

LUMEX®

A Graham-Field Brand

AltaDyne® XT Model 773400A

AltaDyne® XD Model 774200A

Alternating Pressure / Low Air Loss
Replacement Mattress System



USER MANUAL

**Important: Do not operate the Mattress System
without first reading and understanding this manual!
Save this manual for future use.**

**The latest version of this manual can be found online
at www.grahamfield.com.**

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INTRODUCTION

Use this manual for set-up and operation of the Alternating Pressure/Low Air Loss Mattress System. Read all instructions before using the mattress system. Save this manual for future reference.

INTENDED USE OF THIS DEVICE

The AltaDyne XT/AltaDyne XD Alternating Pressure/Low Air Loss Mattress System is an advanced alternating pressure relief replacement system and low air loss system suitable for the prevention and treatment of up to and including stage 4 pressure ulcers.

Contraindication

⚠ WARNING: DO NOT use this product in the presence of flammable anesthesia. There is a possible fire hazard when this product is used with certain oxygen delivery equipment.

Use nasal cannula, face mask, or 1/2 length oxygen tent to deliver oxygen in the presence of this product.

DO NOT use a full length oxygen tent that extends past the top surface of the mattress with this product.

IMPORTANT SAFETY PRECAUTIONS

The safety statements presented in this chapter refer to the basic safety information that should be observed by those using the Alternating Pressure/Low Air Loss Mattress System. There are additional safety statements in other chapters or sections, which may be the same as or similar to the following, or specific to the operations.

⚠ DANGER: Indicates an imminent hazard situation that, if not avoided, will result in death or serious injury.

⚠ WARNING: Indicates a potential hazard situation or unsafe practice that, if not avoided, could result in death or serious injury.

⚠ CAUTION: Indicates a potential hazard or unsafe practice that, if not avoided, could result in minor or moderate personal injury.

▲ NOTICE: Indicates a potential hazard or unsafe practice that, if not avoided, could result in product or property damage.

Info: Provides application recommendations or other useful information to ensure that you get the most from your product.

DANGER

To reduce the risk of electrocution:

⚠ DANGER: Always unplug this product immediately after using.

⚠ DANGER: Do not use this product while bathing.

⚠ DANGER: Do not place or store this product where it can fall or be pulled into a tub or sink.

⚠ DANGER: Do not place this product in or drop into water or other liquid.

⚠ DANGER: Do not reach for a product that has fallen into water. Unplug it *immediately*.

WARNING

To reduce the risk of burns, electrocution, fire, or personal injury:

⚠ WARNING: Do not leave this product unattended when plugged in.

⚠ WARNING: Always use close supervision when this product is used by, on, or near children or those who require close supervision.

⚠ WARNING: Use this product only as intended and described in this manual. Do not use attachments or accessories not recommended by Graham-Field.

⚠ WARNING: Never operate this product if

- a) it has a damaged cord or plug.
- b) it is not working properly.
- c) it has been dropped or damaged.
- d) it has been dropped into water.

Return the product to your Graham-Field equipment provider.

⚠ WARNING: Keep the cord away from heated surfaces.

⚠ WARNING: Never block the air openings of this product or place it on a soft surface, such as a bed or couch, where the openings may be blocked. Keep the air opening free of lint, hair, and other similar particles.

⚠ WARNING: Never drop or insert any object into any opening or hose.

⚠ WARNING: Connect this product *only* to a properly grounded power outlet.

⚠ WARNING: Maximum weight capacity for this product is:

AltaDyne XT (773400A)	400 lb (182 kg)
AltaDyne XD (774200A)	800 lb (364 kg)

