Mason Air LS9000B42
Mason Air LS9000B48

Bariatric Low Air Loss Mattress System

User's Manual

PLEASE READ ALL INSTRUCTIONS BEFORE USE.

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⚠ FOR US AND CANADA ONLY

E465930
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

Le produit à été testé avec des équipements médicaux et respecte les normes UL 60601-1 and CAN / CSA C22.2 No.601.1. prévenant les choc électrique, le feu et les risques de blessures physiques.

CE The Neo-Series Pump is in conformity with the Medical Devices Directive (93/42/EEC) and has been subject to the conformity assurance procedures laid down in the Council Directive.

IMPORTANT SAFEGUARDS
READ ALL INSTRUCTIONS BEFORE USE

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 this 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 or if it has been dropped, damaged, or dropped into water. Return the product to a ser 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 couch, where their openings may be blocked. Keep the air openings free of lint, hairs, and other similar particles.
7. Never drop or insert any object into any opening or hose of this product.
8. This device is Class II equipment with functional earth, no Protective Earth is 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

Neo-series 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 Neo-series are recommended for prevention and treatment of pressure ulcers up to and including stage IV pressure ulcers.

The Neo-series range of systems have been independently tested and successfully approved to the following standards:

EN 60601-1/ UL60601-1
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

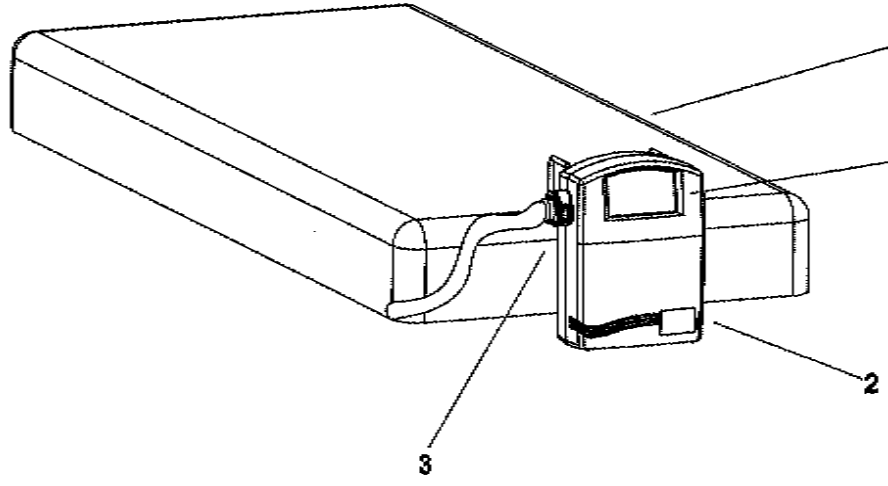
This product is an advanced alternating pressure relief replacement system suitable for high-risk patients. This low air-loss system is intended to help and reduce the incidence of pressure ulcers while optimizing patient comfort. It is recommended for prevention and treatment of pressure ulcers up to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

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

⚠ **NOTE : L'équipment ne peut être utilisé s'il y a risque de mélange d'un anesthésique inflammable avec l'air ou l'oxygène ou oxyde nitreux.**

2. Product Description

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



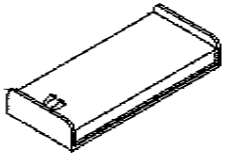
1. Mattress
2. Pump unit
3. Air tube connector
4. Control panel

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 during shipping. If there are damages, please contact your dealer immediately.

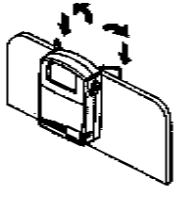
3.2 Setting Up



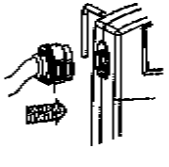
1. Place the mattress on top of the bed frame. Please note for the foot end. Mattress can be secured firmly by fixing the elastic straps at the bottom bed frame.

   It is recommended to use this mattress system with a bed frame with adequate side rails to prevent falling.

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



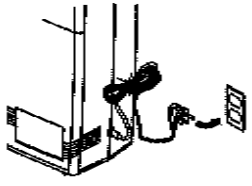
2. Hang the pump onto bed rail (foot-end), and adjust for best fit.



