

# **AiroDyne Premier Model # 1450 Operating Manual**

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# Table of Contents

<b>Section</b>	<b>Description</b>	<b>Page</b>
1.0	Introduction	3
2.0	General Product Overview	3-4
3.0	Safety Precautions	4
4.0	Warnings	4
5.0	Installation	5
6.0	Initial Inflation	5
7.0	Disassembling or Deflating	5
8.0	Programming Power Control Unit Settings	6
9.0	Power Unit Illustration	6-7
10.0	CPR Emergency Deflate / Transport Function	7
11.0	Routine Maintenance	7
12.0	Cleaning	8
13.0	Trouble Shooting Guide	9
14.0	Technical Specifications	10
15.0	Warranty	11

**Important! Before using the AiroDyne mattress replacement systems please read and understand this operations manual and all the Warnings/Safety Precautions. If you have any questions please call our customer service department:**

**USA Only:**

**Phone: 1-800-621-4844**

**Fax: 405-840-8480**

**Outside USA:**

**Phone: 405-840-2600**

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## 1.0 INTRODUCTION

The AiroDyne<sup>™</sup> Premier is a powered low air loss/alternating pressure mattress replacement designed to treat/and or prevent pressure sores Stage I-IV. It is designed to replace a standard hospital mattress and fit most homecare/hospital bed frames. The AiroDyne<sup>™</sup> Premier provides therapy by either sequentially inflating and deflating two sets of air cells on a timed interval (usually referred to as alternating pressure), or by redistributing the patient's weight over a greater surface area in the static low air loss mode.

All AiroDyne<sup>™</sup> systems utilize I.P.S.<sup>™</sup> Technology (Intelligent Pressure Sensing) which allows the systems to operate at a much lower more accurate pressure range than most traditional alternating pressure systems. Pressure is monitored constantly to ensure accurate internal pressure levels, and to adjust for patient movement etc. The continuous movement of the air cells provides pressure relief and enhances capillary blood flow.

## 2.0 GENERAL PRODUCT OVERVIEW

### **AIRODYNE<sup>™</sup> PREMIER Model # PT1450**

The AIRODYNE PREMIER will include:

- A power control unit
- A mattress replacement or overlay
- A zippered therapeutic cover

The AiroDyne<sup>™</sup> Premier uses a microprocessor controlled power unit (PT311) that offers technologically advanced features while remaining user-friendly. The power control unit allows caregivers to customize the system by selecting the mode of operation and entering the patient's weight with the touch of a button. Both the mode and the patient weight are illuminated with bright red character LED displays to eliminate confusion. The system also offers additional features such as firm mode to facilitate with transfers and nursing procedures along with an upright mode to help prevent "bottoming out". The control unit utilizes I.P.S.<sup>™</sup> Technology to provide accurate pressure levels and optimal therapy. The pressure monitoring LED illuminates to let caregivers know it is working. Please note: The light will only illuminate while the compressor is working, but the pressure is being monitored constantly. The control unit also uses quick connect/disconnect couplers to make set-up convenient.

The mattress replacement (PT211) consists of twenty 8.5" tall air cells positioned above a 2" convoluted foam base. It is designed to be placed directly on a hospital bed frame. Each air cell is made of the highest quality 210 Denier coated nylon to ensure durability and longevity.

The therapeutic PrimaTex cover (PT610-8) is made of high quality quilted nylon taffeta with a polyurethane lamination. The polyurethane lamination allows the cover to be water proof yet moisture vapor permeable. This means that it is

impermeable to water, air, and bacteria, but it will allow water vapors to pass through. This allows the skin to “breathe” and helps wick moisture away from the patient’s skin to manage moisture.

