BEAUCARE®

ATmo® Range

MAT60 **ATMO STRATUS**

MAT70 **ATMO AQUILA**



USER MANUAL

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INSTRUCTIONS

DANGER - To reduce the risk of electrocution:

1. Do not place or drop into water or liquid.
2. Do not reach for a product that has fallen into water.
3. Do not place or store the product where it may fall into water.
4. Always unplug this product when not in use.

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

1. Do not block air openings of this unit or place it on a soft surface.
2. Do not operate the unit if it has a damaged cord or plug, return the unit or contact a service centre for examination or repair.
3. Do not drop or insert any object into any opening or hose.
4. Connect the unit to a properly grounded outlet only. See grounding instruction.
5. When plugged in, the unit should not be left unattended.
6. The unit is only for it's intended use, do not use attachments not recommended by the Manufacturer.
7. Close supervision is necessary when this product is used near Children.
8. Keep the cord away from heated surfaces.

NOTE, CAUTION AND WARNING STATEMENTS:

CAUTION – Indicate 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

CE 0197	CE Mark
	Manufacturer
	Complies with standards protecting against electric shock for type BF equipment.
	Consult operating instructions for use
IP21	Protected against solid foreign objects of 12.5 mm and greater; Protection against vertically falling water drops
	Class II
	Temperature limitation/temperature range
	Dry clean, Any Solvent Except Trichloroethylene
	Do Not Iron
	Tumble Dry, Normal, Low Heat
	Do Not Tumble Dry
	Do Not Bleach
	Do Not Dry Clean
	Machine wash, regular / normal, max 95 degrees C (203 degrees F)
	Attention – Observe proper Disposal of Electrical & Electronic Equipment (WEEE): This product should be handed over to an appropriate collection point for the recycling of electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local city office, household waste disposal service or the retail store where you purchased this product.
EC REP	Authorised Representative

A. INTRODUCTION

For initial set up and for reference purpose, this manual should be read carefully.

A.1 GENERAL INFORMATION

The unit is for prevention or treatment of pressure ulcers.

The unit has been tested and successfully approved by the following regulation:
IEC/EN 60601-1
IEC/EN 60601-1-2
IEC/EN 60601-1-11
IEC/EN 61000-3-2 Class A
IEC/EN 61000-3-3
CISPR 11 Group 1, Class B

CE
0197

A.2 INTENDED USE

The unit should help prevent and reduce the incidence of pressure ulcers while optimising Patient comfort. It is used for the following purposes:

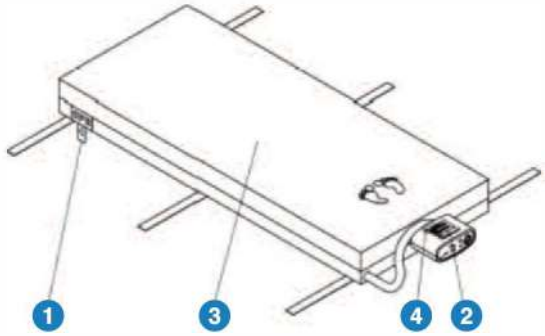
1. For home care and long term care of Patients who may be suffering Pressure Area Care Damage.

2. Pressure relief – to assist in the prevention of pressure area damage.

⚠ **NOTE:** The unit is not suitable for use around flammable anaesthetic mixture, with air or with nitrous oxide.

