

# **Operation Manual**

**FOR** 

Protekt® Aire 8000BA42

&

Protekt® Aire 8000BA48

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#### READ ALL INSTRUCTIONS BEFORE USING

### IMPORTANT SAFEGUARDS

When using electrical products, especially when children are present, basic safety precautions should always be followed, including the following:

### **DANGER**

To reduce the risk of electrocution:

- Always unplug this product immediately after use.
- Do not use while bathing.
- Do not place or store product where it can fall or be pulled into a tub or sink.
- Do not place in or drop into water or other liquids.
- Do not reach for a product that has fallen into water. Unplug immediately.

### **WARNING**

To reduce the risk of bums, electrocution, fire, or injury to persons:

- A product should never be left unattended when plugged in.
- Close supervision is necessary when this product is used by, on, or near children or invalids.
- Use this product only for its intended use as described in this manual.
- Do not use attachments not recommended by the manufacturer.
- Never operate this product if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the product to a service center for examination and repair.
- Keep the cord away from heated surfaces.
- Never block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.
- Never drop or insert any object into any opening or hose.
- Do not use outdoors or operate where aerosol (spray) products are being used.
- Connect this product to a properly grounded outlet only. See Grounding Instructions.

### **GROUNDING**

Before any connection is made, make certain that this product shall be connected to a protective earth conductor via the three-wire power cord; the three-blade plug shall be inserted only into a socket outlet that provides a protective earth contact. Please refer to page 10 for more information.

### SAVE THESE INSTRUCTIONS

### **STATEMENTS & SYMBOLS**

Note, caution, warning & danger statements

### NOTE

Indicates some tips or some information users should be aware of.

### **CAUTION**

Indicates correct operating or maintenance procedure in order to prevent damage to or destruction of the equipment or other property.

### WARNING/DANGER

Calls attention to a potential danger that requires correct procedures or practices in order to prevent personal injury.

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# INTRODUCTION

This manual should be used for the initial set of the system and for reference purposes.

### General

Protekt<sup>®</sup> Aire 8000BA42 and Protekt<sup>®</sup> Aire 8000BA48 Bariatric System are high quality and affordable air mattress system suitable for medium and high-risk pressure ulcer treatment. They have been specifically designed for prevention of bedsores and offer an affordable solution to 24-hour pressure area care.

Protekt® Aire 8000BA42 and Protekt® Aire 8000BA48 Bariatric System have been tested and certificated for the following standards:

CE

FDA

### Intended Use

Protekt<sup>®</sup> Aire 8000BA42 and Protekt<sup>®</sup> Aire 8000BA48 Bariatric System are intended to reduce the incidence of pressure ulcers while optimizing patient comfort. They also provide the following:

- Individual home care setting and long-term care
- Pain management as prescribed by a physician.

### **Contraindication**

Patient conditions for which the application of pressure relieving therapy on an alternation system is contraindicated are as follow:

- Cervical or skeletal traction
- Unstable spinal cord injuries

# PACKAGE CONTENT

Check inside the package. If any of the following items should be missing or damaged, please contact your local dealer or service center for replacement immediately.

## Pump Unit

Protekt<sup>®</sup> Aire 8000BA42 and Protekt<sup>®</sup> Aire 8000BA48 Bariatric System are identical to which you purchased.





### **Mattress**

The mattress comes with a base sheet. A foam base is not a must.

### Cover sheet

\*Optional

The cover sheet makes cleaning an easy task.



### Manual

Always read this manual before using this product.

# PRODUCT FUNCTIONS

## Pump Unit

The functions of the pump unit for Protekt® Aire 8000BA42 and Protekt® Aire 8000BA48 Bariatric System are described below.

#### Power Switch:

The switch is at the right side of the unit.

Turn ON/OFF the power, the unit will start/stop operation.

### Pressure-selector Knob:

Turn the knob from the soft to firm position to select a pressure value.

### Pressure-selector Touch Panel:

There are ten pressure levels on the touch panel, providing options of pressure value.

### Normal Pressure LED:

Indicates the pressure has reached a set level.

### **Low Pressure LED:**

Indicates the pressure is below a set level.

The alarm will turn on at the same time.

### Cycle Time-selector Touch Panel:

Select a desired alternating cycle time from the touch panel. The cycle time value can be 10, 15, 20 or 25 minutes. There are two LEDs for each time value.

### Alarm Mute:

The alarm will turn on when the Low Pressure LED is on.

To mute the alarm, simply press the mute button. The Alarm LED will flash.

Re-press the mute button to reactivate the audible alarm.

### Static/Alternating control:

Set the air mattress in static mode or alternating mode.