NOTICE

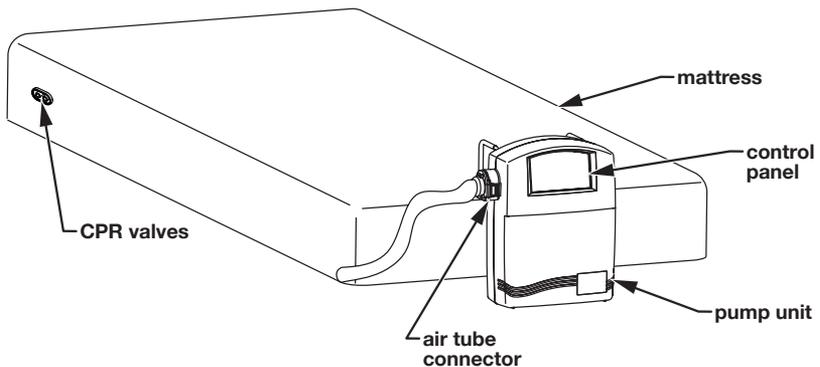
▲ NOTICE: The pump can be used only with the accompanying mattress. Do not use it for any other purpose.

EQUIPMENT SYMBOLS

	Attention! Consult accompanying documents (this manual)
	“BF” symbol: Indicates that this product is in accordance with the degree of protection against electric shock for type BF equipment
	Class II equipment, 2 concentric squares, indicating double insulation
IPX0	This equipment has no protection against ingress of water

PRODUCT DESCRIPTION

The AltaDyne XT/AltaDyne XD offers both low air loss and alternating pressure therapy. The pressure and alternating cycle time are adjustable, in order to maximize therapy and comfort for each individual. The patented cell-in-cell feature is designed to prevent bottoming out in the event of a power failure. The easy-to-operate digital control unit features a lock-out setting designed to prevent changes by unauthorized personnel.



pump and mattress system

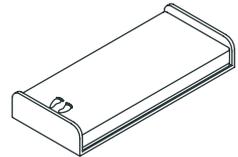
INSTALLATION

UNPACKING

1. Before unpacking, check for obvious damage to the carton(s) or its contents. If damage is evident, please notify the carrier and your Graham-Field equipment provider.
2. Remove all loose packing from the carton(s).
3. Carefully remove all components from the carton(s).
4. Inspect all components. If damage is evident, please notify the carrier and your Graham-Field equipment provider.

PUMP AND MATTRESS INSTALLATION

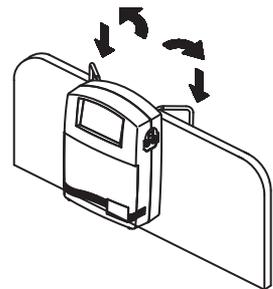
1. Place the mattress on top of the bed frame; ensure that the foot end symbol faces up at foot end as shown at right. Secure the mattress to the bed by affixing the elastic straps to the bottom bed frame.



2. Fold open the wire hangers on the back of the pump as shown at right.



3. Either hang the pump on the bed's foot end as shown at right, or place the pump on a flat surface easily accessible to the user, caregiver, and/or doctor.



▲ **NOTICE:** Place the device in a position where the user, caregiver, and/or doctor can access it easily.

4. Connect the mattress-pump air hose quick connector as shown at right; ensure that the connector has clicked securely into place before continuing.



▲ NOTICE: Ensure that the air hoses are not kinked or tucked under the mattress.

⚠ WARNING: Locate all cords so that they will not be stepped on, tripped over, or otherwise subjected to damage or stress.

⚠ WARNING: Do not use a household extension cord if the electrical cord does not reach the power outlet. Use of an improper extension cord could result in fire and electric shock. If an extension cord must be used, use a three conductor cord with ground, properly wired, in good electrical condition, and keep it as short as possible.

⚠ WARNING: Ensure that the local power voltage is appropriate for the pump unit.

5. Plug the power cord into a properly grounded electrical outlet.

OPERATION

⚠ WARNING: Always read operating instructions before use.

