

LUMEX®

AltaDyne™

For The Quality Of Life

Low Air Loss Therapy Mattress Replacement System

AltaDyne XT Model # 773400A

AltaDyne XD Model # 774200A



Operators Manual

Please read the manual before use

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 **FOR US AND CANADA ONLY**

E228289

53DG



Medical Equipment-Air Pump
with respect to electrical shock, fire and
mechanical hazards only in accordance with
UL60601-1 AND CAN/CSA C22.2 NO.601.1

IMPORTANT SAFEGUARDS

READ ALL INSTRUCTIONS BEFORE USING

DANGER - To reduce the 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 the 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 by, on, or near children or invalids.
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 dropped into water. Return the product to a service center for examination and repair.
5. Keep the cord away from heated surfaces.
6. Never block the air openings 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. This device is class II equipment with functional earth, no Protective Earth id provided.
(For 120V system only)

SAVE THIS MANUAL FOR REFERENCE

1. Introduction

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

1.1 General Information

AltaDyne systems use most advanced technologies and mattress materials to deliver the best quality, comfort and whisper-quiet operations to you and your customers. Most systems in AltaDyne are recommended for prevention and treatment of pressure ulcers up to and including stage IV pressure ulcers.

This LumexAir range of system has been independently tested and successfully approved to the following standards:

EN 60601-1/ UL 2601

EN 60601-1-2

EN 55011 Class B

EN 60555-2 Class A

EN 60555-3

EN 50141

IEC 1000-4-2

IEC 1000-4-4

IEC 1000-4-5

1.2 Intended Use

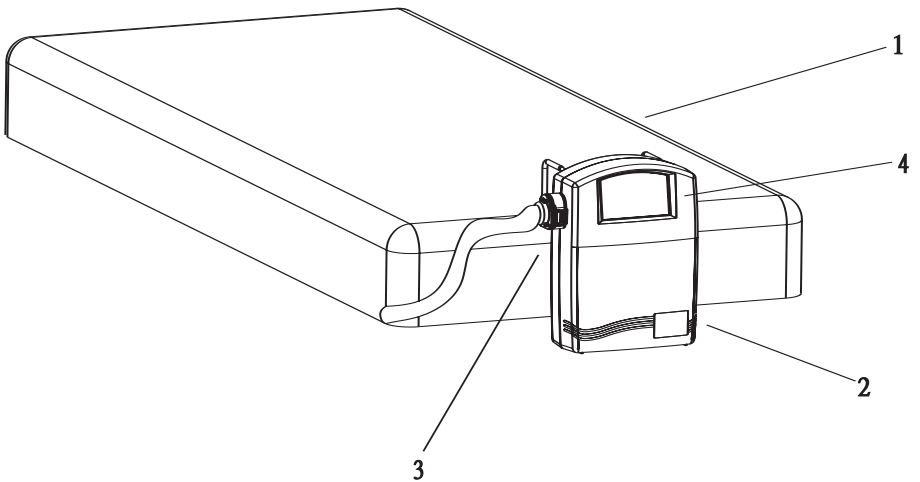
This product is an advanced alternating pressure relief replacement system suitable for high risk patients. This low air-loss system is intended to help and reduce the incidence of pressure ulcers while optimizing patient comfort. It is recommended for prevention and treatment of pressure ulcers up to stage IV.

⚠ NOTE : Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

2. Product Description

2.1 Pump and Mattress System

The digital controlled pump unit, which provides adjustable pressure and cycle time, is compact and effective in pressure control and management. The replacement mattress, which offers a low air loss therapy, provides patients a comfortable pressure support suited to each individual. The patented cell-in-cell design allows the inflation and deflation of air cells to be achieved in the shortest amount of time while providing the good pressure dispersion. The inner cell also offers a sufficient weight support during a power failure.