### Max firm:

Set the air mattress to auto-inflation mode.

## Mattress System

Protekt<sup>®</sup> Aire 8000BA42 and Protekt<sup>®</sup> Aire 8000BA48 Bariatric System come with cell type mattresses of different materials, provided optionally with the pump unit.

The mattress option for Protekt® Aire 8000BA42 and Protekt® Aire 8000BA48 Bariatric System is 10"Nylon/PU only.

## Protekt® Aire 8000BA42

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## Protekt® Aire 8000BA48

- 1. Power Switch
- 2. Pressure-selector Touch Panel
- 3. Cycle time-selector Touch Panel
- 4. Alarm Mute Button
- 5. Static/Alternating control button
- 6. Max Firm

# **INSTALLATION**

Step 1 Place the mattress flatly on the bed frame.

The inflation tube should be towards the foot end. See figure below.



- Step 2 Cover with a cotton sheet to avoid direct skin contact and reduce friction.
- Step 3 Hang the pump unit on the foot end of the bed frame and make sure it is stable.
- Step 4 Connect the inflation tubes from the mattress to the pump's inflating nozzles. Make sure they are properly attached.

### **NOTE:**

Make sure the air hoses are not kinked or tucked under the mattress. Also check to ensure the CPR valve is properly attached.

Step 5 Plug the power cord into an electrical outlet with grounded AC power.

This product should be grounded. The power cord has a grounding wire with a grounding pin. This three-wire plug must be plugged properly into an outlet and grounded as shown in the figures in the Grounding Instructions section.

### **NOTE:**

Before inserting the plug into the outlet, make sure the voltage is compatible. Also make sure this product is well grounded.

- Step 6 Turn on the power by pressing the power switch at the right side of the unit. Proceed to the Operation section.
- Step 7 Make sure to disconnect the pump unit by unplugging the power cord when it is not in use.

## **GROUNDING INSTRUCTIONS**

This product is for use on a nominal 120 V circuit and should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord that contains a grounding wire with a grounding plug.

**DANGER-** Improper use of the grounding plug can result in a risk of electric shock.

If repair or replacement of the cord or plug is necessary, do not connect the grounding to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripe is the grounding wire.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded.

This product has a grounding plug that looks like the plug illustrated in figure A below. A temporary adapter, which looks like the adapter illustrated in figure B and C, may be used to connect this plug to a 2-pole receptacle as shown in figure B if a properly grounded outlet is not available. The temporary adapter should be used only until properly grounded outlet (figure A) can be installed by a qualified electrician. The green colored rigid ear, lug, tab or the like extending form the adapter must be connected to a permanent ground such as properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by the screw.

If it is necessary to use an extension cord, use only a 3-wire extension cord that has a three-blade grounding plug and a 3-slot receptacle that will accept the plug on the product. Replace or repair if damaged.

# **OPERATION**

**NOTE**: Always read the operating instructions before use.

### General

This product is designed to provide maximum comfort to home-care and long-term-care facility patients. Make sure that you operate this product in a proper way to optimize its value. Here we provide some general information you should be aware of.

**For products**: Do not use another pump with different specifications or even from the Protekt<sup>®</sup> series. It is dangerous to use a pump with pressure capacity greater than 120mmHg. This may result in cell-puncture.

Do not change any component by yourself. If there is need for replacement or repair, always contact your local dealer or service center.

**For patients**: When the Normal Pressure LED (green) comes on to indicate the pressure is adjusted to a desired firmness; the patient can then lie on the mattress.

Please cover the mattress with a cotton sheet to avoid direct skin contact and for the patient's comfort.

A firm surface will make it easier for the patient to transfer or reposition. Make use of the static mode function. It can support the patient by keeping the mattress from bottoming out when the patient is in a sitting position. See figure below.

**Hand check**: Check to see if a suitable pressure is selected by sliding one hand between the air mattress and the foam base (or bed frame if there is no foam base) to feel the patient's buttock.

Users should be able to feel the space in between, and the acceptable range is approximately 25 to 40 mm (1" to 1-1/2"). This hand check procedure is issued by AHCPR.

Please follow instructions below for detailed operating procedure of each type.

### Protekt® Aire 8000BA42 and Protekt® Aire 8000BA48 Bariatric System

- Step 1 Turn on the power. A beep sound will begin the operation.
- Step 2 These two types will enter static mode initially when the power turned on. First it will inflate the mattress to 10-15mmHg and then enter alternating mode.

The alarm function (visible and audible alarm) will activate if mattress is not inflated completely within 40 minutes.

Press the Mute button to mute the alarm. The alarm LED will start blinking.