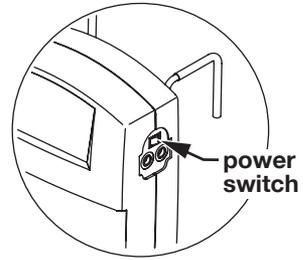
CONTROL PANEL FUNCTIONS

Control Button	Function	Description
	Power	Turns on the control unit. It takes approximately 15 minutes to inflate the mattress.
	Alarm Mute	Enables and disables the audible alarm feature. Press it to silence the audible alarm. The alarm buzzer will sound again after three minutes if the pressure has not yet returned to normal.
	Panel Lock	Locks the current setting to prevent others from changing it. To unlock the panel, press this button and hold it for three seconds.
	Low Pressure Indicator	<ol style="list-style-type: none"> 1. No light: normal condition, mattress is operating properly. 2. Non-flashing yellow light: pressure has not reached the preset setting. 3. Flashing yellow light: low pressure.
	AutoFirm	For maximum inflation of mattress. All other functions are disabled until this button is pressed again. This mode lasts for 20 minutes, then automatically returns to default setting.
	Static	Selects non-alternating mode, similar to a regular air mattress. To go back to alternating mode, press this button again.
	Seat Inflation	Increases the body zone's pressure above the preset setting, ensuring adequate support for sitting position and getting on or off the mattress. Disable this function when the user is lying down, to prevent excessive pressure at body zone.
	Comfort Range	Adjusts the comfort level. Use + / - button to increase or decrease level (+ increases level; - decreases level). The mattress has 6 comfort ranges: 1 is the softest, 6 is the firmest. Please consult your physician for the appropriate setting.
	Cycle Time	Adjusts the cycle time. Use + / - button to increase or decrease cycle time to that desired. (+ increases cycle time; - decreases cycle time). Please consult your physician for the appropriate setting. AltaDyne XT (773400A) cycles between 5, 10, 15, 20 min. AltaDyne XD (774200A) cycles between 10, 15, 20, 25 min.

OPERATION

Before turning power ON, ensure that air tube connectors and CPR valves are securely fastened.

1. Turn the power switch, shown at right, to the ON position.
2. Press the control panel Power button to start the system.
3. Press the control panel AutoFirm button to activate the AutoFirm function.



Info: Use AutoFirm mode for the quickest inflation at set-up; AutoFirm mode will last for 20 minutes, then automatically return to the default setting.

4. The pump will begin delivering air into the mattress. While the mattress is filling, the low pressure indicator (non-flashing yellow LED) will illuminate.
5. When the selected pressure level is reached, the low pressure indicator will de-illuminate.
6. Replace all sheets, blankets, and pillows on the bed.
7. The patient can now lie on the bed. The pressure may now be adjusted to the physician-prescribed setting using the control panel Comfort Range button. The alternating function may now be adjusted to the physician-prescribed setting using the control panel Cycle Time button.

PRESSURE ADJUSTMENT

Generally, a lighter patient will need a lower (softer) setting while a heavier patient will need a higher (firmer) setting, but pressure adjustment must ultimately be based on the patient's *weight distribution*. A short, stocky person may be the same weight as a tall, thin person, but their settings will not be the same. The mattress should be firm enough to support the patient, yet soft enough so the patient will sink down to eliminate pressure points. Test the pressure by placing four fingers below the mattress under the patient's buttock area; your fingers should just fit. If the fit is too loose, decrease the setting. If your fingers do not fit well, increase the setting two notches firmer. Wait ten minutes and then check again. You should only have to adjust this setting one time per patient. Please consult your physician for an appropriate setting.

Comfort range setup

The user can adjust the mattress pressure level by adjusting the comfort range from 1 to 6: Please consult your physician for an appropriate setting. When the Low Pressure Indicator de-illuminates, the mattress has reached its preset pressure level.

Alternating function (cycle time) setup

The user can adjust the alternating cycle time mode as follows. Please consult your physician for the appropriate setting.

AltaDyne XT (773400A) cycles between 5, 10, 15, 20 min.

AltaDyne XD (774200A) cycles between 10, 15, 20, 25 min.

Seat Inflation Function

The seat inflation function provides extra pressure compensation around the buttocks area for better surface support when the patient sits on, gets on, or gets off the mattress. Disable this function when user is lying down, to prevent excessive pressure around the buttocks area.

LOW PRESSURE AND ALARM FUNCTION

When air pressure is below the preset pressure for a prolonged period of time, the control panel Low Pressure Indicator (yellow LED) will flash and the alarm will sound. Ensure that all connections are secure and correctly fastened per preceding installation instructions. To silence the alarm, press the Alarm Mute button; it will be silent for three minutes but the Low Pressure Indicator will still flash. After three minutes, if the pressure has not yet returned to normal, the alarm will sound again.

