



A World of Healthcare Solutions

DECLARATION OF CONFORMITY

The Company

Apollo Healthcare Technologies Ltd
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Declares that the articles which it sells, called
and related accessories, are classified as Class I non-invasive
Medical Devices according to Medical Directive 93/42/EEC and to
national law no. 46/97 and comply with the European Directive on
CE marking; in addition

- they are not measuring instruments;
- they are not intended for clinical investigations;
- they are sold in non-sterile packaging;

**The above mentioned devices meet with the
essential requirements and provisions of
Directive 93/42/EEC.**

Apollo Healthcare Technologies Ltd endeavour to provide the
exact specification as printed. Apollo Healthcare Technologies Ltd
reserve the right to change specification without prior notice.



Apollo

USER MANUAL

Apollo Pro™ Dynamic Replacement Mattress

Product Code - APH059



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STATEMENTS & SYMBOLS

Note, caution, warning & danger statements

NOTE

Indicates some tips or some information users should be aware of.

CAUTION

Indicates correct operating or maintenance procedure in order to prevent damage to or destruction of the equipment or other property.

WARNING/DANGER

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

- ☐ A product should never be left unattended when plugged in.
- ☐ Close supervision is necessary when this product is used by, on, or near children or invalids.
- ☐ Use this product only for its intended use as described in this manual.
 - Do not use attachments not recommended by the manufacturer.
- ☐ 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.
- ☐ Keep the cord away from heated surfaces.
- ☐ Never block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.
- ☐ Never drop or insert any object into any opening or hose.
- ☐ Do not use outdoors or operate where aerosol (spray) products are being used or where oxygen is being administered.

No modification of this equipment is allowed.

Others

Symbols on the printed label on the outside package box are as below:



Class II equipment



Attention! Consult accompanying documents.



Type BF equipment



Follow operating Instructions

INTRODUCTION

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

General

The Apollo Pro is a high quality and affordable air support surface suitable for medium and high-risk pressure ulcer treatment. It has been specifically designed for prevention of bedsores and offers an affordable solution to 24-hour pressure area care.

The Apollo Pro has been tested and certified for the following standards:

□ EN60601-1:2006 and IEC60601-1-2:2007 and 

Intended Use

The Apollo Pro is intended to reduce the incidence of pressure ulcers while optimising patient comfort. It also provides the following:

- Individual home care setting and long-term care
- Pain management as prescribed by a physician.

Contraindication

Patient conditions for which the application of pressure relieving therapy on an alternation system is contraindicated are as follows:

- Cervical or skeletal traction
- Unstable spinal cord injuries

PACKAGE CONTENT

Check inside the package. If any of the following items are missing or damaged, please contact your local dealer or service center for replacement immediately.

Pump

Make sure the type of pump is identical to which you purchased. Functionalities vary from model to model.



Mattress

Cell type: The mattress comes with a base sheet.

For cell height of more than 8 inches, a foam base is not a must.



Cover Sheet

*Optional
The cover sheet makes cleaning an easy task.



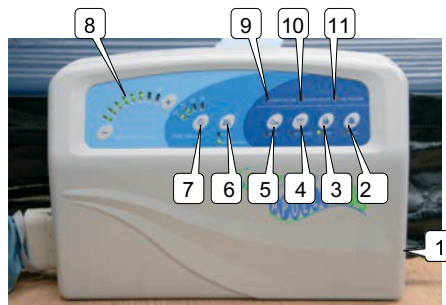
Manual

Always read this manual before using this product.

PRODUCT FUNCTIONS

Pump

- (1) POWER switch
- (2) MUTE switch
- (3) PANEL LOCK switch
- (4) AUTOFIRM switch
- (5) SEAT switch
- (6) STATIC/ALTERNATE switch
- (7) CYCLE TIME switch
- (8) PRESSURE SELECTION Keys
- (9) POWER FAILURE indicator
- (10) SYSTEM FAILURE indicator
- (11) LOW PRESSURE indicator



► **POWER switch (1)**

The POWER switch is at the lower right side of the pump. Turning the POWER switch ON/OFF will start/stop the pump. The switch lights up when the power is ON, and extinguishes when the power is OFF.