Press the Mute button again to have the audible alarm and alarm LED sound again.

Step 3 The alternating cycle time and pressure level are preset to the middle settings. Select from touch panel to adjust the cycle time and pressure level.

#### NOTE:

Press the static mode button from the touch panel to provide a firm surface that makes it easier for the patient to transfer or reposition. The static mode can support the patient by keeping the mattress from bottoming out when the patient is in a sitting position.

Step 4 During normal operation, the unit will monitor pressure. If the pressure is lower than a set pressure, the pump will automatically inflate the mattress to the set level and then stop. The alarm will beep and its LED will come on to alert a low pressure condition.

Press the Alarm Mute button to mute the alarm. The alarm LED will flash.

Press the Alarm Mute button again to have the audible alarm and alarm LED on.

Step 5 Press the Max Firm button to automatically inflate the mattress to the maximum level (above 65mmHg) for about 20 minutes. The pressure will return to a previously set level after 20 minutes.

In case there is a bad connection of tubing or any air leakage from the mattress, this will result in a low pressure condition, and it will activate

the alarm.

#### **NOTE:**

For suitable pressure, please refer to page 11 for the hand check procedure.

### CPR function

When there is an emergency to perform CPR on the patient, pull the CPR valves immediately to release the air quickly from the mattress. The CPR valves are located at the front right-hand side of the mattress.

### Pressure set up

User can adjust the pressure value of the air mattress to a desired firmness by themselves of according to the suggestion from a health care professional.

### NOTE:

It is recommended that the pressure-selector knob set to Firm or press Auto firm on the touch panel every each time the mattress is first inflated. Users can then easily adjust the air mattress to a desired firmness according to the patient's weight and comfort.

### Low pressure

When abnormal pressure occurs, the Low Pressure LED will come on. For some types of pumps, the alarm will be activated to alert of a low pressure condition. Check if the connections are secure and correctly installed according to the relevant instructions.

### NOTE:

If the pressure is consistently low, check for any leakage (tubes or connecting hoses). If necessary, contact your local dealer to replace any damaged tubes or hoses.

## **CLEANING**

In this section, we describe the procedures to clean and decontaminate the unit. It is important to follow these procedures before using the system on patients.

#### **PUMP Unit**

- ▶ DO NOT immerse or soak the pump unit.
- Check for external damage and move the pump to the cleaning area.
- Place the pump on a work surface and spray or wipe the outside of the case with quaternary ammonium solution.
- ▶ DO NOT spray any cleaning solution directly on the surface of the pump.
- ▶ DO NOT use a Hypocarbonate or Phenolic based cleaning solution as this may cause damage to the case. Allow the solution to incubate for 10 minutes or accordingly as stated by the cleaning product used.
- ▶ Wipe case with a clean cloth. Make sure all areas are clean (top and bottom, both sides).
- ▶ Spray cloth with cleaning solution and clean faceplate. DO NOT allow excess cleaning solution on faceplate or control panel. (If solution gets inside, damage will occur.)
  - Allow surface to thoroughly dry after cleaning.
- After the pump is thoroughly cleaned and dried, proceed to plug in the pump and test to see if it runs normally.
- Unplug the pump and store with proper identification tag.

### Mattress System

- ▶ Brush off or wipe down all surfaces of the cover sheet with soap and water before wetting with any liquid disinfectant.
- Any obvious blood spots should be wet thoroughly with 1:9 Hypochiorite solutions (1 part bleach to 9 parts water) and allow drying for at least 10 minutes. Then blot with a clean, damp cloth.
- Unzip the top cover from the mattress.
- ▶ Brush or wipe down all surfaces with soap and water before applying any liquid.
- Covers are immersed and soaked in disinfectant for the required incubation time.
- After pre-soaking, the cover is rinsed through a regular cycle in a washer with no soap then laundered with mild detergent (wash temperature 93F, rinse temperature 78F or on the coldest setting).
- ► Covers are aerated until they are fully dry. (Drying temperature range 90-120F or on the coldest setting.)
- The air cells are unsnapped from one side and are sprayed on all sides with a disinfectant. Let it sit for the required incubation time and wipe down with a clean cloth. (Make sure to disconnect all the air cells, one by one, and spray the disinfectant on all sides, including all the connecting tubes and hoses, Let it sit for

- least 10 minutes.)
- If there is a base after you remove all the air cells, the base has to be sprayed down with the disinfectant, inside and outside. Let it sit for the required incubation time and wipe down with a cloth.
- Repeat the process with the tubing set: spray, incubate, and then wipe clean.
- The carrying bag should be turned inside out and completely wiped down using the disinfectant solution.
- Allow it to thoroughly air dry. Once the inside is dry, turn it back; wipe down the outside of the bag with disinfectant.
- Dry the mattress on a SUNLESS area after cleaning.

