



Park House
Healthcare

DELTA PLUS

PA8900 Bariatric Mattress Replacement System



User Manual

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IMPORTANT SAFEGUARDS

READ ALL INSTRUCTIONS BEFORE USING

DANGER - To reduce risk of electrocution.

1. Always unplug this product immediately after using.
2. Do not use while bathing.
3. Do not place or store product where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for a product that has fallen into water. Unplug immediately.

WARNING - To reduce risk of burns, electrocution, fire, or injury to persons:

1. This product should never be left unattended when plugged in.
2. Close supervision is necessary when this product is used on or near children.
3. Use this product only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
4. 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 dropping in water, return the product to a service centre for examination and repair.
5. Keep the cord away from heated surfaces.
6. Never block the air opening of this product or place it on a soft surface, such as a bed or couch, where their openings may be blocked. Keep the air opening free of lint, hair, and other similar particles.
7. Never drop or insert any object into any opening or hose.
8. Connect this product to a properly grounded outlet only. See grounding instructions.

NOTE, CAUTION AND WARNING STATEMENTS

NOTE	-	Indicates some tips.
CAUTION	-	Indicates correct operating or maintenance procedures in order to prevent damage to or destruction of the equipment or other property.
WARNING	-	Calls attention to a potential danger that requires correct procedures or practices in order to prevent personal injury.

SYMBOLS



"BF" symbol, indicates this product is according to the degree or protecting against electric shock for type BF equipment.



Attention, should read the instructions.

IPX0

Enclosed equipment is without protection against ingress of water.



Disposal of Electrical & Electronic Equipment (WEEE):
This product should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. For more detailed information about recycling of this product, please contact your local city office, household waste disposal service or the retail store where you purchased this product.



Class II Equipment

SAVE THIS MANUAL FOR REFERENCE

1. Introduction

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

1.1 General Information

The Delta Plus Bariatric System uses the most advanced technologies to deliver optimum pressure relief and comfort through whisper-quiet operation.

The Delta Plus system has been independently tested and successfully approved to the following standards:



EN 60601-1 / UL 60601-1

EN 60601-1-2

EN 55011 Class B

IEC 801-2

IEC 801-3

IEC 801-4

IEC 801-5

EN 61000-3-2

EN 61000-3-3

1.2 Intended Use

This product is an advanced alternating replacement system suitable for very high risk bariatric patients. This system is intended to reduce the incidence of pressure ulcers whilst optimising patient comfort. It is recommended for the prevention and treatment of pressure ulcers up to stage IV.



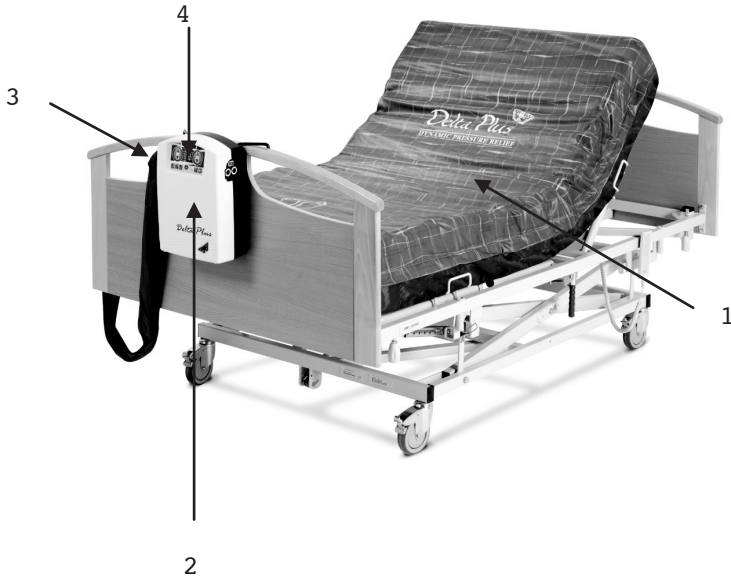
NOTE

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Equipment not suitable for use in the presence of a flammable anaesthetic mixture with air, oxygen or nitrous oxide.