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

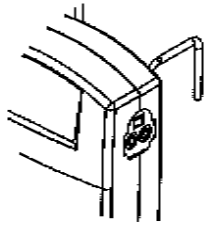
   ⚠ NOTE: Check and ensure the air tubes are not kinked or tucked under mattress.

4. Plug into mains electrical outlet.



⚠ NOTE: Before inserting the plug into the mains, make su
Is suitable for the local main voltage.

⚠ NOTE: Put the plug into socket of grounded AC po



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

⚠ NOTE: Ensure the CPR connectors are sealed comple

Grounding:

(For 120V system only.)

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

Installation tips are listed below:

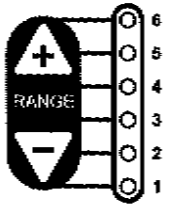
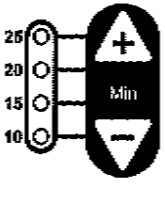
After installation, the extra wire of the power cord, if any, should be neatly arranged to a
any tripping accidents. The equipment should be firmly placed at position w
users/doctors can access easily.

4. Operation

⚠ NOTE: Always read the operating instruction before use.

4.1 Function Description

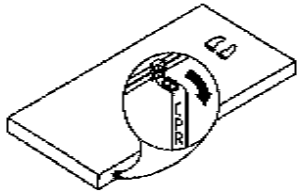
Control Button	Function Description
	POWER To turn on control unit. It takes approximately 15-min to inflate the mattress. The default settings are 5-min alternating cycle time
	ALARM MUTE Enable and disable the audible alarm feature. Press this button to silent the audible alarm. The alarm buzzer will alert again after 3-min if the pressure has not yet returned to normal condition
	PANEL LOCK To lock the current setting and prevent other persons from changing them. To unlock the panel, press this button and hold it for 3 seconds.
	LOW PRESSURE INDICATOR 1. No light - normal condition; mattress is operated accordingly 2. Yellow light - pressure has not reached the preset setting 3. Flashing yellow light - low pressure condition; (see Troubleshooting)
	AUTOFIRM For maximum inflation of mattress. All other functions are disabled unless this button is pressed again. This mode will last for 20-min and then it will return to default setting automatically.

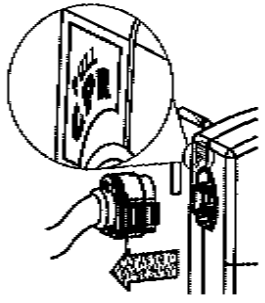
Control Button	Function Description
	STATIC For non-alternating mode of mattress.(such as regular air mattr To go back to alternating mode, simply press this button ag
	SEAT INFLATE The Body zone's pressure will be increased higher than the pre setting to give a proper support while sitting upright for ease getting in and out of the mattress. This function should be disab when user is in lying position to prevent too high pressure supp around truck area.
	COMFORT RANGE 6 comfort ranges of mattress. Use UP/DOWN button to adjust comfort levels. 1 is the softest & 6 is the firmest
	CYCLE TIME 4 alternating cycle time. Use UP/DOWN button to adjust the cy time for 10, 15, 20, 25 minutes

4.2 Operating Instruction

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 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 for: 10,15, 20, 25 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 mattres the seat inflate function provides extra pressure compensation around buttock area for bet surface support. This function should be disabled when user is in lying position to prevent high pressure support around buttock area.

4.6 Low Pressure and Alarm Function

When an abnormal low pressure is lasted for a long time, the Low Pressure Indica (flashing yellow LED) will light up with audible alarm. Check if all the connections are secur 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 connecting tubes. If necessary, replace any damaged cells or tubes or cont local qualified dealer for repair.

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

5. Cleaning

⚠ CAUTION: Ensure the pump unit is disconnected from the mains 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: Air dry the mattress after cleaning, avoid direct sunlight.

6. Storage

1. Pull the CPR tags and make sure all cells are deflated.
2. Lay the mattress out flat.
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.