Info: If the pressure level is consistently low, check for leakage at air cells or connecting tubes. If necessary, contact your GF equipment provider to replace damaged cells or tubes.

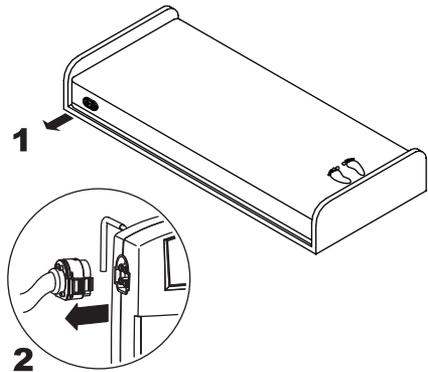
QUICK DISCONNECT

To disconnect the device quickly, pull the power plug from the wall connector.

CPR FUNCTION

If CPR must be performed on the patient while the mattress is in use, to immediately deflate the mattress, either:

1. Pull the CPR valves from the mattress in the location of the arrow shown at right, or
2. Disconnect the quick connector from the pump in the location of the arrow shown at right.



MAINTENANCE

CLEANING

⚠ WARNING: Ensure that the main power plug is unplugged during cleaning.

Perform the following cleaning procedures before use.

Pump: Wipe the pump with a clean, damp cloth and mild detergent, and keep it away from dust. Air dry.

▲ NOTICE: Do not use phenolic products or corrosive or powdered cleansers to clean the pump.

▲ NOTICE: Do not immerse or soak the pump.

Mattress: Wipe the mattress unit with a clean, damp cloth and mild detergent. The mattress may also be cleaned using a 10% solution of sodium hypochlorite (bleach) diluted in water. Air dry all parts thoroughly before use.

▲ NOTICE: Do not use phenolic products to clean the mattress.

▲ NOTICE: After cleaning, air dry the mattress without direct exposure to sunlight.

GENERAL MAINTENANCE

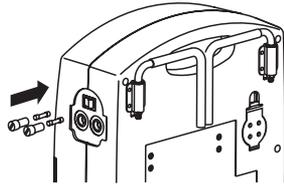
1. Check main power cord and plug for abrasion or excessive wear.
2. Check mattress cover for signs of wear or damage. Ensure mattress cover and tubes are connected correctly.
3. Check airflow from the air hose connector.
4. Check the air hose connectors for damage.
5. Check the air hoses for any kink or break. For replacement, please contact your GF equipment provider.
6. Contact your GF equipment provider with any problems.

Fuse replacement

tool needed: small screwdriver

⚠ WARNING: Ensure that the main power plug is unplugged before fuse replacement.

1. If you suspect a blown fuse, disconnect the plug from the wall outlet immediately.
2. Use a small screwdriver to remove the cover of the fuse holder (fuse locations are shown in picture at right).
3. Insert a new fuse of the same rating.
4. Replace the fuse holder cover.

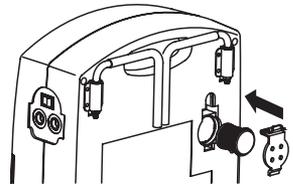


Air filter cleaning/replacement

⚠ WARNING: Ensure that the main power plug is unplugged before air filter cleaning or replacement.

The air filter is located on the back of the pump. Clean the air filter once per month.

1. Snap out the air filter plate (filter location is shown in picture at right).
2. Remove the air filter. The filter is reusable, if not torn, and can be washed gently with a mild detergent and water. Air dry the filter completely before replacing in pump.
3. Replace filter and plate after filter has dried completely. Replace the air filter more often than once per month if it is gray, torn, or the environment is dirty.
4. Contact your GF equipment provider for replacement filters.



STORAGE

1. Disconnect the air hose connectors and CPR valves.
Ensure that all cells are deflated.
2. Lay the mattress out flat and upside down.
3. Lay the air hose connector on the inner side of the mattress to protect it.
4. Roll from the head end toward the foot end.
5. Stretch the foot-end strap around the rolled mattress to prevent unrolling.
6. Store mattress and pump in a dust-free environment with no exposure to direct sunlight.