2. Product Description

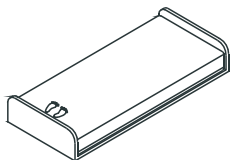
The digitally controlled pump unit provides adjustable pressure and cycle time and is compact and effective in pressure control and management. The replacement mattress, offers alternating therapy and provides patients with a comfortable pressure support setting



1. Mattress
2. Pump Unit
3. Air Tube Connector
4. Control Panel

3. Installation

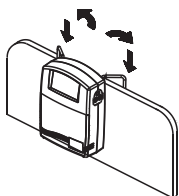
3.1 Setting Up



1. Place the mattress on top of the bed frame. Making sure the hoses are at the foot end of the bed. The mattress can be secured firmly by fixing the straps at the bottom bed frame.



NOTE : Please cover the mattress with a cotton sheet to avoid direct skin contact and for patients comfort.



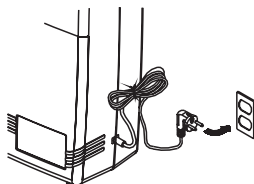
2. Hang the pump at the foot end of the bed, adjust the hangers to secure the pump against the foot board.



3. Connect the air tube connector from air mattress to the pump unit. When a 'click' is felt/heard, the connector is secure.



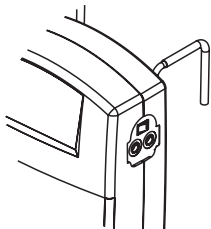
NOTE : Check and ensure the air tubes are not kinked or tucked under mattress.



4. Plug into mains electrical outlet.



NOTE : Make sure the pump unit is suitable for the local power voltage.



5. Then turn the main power switch ON. The power switch is located on the right side panel of the pump unit.



NOTE : Ensure the CPR connectors are sealed completely.

Installation tips are listed below:

After installation, any extra wire of the power cord should be neatly arranged to avoid any stumbling. The equipment should be placed in a position where users have complete access.

4. Operation










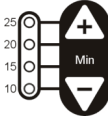

NOTE

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Always read the operating instructions before use.

4.1 Function Description

Control Button	Function Description
	<p>POWER</p> <p>To turn on the control unit.</p>
	<p>ALARM MUTE</p> <p>Enable and disable the audible alarm. Press this button to mute the audible alarm. The alarm will sound again after 3 minutes if the problem has not been resolved.</p>
	<p>PANEL LOCK</p> <p>Locks the control panel to prevent unauthorised setting changes. To unlock the panel, press and hold it for 3 seconds.</p>
	<p>LOW PRESSURE INDICATOR</p> <ol style="list-style-type: none">1. No light - normal condition; mattress is operating accordingly.2. Yellow light - pressure has not yet reached the preset setting.3. Flashing yellow light - low pressure condition; (see Troubleshooting)

Control Button	Function Description
	<p>AUTOFIRM</p> <p>For maximum inflation of the mattress. All other functions will be disabled unless this button is pressed again. This mode will operate for 20 minutes and then return to default settings automatically.</p>
	<p>STATIC</p> <p>Non-alternating mode to facilitate nursing procedures.</p> <p>To resume alternating mode, simply press this button again.</p>
	<p>SEMI-RECUMBENT SETTING</p> <p>This will increase the internal cell pressure by 10% to accommodate the semi-recumbent position.</p>
	<p>CYCLE TIME</p> <p>Four alternating cycle times. Use UP/DOWN function to adjust the cycle time through 10, 15, 20 and 25 minute cycles.</p>
	<p>COMFORT RANGE</p> <p>Six comfort levels for the patient. Use UP/DOWN function to adjust the comfort levels. 1 being the softest and 6 being the firmest.</p>

4.2 Operating Instructions

1. Press the POWER button on the display panel to start the system.
2. For faster inflation, the AUTOFIRM function can be activated. This mode will last for 20 minutes and then it will return to default settings automatically.
3. Once the mattress is fully inflated, the pump settings can be changed to accommodate patient comfort or if recommended by a physician.

4.3 CPR



In the event of an emergency to perform CPR on the patient, quickly pull the CPR tag to release air from the mattress. The CPR tags are located at the head end on the right hand side of the mattress.

4.4 Low Pressure and Alarm Functions

If an abnormal low pressure is detected, the Low Pressure Indicator (flashing yellow LED) will illuminate and the alarm will sound. Check if all the connections are correctly installed and secure as per installation instructions in this manual.



NOTE

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If the pressure level is constantly low, check for any leakage in the air cells or connecting tubes. If necessary, replace any damaged cells or tubes. If you require replacements please contact Park House Healthcare.