► **MUTE switch (2)**

The audible/visible alarm turns on either when the pressure is low or the system fails to alternate. Press the Mute switch to mute the audible alarm, and the MUTE indicator (amber) will light up. The alarm indicator will continue flickering. Re-press the Mute switch to re-activate the audible alarm and to extinguish the MUTE indicator.

► **PANEL LOCK switch (3)**

Press the PANEL LOCK switch over 3 seconds to lock the panel. Press the PANEL LOCK switch over 3 seconds again to unlock the panel. The PANEL LOCK indicator (amber) lights up when the panel is locked. The panel will automatically lock up if no operations are done for over 2 minutes.

► **AUTOFIRM switch (4)**

Press the AUTOFIRM switch to set AUTOFIRM mode to quickly inflate the air mattress to the maximum pressure which facilitates nursing and caring. The AUTOFIRM indicator (amber) lights up when the system is in AUTOFIRM mode. The system will automatically return to the previous mode 30 minutes after the AUTOFIRM mode is in operation. It is also possible to cancel AUTOFIRM mode by pressing the AUTOFIRM switch.

► **SEAT switch (5)**

Press the SEAT switch to set SEAT mode to inflates all cells and increase the pressure by 10mmHg. The SEAT indicator (amber) lights up when the system is in SEAT mode. To cancel SEAT mode, press the SEAT switch.

▣ **STATIC/ALTERNATING switch (6)**

Press the STATIC/ALTERNATING switch to switch the air mattress to STATIC mode or ALTERNATING mode. The amber STATIC indicator (or the green ALTERNATING indicator) lights up to indicate the correspondent operation mode.

▣ **CYCLE TIME switch (7)**

The CYCLE TIME switch can be used to select the appropriate cycle time of the inflation cycle. The 4 different cycle times, 10, 15, 20 and 25 minutes can be selected and are indicated by the number of indicators (green) that light up.

▣ **PRESSURE SELECTION Keys (8)**

The PRESSURE SELECTION Keys can be used to decide the pressure in the inflated cells in the mattress. The 8 pressure levels are indicated by the number of indicators (green) that light up.

▣ **POWER FAILURE indicator (9)**

This indicator (red) flickers when there is no power input to pump.

▣ **SYSTEM FAILURE indicator (10)**

This indicator (red) flickers when the system fails to alternate.

▣ **LOW PRESSURE indicator (11)**

This indicator (red) flickers when the pressure is below the pre-defined level.

Mattress

The Apollo Pro comes with cell type mattress of different materials (Nylon/PVC or PU), provided optionally with the pump.

Please refer to the Specifications section for details.

INSTALLATION

Step 1 □ Place the mattress flatly on the bed frame.

The inflation tube should be towards the foot end so that it can be connected to the inflation nozzles on the pump. See figure below for reference.



Step 2 □ Cover with a cotton sheet to avoid direct skin contact and reduce friction.

Step 3 □ Hang the pump over the frame or board at the foot end of the bed.
Make sure the pump is secured.

Step 4 □ Connect the inflation tubes from the mattress to the pump's inflating nozzles.
Make sure they are properly attached.

NOTE!

**Make sure the air hoses are not kinked or tucked under the mattress.
Also check to ensure the CPR valve is properly attached.**

Step 5 □ Plug the power cord into an electrical outlet with AC230V/50Hz output.

The plug is used as the disconnection device from the mains supply. The plug should be positioned for easy access. The power cord shall be kept away from the patient to prevent injuries such as strangulation.

⚠ **NOTE: BEFORE INSERTING THE PLUG INTO THE OUTLET, MAKE SURE THE VOLTAGE IS**

COMPATIBLE.