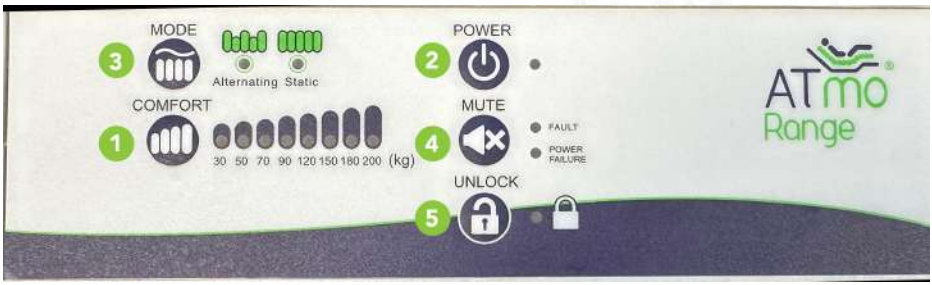
B. PRODUCT DESCRIPTION

B.1 AIR PUMP AND MATERIALS



1. CPR
2. Pump unit
3. Mattress System
4. Quick Connectors

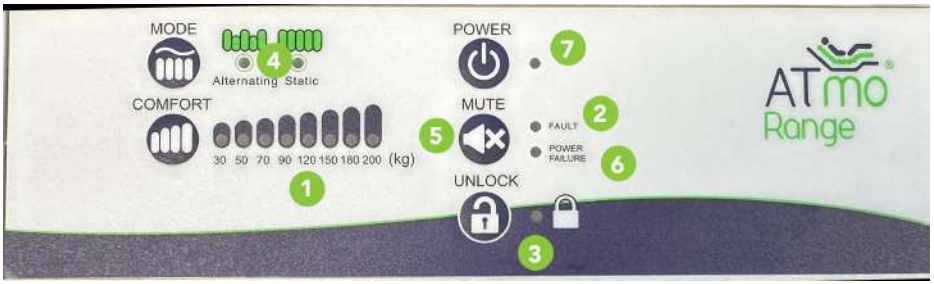
B.2 PUMP AND MATERIALS



1. Comfort Adjust button (30 – 200kg)
2. Power On/Off button
3. Mode button (Alternating/Static)
4. Alarm Mute button
5. Panel Unlock button
6. Fuse
7. Air Filter
8. Mounting Brackets
9. Power Cable Plug



B. 3 FRONT PANEL



1. Comfort (weight) setting indication lights. Adjust the comfort button through the weight settings from 30KG to 200KG, according to the patient's weight.
The weight settings should only be used as a comfort setting and as a guide in conjunction with a qualified Clinicians advice for each individual user.

2. Fault indication light. If the pump detects low pressure in the mattress or the pump requires a service, this light will illuminate Orange, an audible constant beep alarm will also sound. Once the issue has been rectified press the Alarm Mute Button in order to return the pump to normal operation.

3. Panel lock out light. After 2 minutes if no buttons have been pressed on the pump, the panel automatically locks-out. This light will illuminate to show that the panel has locked-out. To unlock the panel, hold down the panel unlock button for 2 seconds. The light goes out and an audible beep will sound.

4. Alternating/Static indicator lights. Depending on whether the alternating or static function has been selected, the corresponding light will illuminate. Pressing the mode button will switch between alternating and static. As a safety feature, the pump automatically switches to alternating from static after a period of 30 minutes.

5. Alarm mute button. When either the fault or power failure alarms are triggered, pressing this button will temporarily silence the alarm whilst the issue is fixed.

6. Power failure alarm indicator light. If the power is lost to the pump this light will illuminate Red and a constant beep alarm will sound. Once the power is restored to the pump the light and alarm will stop.

7. Power on/off indicator light. When the pump is turned on by pressing the power button, this light will illuminate green. When the button is pressed again to turn off the pump or if there is a power failure, the light will go out.

C. INSTALLATION

After delivery check the system for any damage which may have occurred during transit. If damaged in any way contact your supplier immediately.

C1 PUMP AND MATTRESS INSTALLATION



1. Place air mattress on top of the bed frame/platform. Please ensure foot sign is at the bottom of the bed.

2. Hang the pump onto the foot end bed rail and adjust the hangers to a suitable position for the pump. Alternatively, the pump may be placed on a flat surface.

3. If the pump wire mains wire could be a risk on the floor under the bed with the use of other equipment, clip the mains cable into the cable management system on the side of the mattress

4. Connect the air hose connectors from the mattress to the pump unit. Make sure the connection is completely secured.

⚠ **NOTE:** Ensure the air hoses are not kinked or tucked under the mattress.

5. Plug power cord into electrical socket.

⚠ **NOTE:** 1. Make sure the pump is suitable for the power voltage
2. Removing the plug will disconnect the system

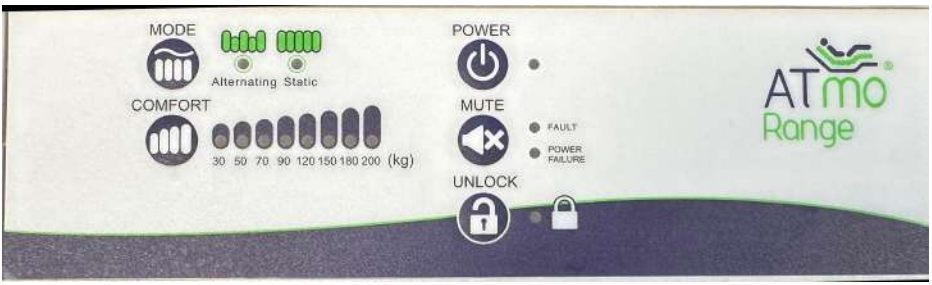
⚠ **CAUTION:** The pump can only be used for the mattress recommended by the Manufacturer. Do not use for any other purpose.