### 3.0 SAFETY PRECAUTIONS

- Attention! Always read accompanying documents.
- Always plug power control unit into a properly grounded electrical outlet to avoid shock. *See Warnings.*
- Attention! This product incorporates fusing only in the ungrounded phase conductor.
- Do not immerse power control unit in any liquid or spray any liquids directly on the power control unit. (IPXO)
- Do not place anything on power cord, and be sure cord is located where it will not be hazardous.
- Caregivers should use reasonable judgment when using the Airodyne systems.
- **ALWAYS LEAVE SIDE RAILS IN THEIR HIGHEST POSITION WHEN USING A MATTRESS REPLACEMENT SYSTEM.**

### 4.0 WARNINGS

- **Danger! Explosion risk if used in the presence of flammable anesthetics**
- **Danger! Risk of electric shock. Do not open back cover. The AiroDyne™ Premier power control unit should only be opened by qualified technical personnel.**
- **Do not insert items into any opening of the power control unit. This could short internal components, which could cause fire or electrical shock.**
- **The AiroDyne™ Premier is a Class I product. Do not cut or remove the grounding prong from the plug used on any PrimaTech products. The grounding prong is for shock prevention. In the event that only a two-pronged wall receptacle is found, it is the personal liability and obligation of the customer to contact a qualified electrician and have the two-pronged receptacle replaced with the properly grounded three-prong wall receptacle in accordance with the National Electrical Code. If you must use an extension cord, ONLY use a three-prong extension cord that has the same or higher electrical rating as the device being connected.**

\*Note: Grounding reliability can only be achieved when plug is connected to an equivalent receptacle marked “Hospital Grade” or “Hospital Only”.

## **5.0 INSTALLATION**

### **5.1 Mattress Replacement:**

1. Remove the standard mattress from the bed frame.
2. Place the AiroDyne™ Premier mattress replacement directly onto the bed frame making sure the hoses are on the foot end of the bed.
3. Attach anchor straps with D-rings (or clips) located on each side of the mattress to the bed frame. The anchor straps should be attached in a manner that does not hinder any moving parts of the bed frame.
4. Refer to Power control unit installation.

### **5.2 Power Control Unit:**

1. Suspend the power control unit at the foot end of the bed or place on smooth flat surface.
2. Plug the power cord into a properly grounded electrical outlet (See Warnings).
3. Inflate using external inflator if available (See Initial Inflation).
4. Connect the male/female couplers on the hoses from the mattress to the couplers on the bottom of the control unit.
5. Turn system on and program settings (See Programming settings).

## **6.0 INITIAL INFLATION**

### **Quick fill with external inflator:**

The AiroDyne™ series power control units all utilize compressors that are low in air flow to minimize noise, patient disturbances, and energy. Therefore, the best way to initially inflate the systems is using the PT inflator (PT10). Once the mattress system has been installed, plug in the PT inflator and connect the hoses of the mattress system to the male/female connector of the PT inflator. The PT inflator will fill the mattress in 3-4 minutes allowing therapy to begin quickly.

## **7.0 DISASSEMBLING OR DEFLATING**

The PT inflator can also deflate the mattress quickly by moving the adapter to the top exhaust. Please note: the CPR pull must be pulled on certain models to deflate the three static cells in the head section. After deflating the mattress system, roll the system and connect clips for easy storage. The AiroDyne™ Premier even includes handles to make transport convenient.

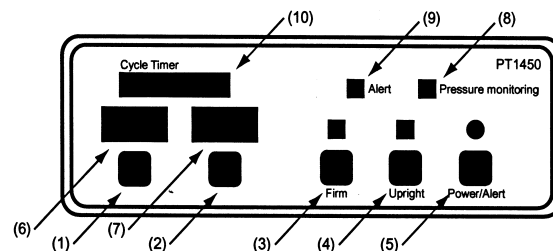
## 8.0 PROGRAMMING POWER CONTROL UNIT SETTINGS

1. From the left side of the control panel choose which mode of operation is appropriate for the patient. By touching the **Mode/Cycle** key the user can choose 0 which is static low air loss or a cycle time of 10, 15, 20, or 25 for low air loss with alternating pressure. These are full cycles so 10 means the system will inflate set A for five minutes and vice-versa.
2. The patient weight key can be used to set the appropriate patient weight. Caregivers and users will see bright red LED characters illuminating the programmed patient weight. To adjust the weight press the **Patient Weight** button until the desired weight is shown. Please note: This should be used for reference only! Depending on the patient's weight distribution some patients will need to have the weight adjusted up or down until the optimal pressure setting is found. To find the optimal weight setting a "hand check" should be done to make sure the patient is submersed in the cells without "bottoming out".
3. The **Firm Mode** button can be pressed when a hard surface is desired. This can be useful to make patient transfers easier and assist with nursing procedures.
4. The **Upright Mode** button can be pressed when patients are in the articulating position and are at risk of "bottoming out". This mode will increase the internal pressure to help prevent this common problem.
5. The **Power/Alert** mute button will not only power the system up and down, but it mutes the Alert in the event of power failure or low pressure.