Step 6 □ Turn on the power by pressing the power switch at the right side of the pump.
Proceed to the Operation section.

Step 7 □ Make sure to disconnect the pump by unplugging the power cord when it is not in use.

OPERATION

General

This product is designed to provide maximum comfort to home care patients. Make sure that you operate this product in a proper way to optimise its value. Here we provide some general information you should be aware of.

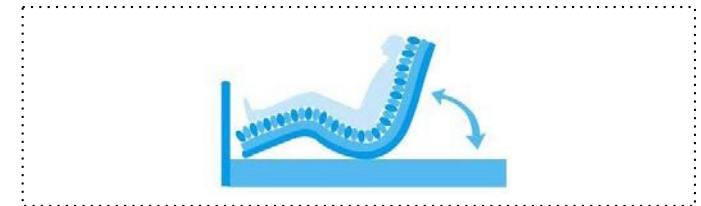
For products: DO NOT use another pump with different specifications. It is dangerous to use a pump with pressure capacity greater than 120 mmHg. This may result in cell-puncture.

DO NOT change any component by yourself. If there is need for replacement or repair, always contact your local dealer or service center.

For patients: When the Normal Pressure indicator (green) comes on to indicate that the pressure has been adjusted to a desired level of firmness, the patient can then lie on the mattress.

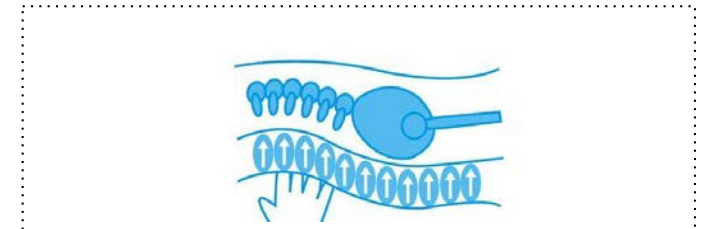
Please cover the mattress with a cotton sheet to avoid direct skin contact and for the patient's comfort.

A firm surface will make it easier for the patient to transfer or reposition. Make use of the static mode function. It can support the patient by keeping the mattress from bottoming out when the patient is in a sitting position. See figure below.



Hand check: Check if the pressure is properly adjusted by sliding one hand between the air mattress and the foam base (or bed frame if there is no foam base) to feel the patient's buttock.

Users should be able to feel the space in between, and the acceptable range is approximately 25 to 40 mm (1" to 1-1/2"). This hand check procedure is issued by AHCPR.



Always read the operating instructions before use.

Turn the power ON

A BEEP sound will begin the operation. The indicator (green) of the power switch will light up, and the pump starts to pump air into the mattress. The LOW PRESSURE indicator (red) will flicker as the inflation of the mattress undergoes.

NOTE!!

The audible alarm would not be heard when inflating up the mattress for the first time.

Automatic STATIC mode

The pump will automatically enter STATIC when it is turned on, and will return to the previous conditions when it was shut down last time once the pressure reaches 20 mmHg.

NOTE!!

If the pressure does not reach 20 mmHg 40 minutes after the pump is turned on, the audible alarm will start to beep, and the LOW PRESSURE indicator will continue flickering.

Mode selection

Press the STATIC / ALTERNATING switch to change the function mode from ALTERNATING to STATIC and vice versa.

NOTE!!

It is recommended to always keep the pump in the ALTERNATING mode when the patient is in a lying position for more efficient pressure ulcer prevention and treatment.

The pump will automatically return to ALTERNATING mode 2 hours after switching to the STATIC mode.

NOTE!!

The STATIC mode provides an even support that will make the patient transfer or reposition easier. The STATIC mode also prevents the patient from bottoming out when in the seating position.

Pressure adjustment

The pressure of the mattress can be set by pressing the PRESSURE SELECTION keys.

There are totally 8 different pressure levels selectable ranging from 20 to 60 mmHg.