5. Press the power button to turn the pump on.

D. OPERATION

NOTE: Always read the manual before use.

D.1 GENERAL OPERATION



1. Insert the supplied power cable into the side of the pump and the plug into a suitable power supply and press the power on button.

2. Wait for 20-30 minutes (depending on the mattress) for the mattress to be fully inflated by the pump.

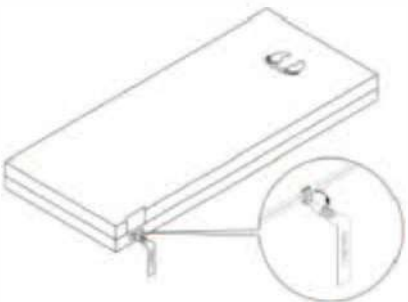
3. The pump will automatically be set to alternating mode and on the lowest comfort setting. Static mode can be selected if desired and the comfort setting can be increased. The alternating or static light will continue to flash until the mattress reaches the pressure chosen.

4. Adjust the comfort setting to the most comfortable level for the Patient, without the mattress bottoming out. The pressure in the mattress will slowly increase or decrease to the required level after the alternating or static light has stopped flashing.

NOTE: It is recommended that the comfort setting be set to maximum (200KG) for the quickest inflation of the mattress for every first inflation or new use, the user can then adjust the comfort setting to the desired level after the mattress has fully inflated.

D.2 CPR

This is for emergency use to deflate air from the mattress. Disconnect the air tubes from the mattress for even faster deflation.



D.3 PRESSURE SET UP

Press the comfort button to cycle through the different weight settings until the green LED on the desired weight is illuminated.
The alternating or static LED will flash until the pressure in the mattress reaches the desired setting.

D.4 LOW PRESSURE INDICATION FUNCTION

Once the mattress has reached the desired comfort setting, should the pump detect low pressure in the mattress the fault LED will light up Orange and an audible constant beep will sound. Check that the connector is fully inserted and that the CPR valve on the mattress is fully closed.

NOTE: If the pressure remains at LOW PRESSURE, check for any air leakage (cells, air tubes and connectors) If necessary, replace any damaged parts. Or contact the supplier for further assistance.

D.5 STATIC MODE

If required, the mode button can be pressed to place the mattress into static. The pressure inside the cells will be inflated to the same comfort setting and the alternating function will be suspended. Pressing the mode button again will return the mattress back to alternating mode. As a safety feature the pump will AUTOMATICALLY switch back to alternating after a period of 30 minutes in static mode.

D.6 ALARM MUTE

When low pressure is detected due to a fault both alarm LED will light and audible alarm will sound. By pressing the alarm mute button, this will temporarily mute the audible alarm until the fault is rectified. Should the fault remain unresolved after 5 minutes, the alarm will sound again, the alarm LED light will remain on until the problem is solved. Contact your equipment provider or technician should the problem persist.

E. CLEANING

Ensure the system is thoroughly cleaned between Patient use. Wipe the air pump with a damp cloth pre-soaked with a mild detergent and keep it dust free.

⚠ **CAUTION**, do **NOT** soak the pump.

Wipe the mattress with a damp cloth pre-soaked with warm water (not to exceed 60^{O} C) containing a mild detergent. Keep the Mattress dust free. The cover may also be cleaned using Sodium Hypochlorite diluted in water. All parts should be air dried thoroughly before use. The mattress cover may also be washed in the washing machine at a temperature not exceeding 95^{O} C. See printed washing instructions on the cover.

⚠ **DO NOT USE PHENOLS**

⚠ Always dry the Mattress without direct exposure to sunlight.

F. STORAGE

1. For storage fully deflate the mattress.
2. Roll the Mattress from head end downwards.
3. Store in a cool dry place.

⚠ **NOTE:** DO NOT FOLD OR STACK THE MATTRESS.