## 9.0 POWER CONTROL UNIT ILLUSTRATION

### Front Control Panel:

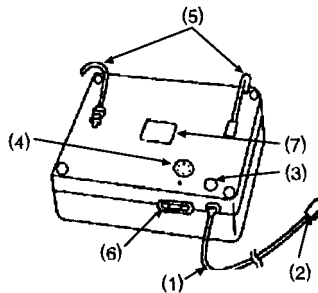
1. Cycle / Float Mode button
2. Patient Weight (lbs) button
3. Firm Mode button
4. Upright Mode button
5. Power / Alert mute button
6. Cycle / Mode Display
7. Patient Weight Display
8. Pressure monitoring LED
9. Low pressure / Power failure Alert LED
10. Cycle Timer Countdown LED(s)



## POWER CONTROL UNIT ILLUSTRATION CON'T

### Back Cover:

1. Power cord
2. Plug
3. Fuse
4. Air filter
5. Hanging hooks
6. Air outlet
7. S/N Label



## 10.0 CPR EMERGENCY DEFLATE/TRANSPORT FUNCTION

### 10.1 CPR:

A CPR release is located near the head of the patient on the left side of the mattress system. In the event of an emergency pull the CPR pull to deflate the mattress immediately.

To resume therapy, insert the CPR pull back into the connector and inflate mattress.

### 10.2 TRANSPORT:

When a need to transport a patient arises, the AiroDyne™ systems have a transport function to hold air in the system for a period of time. Disconnect the quick couplers connected to the power control unit. Connect them together to seal air in the system. Note: The time the system will hold air for transport will vary due to patient weight with a typical time of at least one hour.

## 11.0 ROUTINE MAINTENANCE

The Airodyne™ Premier requires very little maintenance. The air filter should be checked once a month optimally. There are no tools necessary to clean the filter.

### To clean the filter:

1. Remove filter from backside of the power control unit by popping off filter cap.
2. Check for excess dirt or dust. If filter needs to be cleaned, gently wash with mild soap and water.
3. Thoroughly air dry before replacing.
4. Spare filters are available from PrimaTech Medical Systems.

**NOTE:** Cigarette smoke can damage the valve assembly in the AiroDyne™ systems. PrimaTech Medical Systems™ recommends patients and caregivers to avoid smoking near the systems.

## **12.0 CLEANING**

### **12.1 Mattress and Cover**

During Use: The PrimaTex™ cover and mattress replacement are designed to be cleaned with a mild detergent and damp cloth while in use. Do not use harsh chemicals, alcohol, or solvents. The cover can be machine washed in cool water with detergent and an effective medical disinfectant. Dry using LOW HEAT. The mattress replacement should be just wiped down as stated above.

Cleaning Between Patients: The PrimaTex™ cover and mattress replacement should be thoroughly cleaned between patients. PrimaTech Medical Systems™ recommends the following only as a guideline:

1. Put on Don Rubber gloves, eye protection, plastic gown and mask if necessary.
2. Turn power control unit off and remove power cord from outlet.
3. Spray entire cover and mattress replacement down with appropriate medical disinfectant. Let stand for at least 10 minutes.
4. Cover can be machine washed in cool water with detergent and an effective medical disinfectant. Dry using lowest heat possible or hang dry.
5. With mattress air cells deflated, wipe down both sides thoroughly with medical disinfectant. Allow to air dry.
6. Thoroughly wipe down entire mattress base and tubing. If dust or soilage has accumulated, remove using swabs moistened with detergent/disinfectant. Allow all components to air dry. Wrap mattress in plastic and store.

### **12.2 Power Unit:**

1. Turn power off and remove power cord from outlet.
2. Spray entire power unit with appropriate medical disinfectant. Let stand for a minimum of 10 minutes.
3. Wipe down with disposable cloth. Wrap power control unit in plastic and store.