NOTE!!

Pressing the [+] key will bring the pressure one level higher, and the [-] key will bring the pressure one level lower.

It is recommended to follow the HAND CHECK procedure as demonstrated on page 9 to decide the appropriate pressure level.

Automatic pressure control

During normal operation, the pump will monitor pressure changes and keep it constant at the set level. When the pressure is below the set pressure level, the pump will automatically start to inflate the mattress. The pump will stop when the set pressure level is reached.

NOTE!!

If the pressure is consistently low, the audible alarm will beep and its indicator will light up to attract attention.

If there should be obvious leakage, for example caused by loose connection of tubes, the audible/visible alarm will be activated.

For nursing and caring convenience

Press the AUTOFIRM switch to automatically inflate the mattress to the maximum level (above 70 mmHg) for about 30 minutes. The pump will return to the previous pressure level 30 minutes later.

Placing the patient in the seating position

Press the SEAT switch to for the even support and 10mmHg higher pressure to prevent the patient from bottoming out when placing the patient in the seating position for feeding or other applications.

To silence the alarm

If the pressure drops below the pre-defined level, the LOW PRESSURE indicator will light up accompanied with a BEEP alarm tone. If the pump fails to alternate in the ALTERNATING mode, the SYSTEM FAILURE indicator will light up accompanied with a BEEP alarm tone. If the pump loses power input, the POWER FAILURE indicator will light up accompanied with a BEEP alarm tone.

In any case, pressing the MUTE switch will silence the alarm, but the indicator will continue flickering. Re-pressing the MUTE switch will re-activate the audible alarm.



Always read the operating instructions before use.

CPR function

When there is an emergency to perform CPR on the patient, pull the CPR strap immediately to release the air quickly from the mattress.

The CPR strap is located at the front right-hand side of the mattress.

Pressure set up

Users can adjust the pressure level of the air mattress to a desired firmness by themselves or according to the suggestion from a health care professional.

NOTE!

It is recommended that the pressure-adjust knob turned to Firm or press Auto Firm on the panel when the mattress is first inflated. Users can then easily adjust the air mattress to a desired firmness according to the patient's weight and comfort.

Low pressure warning

When abnormal pressure occurs, the Low Pressure indicator will come on. The audible alarm will be activated to bring attention to a low pressure condition.

Check if the connections are secure and correctly installed according to the relevant instructions.

NOTE!

If the pressure is consistently low, check for any leakage (in tubes or connecting hoses). If necessary, contact your local dealer to replace any damaged tubes or hoses.

EMC WARNING

□During operation, cell phone with a maximum output power of 2W shall be kept at least 3.3 m away.

CLEANING

In this section, we describe the procedures to clean and decontaminate the pump. It is important to follow these procedures before using the system on patients. The cleaning task is required at least once a week to maintain personal hygiene.

Pump

- DO NOT immerse or soak the pump.
- Check for external damage and move the pump to the cleaning area.
- Place the pump on a work surface and spray or wipe the outside of the case with quaternary ammonium solution.
- DO NOT spray any cleaning solution directly on the surface of the pump.
- DO NOT use a Hypo carbonate or Phonic based cleaning solution as this may cause damage to the case. Allow the solution to incubate for 10 minutes or accordingly as stated by the cleaning product used.
- Wipe case with a clean cloth. Make sure all areas are clean (top and bottom, both sides).
- Spray cloth with cleaning solution and clean faceplate. DO NOT allow excess solution on faceplate or control panel. (If solution gets inside, damage will occur.) Allow surface to thoroughly dry after cleaning.
- After the pump is thoroughly cleaned and dried, proceed to plug in the pump and test to see if it runs normally.
- Unplug the pump and store with proper identification tag.