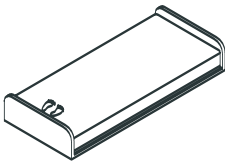
1. Mattress
2. Pump unit
3. Air tube connector
4. Control Panel

3. Installation

3.1 Unpacking

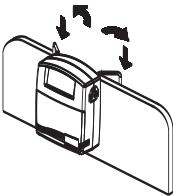
The pump unit and mattress are packaged in a separate box to secure its contents inside. Unpacking these boxes to remove the pump unit and mattress and check for any damage, which may have occurred in shipping. If there are damages, please contact your dealer immediately.

3.2 Setting Up

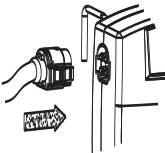


1. Place the mattress on top of the bed frame. Please note for the foot end. Mattress can be secured firmly by fixing the elastic straps at the bottom bed frame.

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

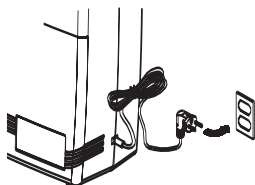


2. Hang the pump onto bed rail (foot-end), and adjust and adjust for best fit.



3. Connect air tube connector from air mattress to the pump unit. When "click" is felt or heard, the connection is completed and secured.

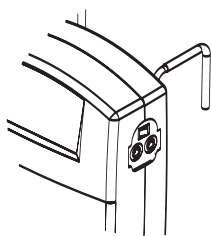
⚠ NOTE: Check and ensure the air tubes are not kinked or tucked under mattress.



4. Plug into main electrical outlet.

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

⚠ **NOTE: Put the plug into socket of grounded AC power.**



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.**

Grounding:

(For 120V system only)

Before any connection to the output connectors is made, the unit shall be connected to grounding conductor via the three-core main cable; the grounding is only a "functional grounding".






Installation tips are listed below:



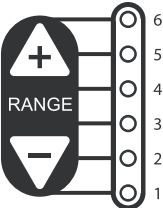
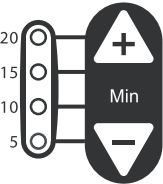
After installation, the extra wire of the power cord, if any, should be neatly arranged to avoid any tripping accidents. The equipment should be firmly placed at position where users/doctors can access easily.

4. Operation

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

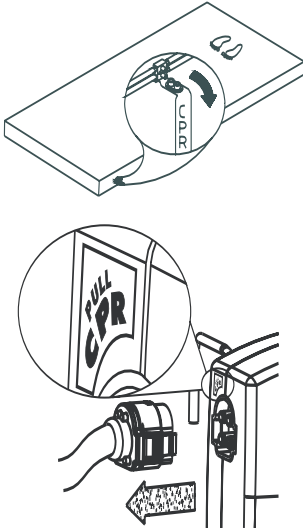
4.1 Function Description:

Control Button	Function Description
	<p>POWER To turn on control unit. It takes approximately 15-min to inflate the mattress. The default settings are 5-min alternating cycle time and level 1 comfort level.</p>
	<p>ALARM MUTE Enable and disable the audible alarm feature. Press this button to silence the audible alarm. The alarm buzzer will sound again after 3 minutes if the pressure has not yet returned to the normal condition.</p>
	<p>PANEL LOCK To lock the current setting and prevent others from changing. To unlock the panel, press this button 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 properly.2. Yellow light - pressure has not reached the preset setting.3. Flashing yellow light - low pressure condition.
	<p>AUTOFIRM For maximum inflation of mattress. All other functions are disabled unless this button is pressed again. This mode will last for 20 minutes and then it will return to default setting automatically.</p>

Control Button	Function Description
	<p>STATIC For non-alternating mode of mattress.(such as regular air mattress) To go back to alternating mode, simply press this button again.</p>
	<p>SEAT INFLATE The Body zone's pressure will be increased higher than the preset setting to give a proper support for purposes of user's sitting up and easiness of getting in and out of the mattress. This function should be disable when user is in lying position to prevent too high pressure support at body zone. (only available in 10" and 8" mattress models)</p>
	<p>COMFORT RANGE The mattress has 6 comfort ranges. Use UP/DOWN button to adjust the comfort levels. 1 is the softest, 6 is the firmest.</p>
	<p>CYCLE TIME 4 alternating cycle time. Use UP/DOWN button to adjust the cycle time of 5, 10, 15, 20 minutes</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 setting automatically.
3. After the mattress is fully inflated, user can change the setting according to their preference or recommended by physician.