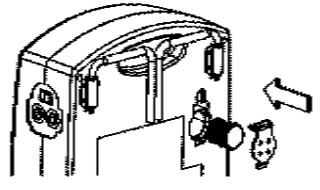
7. Maintenance

7.1 General

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

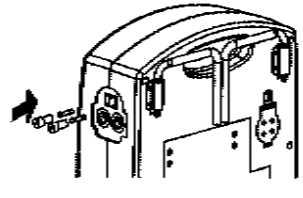
7.2 Air Filter Replacement

The air filter should be checked and dusted periodicall



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

7.3 Fuse Replacement



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

8. Troubleshooting

Problem	Solution
Power is not ON	■ Check if the plug is connected to mains. ■ Check if there is any blown fuse.
Alarm is on (audible & visual)	■ Check if the connection between air tube connector to pump unit is tightly secured. ■ Check if all tubing connections along mattress are secured. ■ Check if the CPR is sealed. ■ Check if there are any leakage on air cells.
Patient is bottoming out	■ 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 lowered down	■ The AUTOFIRM is activated for too long, release some air by disconnecting the air tube connector and change to your preferred setting.
Mattress form is loose	■ Check if all the snap buttons and straps of mattress on all air cells are all securely fastened. ■ Check if the mattress is fixed to the bed frame by elastic straps.
Air tube connector can't fit into the pump unit	■ Press handles on both sides of air tube connector slightly before push 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	■ 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, please contact your local agent directly. They might require a technician to take care the problem.

9. Technical Description

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 • Not suitable for use in the presence of a flammab anesthetic mixture • IPX0, Enclosed equipment without protection agair ingress of water • Continuous operation	

Mattress	Specification	
	42"	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

Consult the distributor or EU representative for further technical documents.

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

SYMBOLS

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

Attention, should read the instructions

IPX0 Enclosed equipment without protection against ingress of water.

Class II equipment, 2 concentric square indicating double insulation.

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

APPENDIX A: EMC INFORMATION

Guidance and Manufacturer's Declaration- Electromagnetic Emissions:

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Emissions Test	Compliance	Electromagnetic Environment-Guidance
RF emissions CISPR 11	Group1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network.
Harmonic emissions IEC61000-3-2	Class A	
Voltage fluctuations / Flicker emissions IEC61000-3-3	Complies	

Guidance and Manufacturer's Declaration- Electromagnetic Immunity:

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Immunity Test	IEC60601 test level	Compliance	Electromagnetic Environment-Guidance
Electrostatic Discharge (ESD) IEC61000-4-2	±6kV contact ±8kV air	±6kV contact ±8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/ burst IEC61000-4-4	±2kV for power supply line ±1kV for input/out line	±2kV for power supply line ±1kV for input/out line	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s)	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC61000-4-11	<5 % U_T (>95 % dip in U_T)for 0,5 cycle 40 % U_T (60 % dip in U_T)for 5 cycles 70 % U_T (30 % dip in U_T)for 25 cycles <5 % U_T (>95 % dip in U_T)for 5 sec	<5 % U_T (>95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of this device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic o a typical location in a typical commercial or hospital environme

NOTE: U_T is the a.c. mains voltage prior to the application of the test level

Guidance and Manufacturer's Declaration - Electromagnetic Immunity:

This device is intended for use in the electromagnetic environment specified below. The user of thi device should make sure it is used in such an environment.

Immunity Test	IEC60601 test level	Compliance	Electromagnetic Environment-Guidance
Conducted RF IEC 61000-4-6	3Vrms150 kHz to 80 MHz outside ISM bands[a]	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of this device, including cables, than there commended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d=1.2\sqrt{P}$ 150kHz to 80MHz $d=1.2\sqrt{P}$ 150kHz to 80MHz $d=2.3\sqrt{P}$ 80 MHz to 2.5G MHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufactur and d is the recommended separation distance in meters (m).[b] Field strengths from fixed RF transmitter as determined by an electromagnetic sit survey[c], should be less than the compliance level in each frequency range[d]. Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a) The ISM (industrial, scientific and medical) bands between 150 kHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz.

b) The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2.5 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 is used in calculating the recommended separation distance for transmitters in these frequency ranges.

c) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.

d) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and this device:

This device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of this device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this device as recommended below, according to the maximum output power of the communications equipment

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=1.2\sqrt{P}$	**80 MHz to 800 MHz** $d=1.2\sqrt{P}$	**800 MHz to 2,5 GHz** $d=2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.