Mattress

- Brush off or wipe down all surfaces of the cover sheet with soap and water followed by wetting with any liquid disinfectant.
- Any obvious blood spots should be wet thoroughly with 1:9 Hypochlorite solution (1 part bleach to 9 parts water) and allow drying for at least 10 minutes. Then blot with a clean, damp cloth.
- Unzip the top cover from the mattress.
- Brush or wipe down all surfaces with soap and water before applying any liquid.
- Covers are immersed and soaked in disinfectant for the required incubation time.
- After pre-soaking, the cover is rinsed through a regular cycle in a washer with no heat then laundered with mild detergent (wash temperature 93°F, rinse temperature 78°F or on the coldest setting).
- Covers are aerated until they are fully dry. (Drying temperature range 90-120°F or on the coldest setting.)
- The air cells are unsnapped from one side and are sprayed on all sides with a disinfectant. Let it sit for the required incubation time and wipe down with a clean cloth. (Make sure to disconnect all the air cells, one by one, and spray the disinfectant on all sides, including all the connecting tubes and hoses. Let it sit for least 10 minutes.)
- If there is a base after you remove all the air cells, the base has to be sprayed down with the disinfectant, inside and outside. Let it sit for the required incubation time and wipe down with a cloth.
- Repeat the process with the tubing set: spray, incubate, and then wipe clean.
- The carrying bag should be turned inside out and completely wiped down using a disinfectant solution.
- Allow it to thoroughly air dry. Once the inside is dry, turn it back: wipe down the outside of the bag with disinfectant.
- Dry the mattress on a SUNLESS area after cleaning.

HANDLING AND STORAGE

- Lay the mattress out flat and upside down.
- Roll from the foot end towards the head end; the foot-end strap can then be rolled around the rolled mattress to prevent unrolling.
- Do not fold, crease or stack the mattress.
- Follow the national requirement to dispose the pump.

MAINTENANCE

General

- Check the power cord and plug to see if there are abrasions or excessive wear.
- Check the mattress cover for signs of wear or damage. Ensure the mattress cover and tubes are connected together correctly.
- Plug in the pump and check the airflow from the hose connection port. The airflow should alternate between ports every half-cycle time.
- Check the air hoses to see if there are kinks or breaks. For replacement, please contact your local agent or dealer.
- Make sure the mattress tube is well connected.
- Check the pump and make sure both power and power indicator are off when the switch is turned off.

Low pressure

Examine if there is air leakage between the pump and the mattress connections or from the air mattress tubes:

- Check connectors between the air mattress and pump. If there is any disconnection, please reconnect it.
- Check the CPR Valves. Ensure their outlets are sealed.
- Check the air-connecting tubes. Ensure each single cell is not broken.
- Turn the pressure-adjust knob to Firm. Keep the tubes fully inflated and inspect for air leakage.
- Check if there is any air leakage from cells. Ensure no leakage occurs. If any leakage occurs, please contact your local agent or dealer.

Warranty / Servicing

Both pump and mattress carry a 2-year warranty in subject to being serviced in accordance to Apollo Healthcare Technologies service manual.

SERVICING YOUR SYSTEM

The mattress system should be serviced every 12 months by Apollo Healthcare Technologies or approved personnel using genuine Apollo Healthcare Technologies spare parts. Compressor/ Bellows should be changed. Filters should be changed.

TROUBLESHOOTING

Problems	Solutions
The pump doesn't work	1. Check if the plug is inserted firmly into the outlet. 2. Turn on the power switch again. ☐ If the power indicator is ON and the pump still doesn't work, contact your local dealer immediately. ☐ If the power indicator is OFF, there may be a faulty outlet. Try to connect the power cord to another outlet. If the power indicator is still OFF, contact a qualified electrician for main power check.
Incomplete inflation (Low Pressure)	1. For a quick check, adjust the pressure to Firm. 2. Check to see if the tubes connected to the pump are twisted or there is any leakage occurring. ☐ Always keep the tubes straight. ☐ Change tubes if there is any leakage. ☐ Ensure the CPR valves are closed. Ensure every single cell is not broken.
Slow air flow	A dirty filter may decrease the air flow. Wash the filter with mild detergent to keep it clean. ☐ Check the air filter at the back of the pump at least once a month.