To silence the alarm, simply press the alarm mute button. The alarm will be silent for 3 minutes but the Low Pressure Indicator will remain flashing. After 3 minutes, the alarm will sound again if the pressure has not returned to normal.

5. Cleaning

The following guidelines are suggested by Park House Healthcare Ltd as being suitable infection control procedures. Further information is available upon request.

5.1 Pump Unit

It is important to follow the cleaning procedures for single patient use. General cleaning may be affected by using a cloth dampened with a mild detergent and water solution. This approach may be followed either by wiping with a sodium hypochlorite solution to a dilution of 1000 ppm or by using an alcoholic wipe.

Wipe the pump unit with a damp cloth and a mild detergent, and keep it away from dust. If another detergent is used, choose one that will have no chemical effects on the surface of the plastic case of the pump unit.



- CAUTION : Do not immerse or soak pump unit.
- Do not use hyper carbonate or phenol based cleaning solutions.
- Do not use any abrasive compounds or cleaning pads.

5.2 Mattress

During general use the mattress and tube set may be cleaned by using a mild detergent solution. Where appropriate mattress covers may be completely removed for laundering or sterilisation. Whenever there is staining or body fluids on the mattress, including the cells and tubing, then a sodium hypochlorite solution to a dilution of 1000 ppm should be used following thorough cleansing with soap and water.

All mattress covers may be laundered as follows:

Pre Wash 80°C + 15 minutes

Main Wash 80°C + 15 minutes

Followed by cold rinses and extraction



- CAUTION : Do not use phenolic based products for cleaning.



- CAUTION : Dry the mattress on a SUNLESS capitalised area after cleaning.



- CAUTION : During cleaning procedures, suitable protective clothing should be worn. Ensure that the mains power supply to the pump has been disconnected prior to cleaning.



- CAUTION : Follow the national requirements for the correct disposal of the pump unit.

6. Storage

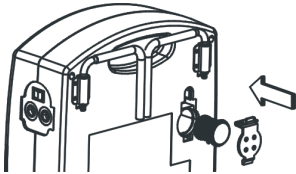
1. Pull the CPR tags and make sure all cells are deflated.
2. Lay the mattress out flat and upside down.
3. Protect the air tube coupler by putting it in the inner side of the mattress.
4. Roll the mattress from the head end towards the foot end.
5. Foot-end straps can then be stretched around the rolled mattress to prevent unrolling.

7. Maintenance

7.1 General

1. Check the main power cord and plug for any abrasions or excessive wear.
2. Check the mattress cover for signs of wear or damage. Ensure the mattress cover and tubes are connected correctly.
3. Check the air tube connections for any damage.
4. Report any problems or malfunctions to Park House Healthcare immediately.

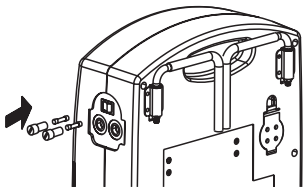
7.2 Air Filter Replacement



The air filter should be checked and dusted regularly once per month.

1. Two foam type filters are used. One is located on the bottom of the pump.
2. The filter is reusable and can be washed gently with a mild detergent and water.
3. We suggest replacing the air filter regularly if the environment is dirty, this will help to improve the airflow. Spare filters are available from Park House Healthcare.

7.3 Fuse Replacement



1. Disconnect the plug from the mains power
2. The filter is reusable and can be washed gently with a mild detergent and water.
3. We suggest replacing the air filter regularly if the environment is dirty, this will help to improve the airflow. Spare filters are available from Park House Healthcare.

8. Troubleshooting

Problem	Solution
Power is not ON	<ul style="list-style-type: none">• Check if the plug is connected to the mains.• Check if there are any blown fuses.
Alarm is on (audible and visual)	<ul style="list-style-type: none">• Check that the connection between the air tube connector and the pump unit is tightly secured.• Check that all tubing connections along the mattress are secure.• Check if the CPR is engaged.• Check if there are any leaks from the air cells.• Check that the correct comfort setting has been set.
Patient is bottoming out	<ul style="list-style-type: none">• Pressure setting may be inadequate for the patient, adjust comfort range 1 to 2 levels higher and wait for a few minutes.
Air tube connector can't fit into the pump unit	<ul style="list-style-type: none">• Press handles on both sides of air tube connector slightly before pushing the connector into the pump unit.• Make sure the connector is tightly secured - a click should be heard/felt when the connector is secure.
No air is being produced from some of the air outlets of the tube connectors	<ul style="list-style-type: none">• This is normal in alternating mode. Air outlets take turns to produce air during their preset cycle time.

