet of the main unit.

Step 5: Connector the power cord to the AC Inlet of the power unit.

Step 6: Plug the power cord of the power unit to a socket with power supply.

Step 7: Turn "ON" the power switch on the side of the power unit, and the green indicator turns on. Air starts to enter the bubble pad in a few seconds.

Step 8: Comfort Range "Knob" select 1 to 10, See" Power Unit Settings Contents"

Step 9: Please wait until all the air cells are inflated by at least 2/3 of their volume (approx. 20mmHg) or for 15 minutes before the user is allowed to lie on the bubble pad.

## 7. Power Unit Settings Contents



## Adjustment of the **comfort range**:

The adjustment range is based on the user's the bottom that **can't** contact with the overlay.

The softness and hardness of the bubble pad can be selected from the number 1 to 10, to provide users comfortable.

(Suggestion: Normal setting in" number 5", user weight limit: 30kg to 100kg)

## 8. Routine Maintenance and Cleaning

### **The Power Unit:**

1. Avoid using the unit when the air is poor. Do not smoke especially to prevent nicotine and greasy tar-like substance from entering the unit and resulting in the deterioration of internal pipes and the need for frequent replacement of the air cotton filter.
2. Thoroughly wipe down the dust or smear stuck on the exterior of the unit with a dry cloth and neutral detergent. it is recommended to clean the pump once a week.. (Caregivers must wear gloves and masks and protected with disinfection.)
3. An air purifier can also be used to maintain the air quality.
4. Replacement of the air cotton filter: it is recommended to replace the filter once a month. (Please purchase the filters from the dealer.)

### **The Bubble Pad:**

1. With a dry cloth and neutral detergent or the 70%~75% medical alcohol. Caregivers must wear gloves and masks and protected with disinfection.
3. To avoid the bubble pad be reused in next patient that hygienic control for the system will cause cross-infection.

## 9. Storage

### ★ **How to store the Power Unit**

1. **It is necessary to turn off the power switch in side panel , unplug the power cord.**
  2. Disconnect the power unit and the power cord; disconnect the power unit and the hose at the feet end of the mattress.
  3. Put the power unit and the power cord in the box and place in a dry place.
  4. When the power unit is put away and not in constant use, it is necessary to switch it on for 3 hours at regular intervals to lengthen its life.
- 5. Follow the national requirement to dispose the power unit**

### ★ **How to store the Bubble Pad**

1. Clean the bubble pad.(Caregivers must wear gloves and masks and protected with disinfection.)
2. Roll up the bubble pad and the air hose.
3. Place in a dry place.

## 10. Troubleshooting

Problem	Inspection Procedure	Possible Solution
1. Power unit does not operate.	1.1) Check if the two ends of the power cable are safely connected to the power unit and the socket.	1.1) Confirm if the wall socket has power supply.
	1.2) Check if the power switch on the side of the power unit is switched to "ON".	1.2) If not, switch to "ON".
	1.3) Check if the fuse has burnt out or not properly installed.	1.3) Turn off the power and check the fuse.
2. Power unit is working, but bubble pad is not inflating.	2.1) Check if air comes out of the power unit and if the connector is properly connected.	2.1) If the unit operates normally but no air comes out, it is possible that the power unit has something wrong inside and needs repair.
	2.2) Check if the bubble pad connector is bent or falls off.	2.3) Repair or replacement is needed if the connector is deformed and cannot be restored or the material is not in its normal state.
	2.3) Check if the air hose is damaged.	2.4) Repair or replacement is needed if the air hose is damaged.
	2.4) Check if the air cotton filter is heavily soiled and the air is blocked.	2.5) Replace the filter if it is heavily soiled.
3. Bottom in contact with the overlay	3.1) Check weight setting.	3.1) Increase weight setting.
	3.2) Check if air leaks from the mattress.	3.2) Replace the air cells if damaged.
	3.3) Check if the air cotton filter is heavily soiled and the air is blocked.	3.3) Replace the filter if it is heavily soiled.
4. Others	Problems other than the above.	Contact the local distributor for handling.

## 11. Technical Specifications

### The Power Unit Specification:

- ◆ Input : AC220-240V,50Hz (OR AC100-120V,60Hz )
- ◆ Power Consumption: 10W max
- ◆ Fuse Rating: T1AL/250V
- ◆ Weight: 1.3Kg (approx.)
- ◆ Dimension: L26cm\*W8cm\*H13cm
- ◆ Air flow rate: 3~8 liter/min
- ◆ Alternating cycle time 5-6 min/pre
- ◆ Class I , Type BF

### The Bubble Pad Specification:

Standard State:

- ◇ Material: 100% PVC
- ◇ Dimension: L200cm\*W90cm\*H5cm
- ◇ Weight: 2.5Kg (approx.)
- ◇ Air Hose Length: 150cm

### Temperature & Humidity Limited:

- △ Operating Temperature: 5°C to 45°C (41°F to 113°F)
- △ Transportation Temperature: -10°C to 45°C (14°F to 113°F)
- △ Transportation Humidity: 5% to 95%

### Storage Environment

- ☆ Storage Temperature: 5°C~ 45°C
- ☆ Storage Humidity: 10% to 80%

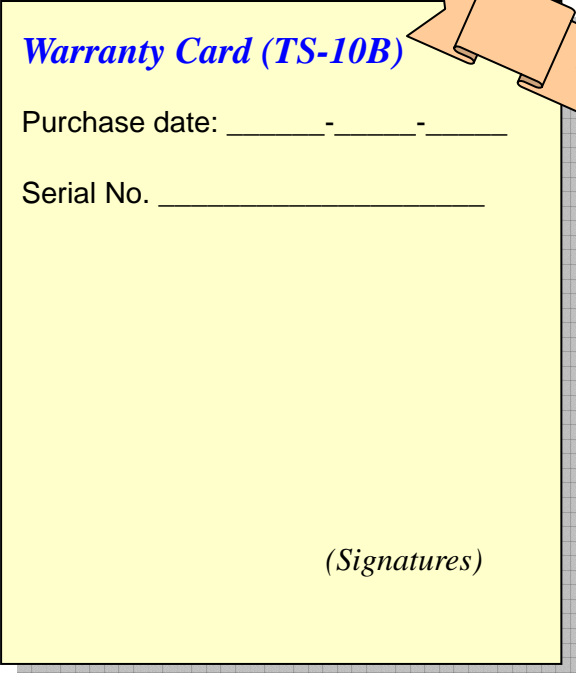


## 12. Warranty

- ◆ **The warranty period for the power unit is 12 months and the bubble pad is 6 months as of the purchase date of the product provided that the product is used in normal conditions.** Repair outside the warranty period is subject to charge. The maintenance service for the product is warranted for 5 years. Upon the completion of maintenance outside the warranty period, an additional 6-month warranty period is provided. During this period, the same general terms and conditions of warranty apply.
- ◆ Only function failure repair is covered during the warranty period.

The warranty does not include general maintenance (e.g. replacement of the cotton filter, cleaning), setting adjustment or component renewal.

The warranty does not cover maintenance conducted by opening the power unit without authorization; careless dropping or use of the product other than for its intended purpose and repair of such is subject to charge.



***Warranty Card (TS-10B)***

Purchase date: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Serial No. \_\_\_\_\_

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*(Signatures)*

***Manufactured for:***  
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