4.3 CPR

When there is an emergency to perform CPR on the patient, quickly pull the CPR valves to release air from mattress. The CPR valves are located at the head-end, right-hand-side of the mattress. The air tube connector (located on the pump unit indicated with "PULL CPR" sign) can be disconnected for even faster deflation.

4.4 Alternating Function Setup

User can adjust pressure of air mattress by adjusting the comfortable range from level 1 to 6. The system also provides various alternating cycle time mode, 5, 10, 15, 20 minutes.

Please consult your physician for a suitable setting.

When the Low Pressure indicator is off, it indicates the mattress has reached to its preset softness. Patient can lie on the mattress.

⚠ NOTE: Check to see if the suitable comfort range (or pressure setting) is selected by sliding one hand between the deflated air cell and the patient to feel the patient buttock. Users should be able to feel the minimal contact.

4.5 Seat Inflate Function

When it is necessary for patient to sit on the bed (or for ease of getting in and out of mattress), the seat inflate function provide extra pressure compensation around buttock area for better surface support. This function should be disabled when user is in lying position to prevent too high pressure around buttock area.

4.6 Low Pressure and Alarm Function

When an abnormal low pressure occurs, the Low Pressure Indicator (flashing yellow LED) will light up with audible alarm. Check if all the connections are securely made and that they are correctly installed as per installation instructions.

⚠ NOTE: If the pressure level is consistently low, check for any leakage at air cells or connecting tubes. If necessary, replace any damaged cells or tubes or contact local qualified dealer for repair.

If the control unit is equipped without audible alarm feature, the Low Pressure Indicator will flash until the low-pressure fault condition is solved. If the control unit is equipped with audible alarm feature, the Low Pressure indicator will flash and the alarm will sound when air pressure is below normal (preset pressure). To silence the alarm, simply press the alarm mute button, and it will be silent for 3 minutes; however, the Low Pressure Indicator still remains flashing. After 3 minutes, alarm buzzer will alert again if the pressure has not yet returned to normal.

5. Cleaning

⚠ CAUTION: Ensure the pump unit is disconnected from the main power before cleaning.

5.1 Pump Unit

Wipe with a damp cloth and a mild detergent and keep it away from dust. If other detergent is used, choose one that will have no chemical effects on the surface of the plastic case of the pump unit. All parts should be air dried thoroughly before use.

⚠ CAUTION: Do not immerse or soak pump unit.

5.2 Mattress

Wipe down with warm water containing a mild detergent. The cover may also be cleaned using sodium hypochlorite diluted in water. All parts should be air dried thoroughly before use.

Do not use Phenolic based products for cleaning.

For suitable and locally available cleaner please ask your distributor.

⚠ CAUTION: Dry the mattress on SUNLESS capitalized area after cleaning.

6. Storage

1. Pull the CPR tags and make sure all cells are deflated.
2. Lay the mattress out flat and upsides down.
3. Protect the air tube coupler by putting it in the inner side of 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.

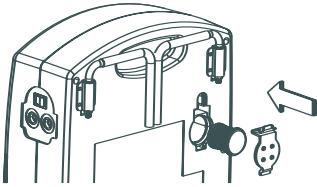
7. Maintenance

7.1 General

1. Check main power cord and plug for is abrasions or excessive wear.
2. Check mattress' cover for signs of wear or damage. Ensure mattress cover and tubes are stubbed together correctly.
3. Check the air tube connections for any damage.
4. Report any problems or malfunctions to local distributors.