G. MAINTENANCE

G.1 GENERAL

1. Check the main power cord and plug are not excessively worn or cut.
2. Make sure mattress cover, inner cells and air tubes are assembled correctly.
3. Make sure all the cells are alternating correctly.
4. Check all tubing is not kinked or broken. If replacements are required, contact your supplier.

G.2 FUSE REPLACEMENT

1. Firstly unplug the pump from the mains.

2. Remove the cover of the fuse with a cross head screwdriver.

3. Insert a new fuse of the correct rating and replace the cover.
   The fuse should be rated as T1A/250V and CE approved.

G.3 AIR FILTER REPLACEMENT



1. Remove the air filter cover, located at the back of the pump.

2. Replace the filter and replace the cover.

3. Replacing the air filter regularly is recommended.

H. SPECIFICATIONS

Air pump		Specification
Power Supply		AC 120V 50/60 Hz, 0.1A 8W AC 230V 50/60 Hz, 0.06A 11W
Fuse Rating		T1A, 250V
Cycle time		**9.6 minutes**
Pump Dimension (L x W x H)		**27 x 13.3 x 9cm**
Pump Weight		2.38kgs
Environment	Temperature	Operation:10° C to 40° C (50° F to 104° F) Storage: -15° C to 50° C (5° F to 122° F) Shipping: -15° C to 70° C (5° F to 158° F)
	Humidity	Operation: 10% to 90% non-condensing Storage: 10% to 90% non-condensing Shipping:10 % to 90% non-condensing
Classification		Class II, Type BF, **IPX1** Applied Part: Air Mattress **DO NOT USE IN THE PRESENCE OF A FLAMMABLE ANESTHETIC MIXTURE (NO AP OR APG PROTECTION)**

Air mattress	Specification	
Mattress Height	**MAT60 - 7" or 17.5cm**	**MAT70 - 8" or 20cm**
Dimension (L x W x H)	**198 x 88 x 17.5cm**	**198 x 88 x 20cm**
Mattress Weight	4.1kgs	5.18kgs
System Pressure Range	30 - 80 mmHg	30 – 80 mmHg
Maximum load	200 kg	200 kg
Suggested load	1st LED : 30~40 kg 2nd LED : 50~60 kg 3rd LED : 70~80 kg 4th LED : 90~110 kg 5th LED: 120~140 kg 6th LED :150~170 kg 7th LED : 180~190 kg 8th LED : 200 kg	1st LED : 30~40 kg 2nd LED : 50~60 kg 3rd LED : 70~80 kg 4th LED : 90~110 kg 5th LED: 120~140 kg 6th LED :150~170 kg 7th LED : 180~190 kg 8th LED : 200 kg

⚠ **NOTE: If necessary, please ask your supplier for further technical documents**

10. Technical Specification:

Item		Specification
Power Supply (Note: Seerating label on the product)		AC 220-240V 50 Hz, 0.09A (for 230V system)
Fuse Rating		T500mAH, 250V
Cycle time		12mins
Dimension (L x W x H)		27.5x13.5x9cm
Weight		1.3Kg
Environment	AtmosphericPressure	80KPa to 106KPa
	Temperature	Operation: 5°C to 35°C (41°F to 95°F) Storage: -15°C to 50°C (5°F to 122°F) Shipping: -15°C to 70°C (5°F to 158°F)
	Humidity	Operation: 10% to 90% non-condensing Storage: 10% to 90% non-condensing Shipping: 10 % to 90% non-condensing
Classification		Class II, Type BF, IP21 Applied Part: Air Mattress Not suitable for use in the presence of a flammable anesthetic mixture (No AP or APG protection)

Mattress	Specification		
Model	T01	T05	T04(Cell-on-cell mattress)
Dimension (L x W x H)	200x90x10cm	200x90x10cm	200x90x20cm
Weight	5.31Kg	4.58Kg	9Kg
Max. Support Weight	180Kg	180Kg	200Kg

⚠**NOTE-**

1. Consult the distributor or EU representative for further technical documents.
2. The specification is also suitable for other areas operating with same power supply.
3. Mattress dimension and weight is measured without foam cushion.
4. The manufacturer reserves the right to modify the specification without notice.

Appendix A: EMC Information

Guidance and manufacturer's declaration-electromagnetic emissions		
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that they are used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	The models device use RF energy only for their internal function. Therefore, their RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR11	Class B	The model P08E are suitable for used in domestic stablishment and in establishment directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonic emissions lEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions lEC 61000-3-3	Complies	
Warning: 1. The device should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the device should be observed to verify normal operation in the configuration in which it will be used**.** 2. Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation. 3. Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Pump, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.		