# HANDLING AND STORAGE

- Lay the mattress out flat and upside down.
- ▶ Roll from the foot end towards the head end; the foot-end strap can then be stretched around the rolled mattress to prevent unrolling.
- ▶ Do not fold, crease or stack the mattress.

## **MAINTENANCE**

#### General

- Check the power cord and plug to see if there are abrasions or excessive wear.
- ► Check the mattress cover for signs of wear or damage. Ensure the mattress cover and tubes are connected together correctly.
- ▶ Plug in the pump unit and check the airflow from the hose connection port. The airflow should alternate between ports every half-cycle time.
- ► Check the air hoses to see if there are kinks or breaks. For replacement, please contact your local agent or dealer.
- Make sure the mattress tube is well connected.
- Check the pump unit and make sure both power indicators are off when the switch is turned off.

### Low pressure

Examine if there is air leakage between the pump and the mattress connections or from the air mattress tubes:

- ► Check connectors between the air mattress and pump. If there is any disconnection, please reconnect it.
- Check the CPR Valves. Ensure their outlets are sealed.
- Check the air-connecting tubes. Ensure each single cell is not broken.
- ▶ Set the pressure-selector knob to Firm position. Keep the tubes fully inflated and inspect for air leakage.
- ► Check if there is any air leakage from cells. Ensure no leakage occurs. If any leakage occurs, please contact your local agent or dealer.

# **TROUBLESHOOTING**

Problems	Solutions	
The pump doesn't work	<ol> <li>Check if the plug is inserted firmly into the outlet.</li> <li>Turn on the power switch again.</li> <li>If the power LED is ON and the pump still doesn't work, contact your local dealer immediately.</li> <li>If the power LED is OFF, there may be a faulty outlet. Try to connect the power cord to another outlet. If the power LED is still OFF, contact a qualified electrician for main power check.</li> </ol>	
Incomplete inflation	1. For a quick check, adjust the pressure to Firm position.	
(Low Pressure)	2. Check to see if the tubes connected to the pump are twisted or there is any leakage occurring.	
(Low Fessure)	<ul> <li>Always keep the tubes straight.</li> <li>Change tubes if there is any leakage.</li> <li>Ensure the CPR valves are closed. Ensure every single cell is not broken.</li> </ul>	
Slow air flow	A dirty filter may decrease the air flow.  Wash the filter with mild detergent to keep it clean.  Check the air filter at the back of the pump unit at least once a month.	

# **SPECIFICATIONS**

### CLASSIFICATION OF ADAPTABILITY

PUMP	MATTRESS	ADAPTABILITY	STAGE
Protekt®Aire 8000BA42 &	10"X20 CELLS		I~IV
Protekt®Aire 8000BA48			

### **NOTE:**

All specification is subject to change without notice.

## **Pump Unit**

Series	Function	Specifications
Protekt <sup>®</sup> Aire	ON/OFF switch	Dimension: 13.4x4.9x9.7 inch
8000BA42	Pressure-selector touch panel	Power:120V AC/60Hz
&	Cycle Time-selector touch panel	Pressure:20~65 mmHg
Protekt <sup>®</sup> Aire	Alternate/Static/Seat inflate mode	Cycle time:10, 15, 20, 25 min,
8000BA48	Alarm: Low pressure/Power failure /	selectable
	Alternate failure	
	Max Firm	

## **Mattresses**

Model	Arrangement	Dimension	Material	
Protekt®Aire 8000BA42	10"x20 CELLS	80"X42"X10"	Nylon/PU	660lbs
Protekt <sup>®</sup> Aire 8000BA48		80"X48"X10"		660lbs

## System

Item	Specifications
Medical Equipment	Class I
	IPXO
	AP/APG NO
	Type BF
Applied Part	Mattress
Power Supply	AC 120V/60Hz, 10W 1A
Pressure Range	20~65 mmHg
Cycle Time	10,15,20,25 min. selectable
Dimensions	13.4x4.9x9.7 inch
Weight	8.0 lbs
Environment Requirements	1. Operation Temperature: 50°F~95°F (10°C~35°C)
	2. Storage Temperature: 5°F~122°F (-15°C~50°C)
	3. Operation Humidity: 20%~80% non-condensing
	4. Storage Humidity: 10%~90% non-condensing
Limited Warranty	2 years for pump and mattress

## **NOTE:**

The above specifications are also applicable to those areas operating with the same power supply range.