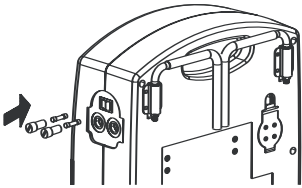
7.2 Air Filter Replacement

The air filter should be checked and dusted periodically.



1. Snap out the plastic cover, located on the back of the pump unit.
2. The filter is reusable and can be washed gently with a mild detergent and water.
3. Suggest to replace air filter regularly if the environment is dirty. This will help to improve the airflow. Spare filters are available from your local distributor.

7.3 Fuse Replacement



1. Disconnect the plug from mains power when a fuse is to be replaced.
2. Remove the cover of the fuse holder by means of a small screwdriver.
3. Insert a new fuse of the correct rating in, and replace the cover of the fuse holder back. Check the technical specification for correct fuse rating.

8. Troubleshooting

Problem	Solution
Power is not ON	<ul style="list-style-type: none"> • Check if the plug is connected to main power. • Check if there is any blown fuse.
Alarm is on (audible & visual)	<ul style="list-style-type: none"> • Check if the connection between air tube connector to pump unit is tightly secured. • Check if the CPR is sealed. • Check if there are any leakage on air cells. • Check if all tubing connections along mattress are secured.
Patient is bottoming out	<ul style="list-style-type: none"> • Pressure setting might be inadequate for the patient, adjust comfort range 1 to 2 levels higher and wait for a few minutes.
Mattress becomes too firm and pressure can't be reduced.	<ul style="list-style-type: none"> • This may happen when the AUTOFIRM is activated for too long. Release some air by disconnecting the air tube connector and change to preferred setting.
Mattress form is loose	<ul style="list-style-type: none"> • Check if all the snap buttons or straps of mattress are all securely fastened. • Check if the mattress is fixed to the bed frame by elastic straps.
Air tube connector won'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 by hearing "click" while pushing it into pump unit.
No air produced from some air outlets of the air tube connector	<ul style="list-style-type: none"> • This is normal since there is alternating mode. Air outlets take turn to produce air during their preset cycle time.

If your questions can't be answered with above information, it might require a technician to take care the problem. Please contact your local dealer directly.

9. Technical Description

Specifications:

Pump		Specification	
Power supply (Note: See rating label on the product.)		AC100-120V, 50/60Hz, 1.0A	AC220-240, 50/60Hz, 1.0A
Fuse Rating		1A	T1A
Dimension (L x W x H)		37 x 27 x 13 (cm) or 14.4" x 10.5" x 5.0"	
Weight		6.0 kg or 13.2 lb	
Environment	Temperature	Operation: 10°C to 40°C (50°F to 104°F) Storage: -10°C to 50°C (14°F to 122°F) Shipping: -10°C to 70°C (14°F to 158°F)	
	Humidity	Operation: 30% to 75% non-condensing Storage: 10% to 90% non-condensing Shipping: 10% to 90% non-condensing	
	Atmosphere	700 hPa ~ 1060 hPa	
Classification:		Class II, Type BF, Applied Parts: Mattress <ul style="list-style-type: none"> • Not suitable for use in the presence of a flammable anesthetic mixture • IPX0, Enclosed equipment without protection against ingress of water • Continuous operation 	
Mattress		Specification	
Model		Bariatrics 42	Bariatrics 48
Dimension (L x W x H)		200 x 107 x 26(cm)	200 x 122 x 26(cm)
		78.7" x 42"x 10"	78.7" x 48"x 10"
Weight		11.6 kg or 25.5 lb	12.8 kg or 28.2 lb

* The weight and dimension of mattress is measured without foam.

Consult the distributor or EU representative for further technical documents.

NOTE: The specifications, also apply to those areas operating with the same power supply.

SYMBOLS



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



The Symbol for class II equipment, 2 concentric square indicating double insulation.



Attention, should read the instructions !

IPX0 Enclosed equipment without protection against ingress of water.

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