Guidance and Declaration-electromagnetic immunity			
The models device intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that they are used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment -guidance**
Electrostatic discharge (ESD) lEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8kV, ±15 kV air	Floors should be wood, concrete orceramic tile. If floors are coveredwith synthetic material, the relativehumidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supplylines ±1 kV for Input/outputlines	±2kV for powersupply lines	Mains power quality should be thatof a typical commercial or hospitalenvironment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11.	<5 % UT (>95% dip in UT.) for 0.5 cycle <5 % UT (>95% dip in UT) for 1 cycle 70% UT (30% dip in UT) for 25/30 cycles <5% UT (>95 % dip in UT) for 5/6 sec	<5 % UT (>95% dip in UT.) for 0.5 cycle <5 % UT (>95% dip in UT) for 1 cycle 70% UT (30% dip in UT) for 25/30 cycles <5% UT (>95 % dip in UT) for 5/6 sec	Mains power quality should be thatof a typical commercial or hospitalenvironment. If the user of themodel P08 require continuedoperation during power mainsinterruptions, it is recommendedthat the model P08 poweredfrom an uninterruptible powersupply or a battery.
Power frequency (50/60 Hz) magnetic field lEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fieldsshould be at levels characteristic ofa typical location in a typicalcommercial or hospitalenvironment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			
Conducted RFlEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6 Vrms in ISM andamateur radiobands	3 Vrms 150 kHz to 80 MHz 6 Vrms in ISM andamateur radiobands	Portable and mobile RF communicationsequipment should be used no closer to any part ofthe models P08 including cables, than therecommended separation distance calculated fromthe equation applicable to the frequency of thetransmitter. **Recommended separation distance** $d=[3,5/V1]x\ P^{1/2}$ $d=1,2xP^{1/2}$ 80 MHz to 800 MHz $d=2,3xP^{1/2}$ 800 MHz to 2.7 GHz where P is the maximum output power rating of thetransmitter In watts (W) according to the transmittermanufacturer and d Is the recommendedseparation distance in meters (m). Field strengths from fixed RF transmitters, asdetermined by an electromagnetic site survey,[a]should be less than the compliance level in eachfrequency range.[b]Interference may occur In the vicinity of equipmentmarked with the following symbol: 
Radiated RFlEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz. **385MHz-5785MHz TestspecificationsforENCLOSUREPORTIMMUNITY toRF wirelesscommunicationequipment(Refer to table9 of IEC 60601-1-2:2014)**	10 V/m 80 MHz to 2.7 GHz **385MHz-5785MHz Testspecificationsfor ENCLOSUREPORTIMMUNITY toRF wirelesscommunicationequipment(Refer to table9 of IEC 60601-1-2:2014)**	
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) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones andland mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predictedtheoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, anelectromagnetic site survey should be considered. If the measured field strength in the location in whichthe models P06Ais used exceeds the applicable RF compliance level above, the model P06A should be observed to verify normal operation. If abnormal performance is observed, additional measuresmay be necessary, such as reorienting or relocating the model P06A. b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.			

Recommended separation distances between portable and mobile RF communications equipment and the model P08E

The model P08E is intended for use in electromagnetic environment in which radiated RF disturbances is controlled. The customer or the user of the model P08E can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model P08E is recommended below, according to the maximum output power of the communications equipment.

Rated maximum outputPowerof transmitter W	**Separation distance according to frequency of transmitter m**		
	150kHz to 80MHz $d=1.2xP^{1/2}$	**80MHz to 800MHz** $d=1.2xP^{1/2}$	**800MHz to 2,5GHz** $d=2.3xP^{1/2}$
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) accord able 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.

SAVE THESE INSTRUCTIONS

It is **NOT** recommended to repair or replace the unit, unless this is by qualified personal. To reduce the risk of shock or electrocution do not change or modify the cord or plug in any way.

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For further technical support please call

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EC REP

BHTA British Healthcare Trades Association

CE 0197

APPROVED CODE

Due to ongoing research and development, Apollo Healthcare Technologies Ltd, reserve the right to change specifications without prior notice. This will not affect the efficacy of the system. Always consult the user manual for instructions for use.