## 13.0 TROUBLE SHOOTING GUIDE

Problem	Inspection Procedure	Possible Solutions
1.) Power control unit is working, but mattress replacement is not inflating.	<p>1.1) Be sure air is flowing smoothly through hoses and mattress manifolds.</p> <p>1.2) Be sure hoses are properly connected to power control unit.</p> <p>1.3) Be sure CPR pull is properly sealed.</p>	<p>1.1) Hose(s) or manifolds may need to be replaced.</p> <p>1.2) "Click" CPC connectors into place.</p>
2.) Low pressure alert is activated.	<p>2.1) First, try same procedures as above.</p> <p>2.2) Check each air cell for large leaks, tears, etc.</p> <p>2.3) Check hose connections throughout entire mattress.</p> <p>2.4) Be sure unit is plugged in properly.</p>	<p>2.2) May need to replace individual air cell.</p> <p>2.3) May need to connect individual air cell.</p> <p>2.4) Make sure plug is in grounded outlet according to operations manual.</p>
3.) Patient is "bottoming out".	<p>3.1) First, try same procedures as above.</p> <p>3.2) Patient weight setting may be set too low.</p>	<p>3.2) Increase or decrease weight setting by pushing <b>Patient Weight</b> button until adequate pressure setting is achieved.</p>
4.) Power control unit is turning on, but displays are remaining SR311.		<p>4.1) Valve motor may be faulty. Turn unit off for five seconds and re-start.</p>
5.) Power control unit is inoperable.	<p>5.1) This could be caused by a power surge that has overloaded the circuitry. Turn unit off for several seconds. Check the fuse for damage. Re-try turning unit on with normal operating procedures.</p>	<p>5.2) Call customer service at 1-800-621-4844.</p>

## 14.0 TECHNICAL SPECIFICATIONS

### 14.1 AiroDyne™ Model # PT1450

#### **ELECTRICAL**

Electrical Rating:	110-120 VAC, 50-60Hz, 0.1 A
Agency Approvals:	UL 2601-1
Protection Against Shock:	Class I
Applied Parts:	Type B Equipment
Mode of Operation:	Continuous
Fuse:	1A T250V

#### **DIMENSIONS**

Mattress Replacement (PT211)	80" x 37" x 10. 5"
Pump (PT311)	10" x 8.5" x 3.5"

#### **WEIGHT**

Mattress Replacement (PT211)	20 lbs.
Pump (PT1450P)	7 lbs.

#### **WARRANTY**

Pump (PT311)	2 year
Mattress Replacement (PT211)	2 year
Cover (PT610-8)	2 year

## 15.0 WARRANTY

Please note: The warranty below has been drafted to comply with federal law applicable to products manufactured after July 4, 1975.

This warranty is extended only to the original purchaser / user of our products.

PrimaTech Medical Systems™ warrants each of its products against defects in material and workmanship for the period(s) specified below. The period begins from the date of shipment from PrimaTech Medical Systems.

**AiroDyne™ PT1450**

Power Control Unit: 2 years  
Mattress Replacement: 2 years  
Therapeutic Cover: 2 years

During the warranty period if any such product shall be proven to be defective after proper test and examination, such product shall be repaired or replaced at PrimaTech Medical Systems™ option.

Limitations and Exclusions: This warranty does not include repair for stains, punctures, tears, dents, and damaged electric cords. In addition, the foregoing warranty shall not apply to products (including parts) that have been modified without PrimaTech Medical Systems™ authorization, or if any unauthorized parts have been used, or if products have been subjected to negligence.

For warranty service please contact PrimaTech Medical Systems™ customer service for an appropriate RA #. Returns will be rejected that don't have an appropriate RA #. PrimaTech Medical Systems will pay for freight to return goods to customer.

This warranty stated above is the only warranty made by PrimaTech Medical Systems™. It shall not extend beyond the duration of the expressed warranty provided herein and the remedy for violations of any implied warranty shall be limited to repair or replacement of the defective product pursuant to the terms contained herein. PrimaTech Medical Systems™, nor any of its agents shall be held liable for any consequential or incidental damages whatsoever.

This warranty shall be extended to comply with state / provincial laws and requirements.