▲ NOTICE: Do not fold, crease or stack the mattress.

TROUBLESHOOTING

Problem	Solution
Power is not ON	Ensure that plug is connected to power.
	Check if fuse is blown.
Alarm is on (audible & visible)	Check if the connection between pump and hose (quick connector) is secure.
	Check if the CPR connection is secure.
	Check if any air cells have leakage.
	Check if all tubing connections along mattress are secure
Patient is bottoming out	Pressure setting may be too low for patient; adjust comfort range 1 to 2 levels higher, wait a few minutes, recheck.
Mattress becomes too firm and pressure can't be reduced	AutoFirm may have been activated for too long. Release some air by disconnecting the air tube connector, change to preferred comfort level, reconnect.
Air mattress is loose	Ensure snap buttons and/or mattress straps are securely fastened.
Air tube connector won't fit into pump	Press handles on both sides of air tube connector. Ensure the connector is tightly secured by listening for "click" while connecting.
No air produced from some air tube connector air outlets	This is normal, since this system has alternating mode. Air outlets alternate to produce air during their preset cycle time.

Contact your GF equipment provider if you are unable to solve your problem after using the above steps.

SPECIFICATIONS

Standards	
This pump and mattress system has been independently tested and successfully approved to the following standards	EN60601-1/UL 2601, EN60601-1-2, EN55011 Class B, EN 60555-2 Class A, EN 60555-3, EN 50141, IEC 1000-4-2, IEC 1000-4-4, IEC 1000-4-5

For U.S. and Canada only		
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

Pump		Specification
Power Supply		120V AC 50/60 Hz
Fuse Rating		1A
Cycle Time	AltaDyne XT (773400A)	5, 10, 15 or 20 minutes
	AltaDyne XD (774200A)	10, 15, 20 or 25 minutes
Air Output		>16 LPM
Dimensions (L x W x H)		14.4" x 10.5" x 5" (37 x 27 x 13 cm)
Weight		9.9 lb (4.5 kg)
Environment	Temperature	Operation: 50°F to 104°F (10°C to 40°C) Storage: 14°F to 122°F (-10°C to 50°C) Shipping: 14°F to 158°F (-10°C to 70°C)
	Humidity	Operation: 30% to 75% non-condensing Storage: 10% to 90% non-condensing Shipping: 10% to 90% non-condensing
	Atmosphere	10.15 psi ~ 15.37 psi (70 kPa ~ 106 kPa)
Classification		Class II, Type BF, Applied Part: Air Mattress Not suitable for use in the presence of a flammable anesthetic mixture IPXO, enclosed equipment without protection against ingress of water Continuous operation

Mattress		Specification
Dimensions (L x W x H)	AltaDyne XT (773400A)	78.7" x 35.4" x 8" (200 cm x 90 cm x 20.3 cm)
	AltaDyne XD (774200A)	78.7" x 42" x 10" (200 cm x 106.7 cm x 25.4 cm)
Arrangement	AltaDyne XT (773400A)	20 x 8" cells
	AltaDyne XD (774200A)	20 x 10" cells
Material	Cover	Quilted top sheet Slip-resistant bottom mat Top cover fabric: Nylon PU (vapor permeable, fluid resistant)
	Cells	Nylon PU

WARRANTY

GF Health Products, Inc. warrants the Lumex AltaDyne XT 773400A / AltaDyne XD 774200A Alternating Pressure / Low Air Loss Mattress System for defects in workmanship and materials for the terms listed below.

Control unit: two years

Mattress: one year

If a product is deemed to be under warranty, GF Health Products, Inc. shall provide, at its option, (1) replacement of any defective part or product or (2) a credit of the original selling price made to GF Health Products, Inc.'s initial customer. The warranty does not include any labor charges incurred in replacement part(s) installation or any associated freight or shipping charges to GF Health Products, Inc.

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**USA Corporate Headquarters:
GF Health Products, Inc.
2935 Northeast Parkway
Atlanta, Georgia 30360**

**telephone: 770-368-4700
fax: 770-368-2386**



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www.grahamfield.com

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