DISPOSAL OF THE UNIT

Follow the national requirement to dispose the unit.

SPECIFICATIONS

System

Item	Specifications		
Classification	Class II; IP21; AP/APG NO; Type BF		
Applied Part	Air mattress		
Input Rating	230V 50Hz; 12W, 1A		
Fuse Rating	250V, T1AL T: Time delay L: Low Breaking Capacity		
Pressure Range	20 ~ 60 mmHg		
Cycle Time	10, 15, 20 , 25 minutes		
Dimensions (Pump)	369 x 135 x 250 mm (14½" x 5¾" x 10")		
Weight (Pump)	4.20 kg (9.3 lbs)		
Environment Requirements	□ Temperature: Operation 41°F~104°F (5~40°C) Storage -13°F ~158°F (-25°C to 70°C) Shipping -13°F ~158°F (-25°C to 70°C) □ Humidity: Operation less than 93% non- condensing Storage: less than 93% non-condensing		
Safety Standards	EN/IEC 60601-1		
EMC Standards	CISPR 11 Class B IEC 61000-3-2 IEC 61000-3-3 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-8 IEC 61000-4-11		
Service Life	2 years		

* Due to the continual development of the above products, specifications are subject to change without prior notice.

Table 1–MANUFACTURER’S declaration – ELECTROMAGNETIC EMISSIONS – for all ME EQUIPMENT and ME SYSTEMS

GUIDANCE AND MANUFACTURER’S DECLARATION – ELECTROMAGNETIC EMISSIONS		
The Air pump is intended for use in the electromagnetic environment specified below.		
The customer or the user of the Air pump should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The Air pump 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 Air pump is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 2 –MANUFACTURER’S declaration – electromagnetic IMMUNITY –for all ME EQUIPMENT and ME SYSTEMS

GUIDANCE AND MANUFACTURER’S DECLARATION – ELECTROMAGNETIC IMMUNITY			
The Air pump is intended for use in the electromagnetic environment specified below.			
The customer or the user of the Air pump should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	6 kV contact 8 kV air	±6 kV contact ±8 kV 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 IEC 61000-4-4	2 kV for power supply lines 1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	1 kV line(s) to line(s) 2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 0,5 cycle 40 % <i>UT</i> (60 % dip in <i>UT</i>) for 5 cycles 70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 sec	<5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 0,5 cycle 40 % <i>UT</i> (60 % dip in <i>UT</i>) for 5 cycles 70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Air pump requires continued operation during power mains interruptions, it is recommended that the Air pump be powered from an uninterruptible power supply or a battery.
Power Frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE <i>UT</i> is the a.c. mains voltage prior to application of the test level.			

Table 3 – Guidance and MANUFACTURER'S declaration –
electromagnetic IMMUNITY –for ME EQUIPMENT and ME SYSTEMS that
are not LIFE-SUPPORTING

GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY			
The Air pump is intended for use in the electromagnetic environment specified below. The customer or the user of the Air pump should assure that it is used in such an environment.			
<i>Immunity test</i>	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the Air pump, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 2,3 \sqrt{P} \quad 800 \text{ MHz to } 2,5 \text{ GHz}$ where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b 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. 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 Air pump is used

exceeds the applicable RF compliance level above, the Air pump should be observed to verify

normal operation. If abnormal performance is observed, additional measures may be

necessary, such as reorienting or relocating the Air pump.

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

Table 4 – Recommended separation distances between portable and mobile

RF communications equipment and the ME EQUIPMENT or ME SYSTEM –
for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE AIR PUMP			
The Air pump is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Air pump can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Air pump 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 metres (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.			

* Due to continual development of the above products, specifications are subject to change without prior notice.