If your problem cannot be resolved using the above information, please contact Park House Healthcare.

9. Technical Description

Product Code		PA8900	
Pump		Specification	
Power Supply (refer to rating label on the product)		AC 220-240V, 50/60Hz, 1.0A (for 230V system)	
Fuse Rating		T1A	
Dimension (L x W x H)		37 x 27 x 13 (cm)	
Weight		6 kg	
Environment	Temperature	Operation: Storage: Shipping:	10°C to 40°C (50°F to 104°F) -15°C to 50°C (5°F to 122°F) -15°C to 70°C (5°F to 158°F)
	Humidity	Operation: Storage: Shipping:	10% to 90% non-condensing 10% to 90% non-condensing 10% to 90% non-condensing
	Atmosphere	700 hPa to 1060 hPa	
Classification		<ul style="list-style-type: none"> • Class II, Type BF, IPX0 • Applied Parts: Mattress • Not suitable for use in the presence of a flammable anaesthetic mixture (No AP or APG protection) • Continuous operation 	
Mattress		Specification	
Dimension (L x W x H)		196 x 107 x 20 (cm)	
Weight		11.6 kg	
Maximum Patient Weight		318 kg or 50 stones (both sides)	

Contact the distributor or EU representative for further technical documents.



NOTE

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The specification is also suitable for other areas operating with the same power supply.

10. Guarantees and Warranty

10.1 Pump Unit

All new pumps have a guarantee for a period of 2 years following the date of dispatch.

10.2 Mattress

All new mattresses have a guarantee for a period of 2 years following the date of dispatch.

10.3 Guarantee

Park House Healthcare guarantees to repair or place any equipment issued to its customers, which is found to be faulty during the relevant guarantee or warranty period. The Company's guarantees are subject to following conditions:

- a) That the equipment has been used for the purpose for which it was intended.
- b) That the usage has been on a 'fair wear and tear' basis.
- c) That the Company's cleaning / disinfection guidelines have been followed.
- d) That the Company's maintenance guidelines have been followed.
- e) That maintenance has been carried out by a suitable and qualified person.

10.4 Warranty

Extended warranties can be purchased from Park House Healthcare, for more information contact Customer Services on 0845 0600 333.

10.5 Claims relating to Guarantee and Warranty

In the event of a fault being discovered within the warranty period, the customer must notify Park House Healthcare at the earliest opportunity.

If upon inspection, Park House Healthcare accepts liability then the equipment shall be repaired or replaced immediately.

If Park House Healthcare does not accept liability it shall inform the customer of its reasons for declination and provide the customer with an estimate on either the repair or replacement cost.

Park House Healthcare reserves the right to alter or amend this document without prior notice.



New Corporate Headquarters opened in October 2006

The Company

Founded in 1984, Park House Healthcare Ltd is recognised as one of the leading manufacturers of specialist pressure relieving and pressure reducing equipment in the U.K.

Park House Healthcare Ltd has an extensive product portfolio and the facility to customise products to suit customer needs whilst offering solutions in pressure care, postural management and moving and handling.

Employing over 100 full time staff at our 60,000 sq. ft state of the art Corporate Headquarters in West Yorkshire, Park House Healthcare are proud to offer in-house manufacturing, a full product audit and decontamination service and a network of distribution centres as part of our continued commitment to Customer Care.

24 hour care, 365 days a year dedicated internal personnel manage specific regions and divisions ensuring one-on-one personal customer service at all times. With distributors in over 25 countries, Park House Healthcare are a truly international company and we place important emphasis on providing high levels of customer care to ensure we exceed customer expectations at all times.

Additional support nationwide is available through our service centres situation strategically around the country.

Park House Healthcare Ltd is a respected member of the British Healthcare Trade Association and has BS EN ISO 9001 and EN 46002 accreditation which is the specific quality standard for Medical Devices. All products are CE marked in accordance with the European Directive 93/42/EEC.



ISO Certificate No: 8019
CE Certificate No: CA001810
Master Indemnity Assurance No: IFA 2433 0451 CCI

Due to its policy of continued development and improvement, Park House Healthcare Ltd reserves the right to amend any details and specifications without notice.

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